REPUBLIC of TUNISIA
MINISTRY of EDUCATION

COLLEGE COMPUTER SCIENCE
YEARS 7, 8, 9
PIONEER COLLEGE

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Computer Science at the college level is a link representing a connection between the primary level program and that taught in lycées.

Quite general and practical computer science at college level sets the following general objectives:

1. Exploit the elementary functions of a computer.
2. Produce a digital document.
3. Get information and data and communicate through ICT.

Develop a critical spirit towards information and its processing.

The book contains four parts:

1 - Chapter 1 : Computer and Exploitation System
2 - Chapter 2 : Software Exploitation
3 - Chapter 3 : Internet
4 - Chapter 4 : Project

For each part, there is a distinctive colour to indicate the three « collège» levels:

- Orange for year 7 classes
- Green for year 8
- Blue for year 9

Each chapter contains:

- A presentation of skills and knowledge elicited through objectives
- A section labelled “Toolbox” listing the pedagogic aids necessary to perform the chapter activities.
- A section entitled “In this unit” lists the new terms the learner will discover in the chapter. These words are translated at the beginning of the chapter.
• Another section entitled « In this chapter, I have learnt... », sums up briefly the different notions and concepts in the chapter

• As for the section entitled « I practise », it enables the learner to apply knowledge through exercises

• The « Self-assessment », section allows students to self-assess and manage her/his learning with the teacher’s help

• « The Researcher’s Corner », aims to develop the learners’ autonomy, arouse their curiosity and enrich their computer culture

The section « My project Board » that appears in chapter 4 will help the learner check the progression of their project

At the end of the book, we suggest a lexical list of the new computer terms which the learner at college level will discover while learning.

Enjoy reading

The authors
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In this unit:

Information / Computer / Central Processing Unit / Input Device / Output Peripheral / Operating System / Sharing / File / Support of Storage

John Von NEUMANN
(1903-1957) American of Hungarian origin, he is considered as the father of modern computers (architecture Von Neumann). He created the 1st computer using electricity (EDVAC) and made an important contribution to artificial intelligence.

CHAPTER

Computer & Operating System

• Year 7
  - Introduction
  - Basic components
  - Operating System
  - Management of folders and files

• Year 8
  - Reminders
  - Presentation of the supports of storage (continued)

• Year 9
  - Reminders
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<table>
<thead>
<tr>
<th>French</th>
<th>العربية</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatique</td>
<td>تشغيل آلی</td>
<td>Automatic</td>
</tr>
<tr>
<td>CD</td>
<td>قرص مدمج</td>
<td>CD</td>
</tr>
<tr>
<td>Clavier</td>
<td>لوحة مفاتيح</td>
<td>Keyboard</td>
</tr>
<tr>
<td>Coller</td>
<td>لصق</td>
<td>Paste</td>
</tr>
<tr>
<td>Copier</td>
<td>نسخ</td>
<td>Copy</td>
</tr>
<tr>
<td>Corbeille</td>
<td>سلة النفايات</td>
<td>Trash</td>
</tr>
<tr>
<td>Couper</td>
<td>قصّ</td>
<td>Cut</td>
</tr>
<tr>
<td>Disque Dur</td>
<td>قرص صلب</td>
<td>Hard Disk</td>
</tr>
<tr>
<td>Disquette</td>
<td>قرص مرن</td>
<td>Floppy Disk</td>
</tr>
<tr>
<td>Dossier</td>
<td>مجله</td>
<td>Folder</td>
</tr>
<tr>
<td>Ecran (Moniteur)</td>
<td>شاشة</td>
<td>Monitor</td>
</tr>
<tr>
<td>Explorateur Windows</td>
<td>مستكشف ويندوز</td>
<td>Windows Explorer</td>
</tr>
<tr>
<td>Fichier</td>
<td>ملف</td>
<td>File</td>
</tr>
<tr>
<td>Flash disque</td>
<td>حامل رقمي</td>
<td>Flash Disk</td>
</tr>
<tr>
<td>Graveur</td>
<td>نااسخ</td>
<td>Burner</td>
</tr>
<tr>
<td>Haut Parleur</td>
<td>مضخم صوت</td>
<td>Speaker</td>
</tr>
<tr>
<td>Icône</td>
<td>أيقونة</td>
<td>Icon</td>
</tr>
<tr>
<td>Imprimante</td>
<td>طابعة</td>
<td>Printer</td>
</tr>
<tr>
<td>Logiciel</td>
<td>برامجية</td>
<td>Software</td>
</tr>
<tr>
<td>Matériel</td>
<td>اجهزة</td>
<td>Equipment</td>
</tr>
<tr>
<td>Mémoire</td>
<td>ذاكرة</td>
<td>Memory</td>
</tr>
<tr>
<td>Menu</td>
<td>قائمة</td>
<td>Menu</td>
</tr>
<tr>
<td>Ordinateur</td>
<td>حاسوب</td>
<td>Computer</td>
</tr>
<tr>
<td>Poste de travail</td>
<td>جهاز الكمبيوتر</td>
<td>My computer</td>
</tr>
<tr>
<td>Programme</td>
<td>برنامج</td>
<td>Program</td>
</tr>
<tr>
<td>Réseau</td>
<td>شبكة</td>
<td>Network</td>
</tr>
<tr>
<td>Saisie</td>
<td>حجز/ رقم</td>
<td>Write</td>
</tr>
<tr>
<td>Souris</td>
<td>خاراء</td>
<td>Mouse</td>
</tr>
<tr>
<td>Stockage</td>
<td>تخزين</td>
<td>Storage</td>
</tr>
<tr>
<td>Système d’exploitation</td>
<td>نظام تشغيل</td>
<td>Operating System</td>
</tr>
<tr>
<td>Touche</td>
<td>مفتاح</td>
<td>Key</td>
</tr>
<tr>
<td>Unité centrale</td>
<td>وحدة مركزية</td>
<td>Central Unit</td>
</tr>
</tbody>
</table>
Computer & Operating System

OBJECTIVES
By the end of this chapter, you will be able to:

• Use the basic functions of a computer and peripheral products.
• Manage storage media products.
• Define the role of an operating system.
• Manage folders and files.

Toolbox
• A computer
• A picture file named "Computer" which contains an image of a computer
• A blank floppy disk.
• A tree on the drive.

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I - Introduction
I - 1 - Definitions
Through the following activities, you discover the meaning of these words:
Computing / Computer / Information

Activity 1:
The word «computing» is used in many areas. Can you find and explain it in simple terms?
Help yourself by using a dictionary and compare your answers to the definitions contained therein.

Computing: ......................................................................................................................................................
...................................................................................................................................................................

Activity 2:
Use an arrow to link each object to its name.

<table>
<thead>
<tr>
<th>Image A</th>
<th>Image B</th>
<th>Image C</th>
<th>Image D</th>
</tr>
</thead>
<tbody>
<tr>
<td>A tree</td>
<td>A bird</td>
<td>A manual machine</td>
<td>An automatic machine</td>
</tr>
</tbody>
</table>

Activity 3:
Observe the two images A and B in Activity 2. Which of the two images requires human intervention and physical effort to operate?
What is the machine in image B?
What does the word automatic mean?
With the answers to previous questions, complete the definition of a computer.

The Computer is an ……………….. machine which is commanded by programs.
Activity 4:
The following diagram represents some information manipulated by the human brain. Can you describe and classify it according to its nature?

![Diagram]

Activity 5:
Can a computer handle various forms of information described in Activity 4?

Notice:
The new generation of computers are multimedia ones. They can process many kinds of information such as text, images, sound and video.

I – 2 - Some areas of application

Activity 6:
Read the following text, then identify the relevant fields of information technology. Do you know other fields of application?

Computers and me
When I was young, my father had a computer at home which he used to complete his work reports. Sometimes he offered me to use it to play and draw.
On Sunday, when I accompanied my mother to the supermarket, I noticed that the pretty cashier uses the keyboard of her computer with skill, then tended the ticket to my mother, smiling.
When I entered college, my first meeting was a meeting of computing. I then found myself in a clean laboratory, sitting at a computer I could use at ease.
Interpretation:
• The micro-computer: input text, tables, graphics, computer assisted design (CAD), gaming and leisure...
• Information management: sales, purchases, ...
• Communicating Information: education and training (CAL: Computer Assisted Learning), electronic mail, chat, forums, ...
• There are other areas of computing as:
• Computer industrial robotics, computer-aided design (CAD), ...
• Computer science: research, medicine, ...

II - The basic components of a computer

Activity 7:
You are asked to draw a computer of your computing laboratory. To do this, you have to carefully examine the material before drawing. You can, if necessary, move to see all sides of the computer and possibly consider a computer next to yours.
1) On a page of your notebook, design, without too much detail, a computer with all the devices that make it up.
2) Do you know the names of these devices?

Notice:
On your drawing, there are at least the four elements of the following series:

Central Unit  Keyboard  Monitor  Mouse

II - 1 - The Central Unit

The central unit is the main component of the computer. It receives data, then it treats them so as to return results. Peripherals are connected to the central unit.
II – 2 – The Monitor (or Screen)

Activity 8:

Question 1: What do you need to watch a film which is broadcasted on television?

Question 2: What does the screen of a calculator do?

Activity 9:
Use the answers to the previous questions to describe to your peers, the screen of your computer and then complete the following definition. You should use the following words:

display / peripheral / output

Definition:
The screen is an ___________________________ ___________________________ . It is used to ___________________________ data from the computer.

II – 3 – The mouse

Activity 10:
Switch on your computer. While observing the computer screen, move the mouse to the right, to the left, up then down. What do you notice?

Notice:
An arrow moves on the screen. This is the mouse pointer, it indicates a position on the screen.

Activity 11:
How to select the object "Computer" visible on your screen?

Notice:
To select an object, click on it by using the left button of the mouse.

Interpretation:
The mouse allows the selection of objects.

Activity 12:
Double click on the subject "Computer" visible on your screen. Observe what happens.

Observation:
The image of a computer appears on the screen.

Interpretation:
The double click allows the opening of an object.
**Activity 13:**
Use the previous answers and the words from the following list to complete the definition of a mouse:

*activation / input / pointing / device / selection.*

**Definition:**
A mouse is an input ... device, playing the role of a... device for the computer. It is manipulated for ... ... (with a simple click) or ... ... ... of objects on the screen (double click).

**II - 4 - The keyboard**

**Activity 14:**
Can you use the mouse to write the following sentence "I like computer science". Give your reasons and suggest a device to do this task.

**Observation:**
The mouse is a pointing device used in a graphical environment. Writing a text is translated by the processing of letters, numbers and other symbols that make up the text. The mouse is not the appropriate device to do this. The most suitable device for the processing is the keyboard.

**Activity 15:**
Describe the keyboard of your computer, then complete the definition of the keyboard.

**Definition:**
The keyboard is a device which is used to write (A..Z), (0..9) and other characters such as punctuation (« », ? ! ; ).

**II - 5 - The printer**

**Activity 16:**
What device must you use to reproduce, on paper, the images you see on your computer screen?
**Observation:**
To reproduce the information on your screen, you must use a printer.

**Definition:**
The printer is an output device that can reproduce on paper, texts or images from the computer. This reproduction on paper is called "**Printing**".

### II – 6 – Storage devices

**Activity 17:**
You want to save your favourite cartoon which is broadcasted on a TV channel. Suggest a solution.

**Notice:**
It is possible to record your favourite series on a videotape or DVD which are media that can store information. They are called recording media. Similarly, one can record data from a computer record carriers or storage.

**Definition:**
A storage device can store data on a permanent basis, they can be removed and played back on another computer.

**Activity 18:**
Pictures, below, are data storage devices. Can you find for each image, the type of information stored? Colour in yellow the number of the images that represent storage media used in computers.

<table>
<thead>
<tr>
<th>Image 1</th>
<th>Image 2</th>
<th>Image 3</th>
<th>Image 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard disk</td>
<td>Photo film</td>
<td>Band photos</td>
<td>Floppy disk</td>
</tr>
</tbody>
</table>

a – **Floppy Disk**

It’s a magnetic storage device with a very limited capacity for recording data in a permanent way.
b - Hard Disk
It’s a magnetic storage device with a large storage capacity used for saving data.

c - CD (Compact Disk) :
Optical disk used for recording data.

III – Operating System

III – 1 – Presentation
a - Definition of an operating system

Activity 19 :
Insert a blank floppy disk in the floppy disk drive then start your computer. What happens?

Notice :
The message "Invalid System Disk" appears on the computer screen. We must insert a disk that contains a program needed to boot a computer.

Activity 20 :
Remove the disk and then restart your computer.

Observation :
The computer starts, and then displays a graphical interface that contains small graphic images (icons). You can then use the mouse, keyboard...

Definition :
An operating system is a basic software that aims to act as an intermediary (interface) between the user and the computer. It allows the management of the computer software and hardware.

b - Presentation of Microsoft Windows Desktop

Activity 21 :
Start your computer and then describe the Windows desktop. You can use the "information bubble".
III – 2 - Managing files and folders

Activity 22:
Your teacher of Life and Earth Science asks you to prepare a research about the five human senses in humans. Explain how you will store different information that you have collected to illustrate this research.

Observation:
The information found will be written on sheets of paper that can be called also "cards or files". All these sheets will be glued, organized in a yellow or red folder.
So a folder may contain cards or folders.
What you do with paper can be done using the computer thanks to the operating system.
**Activity 23:**
Open your workstation and then make a description of its content.

**Observation:**

This area is called arborescence, it shows how are organized the data contained on a computer.

This area allows to detail the selected element.

**Activity 24:**
Select the drive "Drive C" and open the object "Course". Can you make a description of its content?

The folder "cours" contains a folder and some files.

- **Definitions**

**Folder**: A folder is a computing object which can contain files and folders.
**File**: A file is a set of computing data establishing a document of some nature (text, image, sound, program). It is characterized by its name, its size and its type (extension).

**b - Manipulation of folders and files**

**Creation of folders and files**

**Activity 25:**
What are the folders and the files of the tree below?

<table>
<thead>
<tr>
<th>Dossiers</th>
<th>Nom</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mes documents</td>
<td>Elève 1</td>
<td>Dossier de fichiers</td>
</tr>
<tr>
<td>Poste de travail</td>
<td>Elève 2</td>
<td>Dossier de fichiers</td>
</tr>
<tr>
<td>Lecteur (C:)</td>
<td>Système d'exploitation.doc</td>
<td>Document Microsoft Word</td>
</tr>
<tr>
<td>7ème Année</td>
<td>L'ordinateur.bmp</td>
<td>Image bitmap</td>
</tr>
<tr>
<td>Elève 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elève 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7ème Année cope</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observation:**
Folders are easily located by their yellow icon, whereas the icons of files change according to the nature of the file. Here are some examples:

- Text file
- Excel file
- Word file
- Web Page file
- Video / Sound file

To create a folder, follow these steps:

1) Select the drive or the related folder.
2) Choose the «File» menu.
3) Choose the «New» command.
4) Choose the «Folder» option.
5) Using the keyboard, type the name of the folder.
6) Press the "Enter" key to validate.
To create a file, follow these steps:

1) Select the drive or the father folder.
2) Choose the «File» menu.
3) Choose the «New» command
4) Choose the type of the file to be created.
5) Using the keyboard, type the name of the folder.
6) Use the keyboard to type the name of the file then validate by the key "Enter".

-copy of a file or a folder-

Activity 26:

What is the role of the device opposite?

Observation:

This device produces a certified copy of the object (folder or file) copied. In the same way, an operating system offers the possibility of making copies of files and folders.

To duplicate the contents of folders and files, here are the steps:

1) Select the object to copy
2) Choose the «Copy» command from the «Edit» menu.
3) Open the destination folder.
4) Choose the «Paste» command from the «Edit» menu.
Moving a file or a folder

When you copy a folder or a file, a second copy of the object (identical to the first one) is created. When you move a folder or a file, it changes its place. As a result, we obtain a single copy but in a different place. Here are the stages which will allow you to move folders or files.

1) Select the object to move
2) Choose the command «Cut» from the «Edit» menu.
3) Open the destination folder.
4) Choose the command «Paste» from the «Edit» menu.

Rename a folder or a file

Here are the stages which will allow you to rename folders or files.

1) Select the object to rename
2) Choose the «File» menu
3) Choose the «Rename» command.
4) Type the new name.
5) Press the «Enter» key.

Deletion of a file or a folder

Here are the steps which will allow you to delete folders or files.

1) Select the object to delete.
2) Choose the «File» menu.
3) Choose the «Delete» command.
4) Click the "OK" button to confirm the deletion or the "NO" button for the opposite case.

In case you made a bad manipulation, you can get the erased data back from the recycle by making a restoration.
Computing is the science of information processing by means of a computer. The information treated by a computer can be visual (text, drawing, image) or auditory or both.

A computer is a machine which ensures the automatic processing of information by means of programs.

Every computer consists of a central processing unit and peripherals.

An operating system is a set of programs necessary for the starting up and for the use of a computer.

A file is a structure which allows to store data or programs in a physical support.

A folder is a structure which can contain files and also folders. The creation of files allows to organize in a hierarchical way the data in a storage support.
Exercise 1:
Complete these sentences with the appropriate words from the following list:
- device / communication / the user /
- automatic processing / computer / automatic

- Computing is the science of ...................... of information.
- A peripheral is a .................. which ensures ................ between the .................. and ..................

Exercise 2:
Classify the following devices. Put them under the correct heading in the table below:
printer / floppy disk / mouse / screen / keyboard / hard disk.

<table>
<thead>
<tr>
<th>Input peripheral</th>
<th>Output peripheral</th>
<th>Storage device</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exercise 3:
True or False? Write True or False in the boxes.

<table>
<thead>
<tr>
<th>True / False</th>
<th>The operating system is a set of peripherals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>A file can contain folders.</td>
</tr>
<tr>
<td>True</td>
<td>A folder can contain files and folders.</td>
</tr>
<tr>
<td>False</td>
<td>A file can only contain text.</td>
</tr>
<tr>
<td>True</td>
<td>To move a folder, we have to use the command &quot;Copy&quot; then &quot;Paste&quot;.</td>
</tr>
</tbody>
</table>

Exercise 4:
1) Create the tree above on drive C.
2) Create the following files in the "Computing" folder of drive C.
   - Mouse of bitmap image type.
   - Word Processing of Microsoft Word type.
3) Copy the file "Mouse" that is in the "Computing" folder in drive C to the "Equipment" folder.
4) Move the file "word processing" from the "Computing" folder to the "Software" folder.

Have you made your choice on the work in this chapter you will keep in your portfolio?
Reproduce the following statements on your notebook and answer questions.

<table>
<thead>
<tr>
<th>Question</th>
<th>True</th>
<th>False</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without a screen, the computer no longer works.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computing is the science of information processing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To enter text information, we must use the keyboard.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To draw objects, we use the mouse.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The most used button of the mouse is the left button.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A file can contain folders.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An operating system allows drawings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The mouse is a device for processing information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible that a folder contains several files with the same name.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To get an image on paper, you can use a printer.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, then you should review this chapter.

**Researcher’s Corner**

- You started your computer, but it displays the following message: "**non-system disk**". Make a diagnostic of your computer, then give an appropriate solution to make it functional.
- You have very important data and you risk losing them. Suggest a solution to avoid losing data.
OBJECTIVES

By the end of this chapter, you will be able to:

• Identify and exploit the usual media information.
• Make a considered choice of storage media to use.
• Manage your own work space.

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Toolbox

• A computer
• A CD player and a DVD player.
• A CD and DVD burner.
• Some floppy discs, CDs and DVDs
• A burning software.
• Audio files.

Reminders and presentation of media storage (continued)
## Activity 1:
Use the following image to complete the table:

<table>
<thead>
<tr>
<th>Nº</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Output peripheral used to display data.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Floppy Drive</td>
<td>Allows reading from and writing to floppy disks.</td>
</tr>
<tr>
<td>3</td>
<td>Floppy disk</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Allows printing texts and images in papers.</td>
</tr>
<tr>
<td>5</td>
<td>CD</td>
<td>Storage medium.</td>
</tr>
<tr>
<td>6</td>
<td>CD Drive</td>
<td>It’s used to read from a CD.</td>
</tr>
<tr>
<td>7</td>
<td>The keyboard</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>A pointing device.</td>
</tr>
<tr>
<td>9</td>
<td>The speakers</td>
<td></td>
</tr>
</tbody>
</table>
Activity 2:
Use your answers from the previous activity and what you have learned in the 7th year to list all the storage media you know.

Notice:
The storage media are:
- The hard disk
- The floppy disk
- The CD

II – The storage media (continued)

Activity 3:
Switch on the computer then find out the name, size, type and space of each storage medium.

II – 1 - Presentation
The storage media (mass storage or memory aids) are used to store data permanently. They are physical media on which data is stored. These mass storage can be transported from a computer to another. Among the storage media we can mention: the hard disk, the floppy disk, CD-ROM, DVD... A storage medium is characterized by its name, its size and type.

Activity 4:
Do you know the unit of measurement to use to measure the amount of water in a bottle?

Notice:
I use the liter and its multiples as a unit for measuring the amount of water in a bottle.

In computer science, to measure capacity (amount of) a storage medium, we use byte and its multiples.

II – 2 - The units of measurement
1 Kilobyte (Kb) = 1024 byte
1 Megabyte (Mb) = 1024 kilobyte
1 Gigabyte (Gb) = 1024 megabyte

II – 3 – The hard disk
The hard drive is the main storage device data.

It stores data on a stack of rotating magnetic disks, called platters. The size of disks is becoming increasingly large, it can exceed 750 GB
**Activity 5:**
1- Create the following tree on drive C.
2- In "Student1" folder, create the text file "Definition" then type the definition of a storage medium.
3- In "Student2" folder, create the file "Disk" of Bitmap Image type then draw a floppy disk.

**II – 4 – The floppy Disk**
A floppy disk is a mass storage. It is also called floppy because of the flexibility of its support and in contrast with the hard drive. A floppy disk may be used only from a floppy drive. Its maximum capacity is 1.44 Mb.

**II – 5 – Optical Media**

**Activity 6:**
By visiting the Fair of Computing and Technology "The SIB", you noticed that many sellers have pasted the following displays:

**Sales of hardware**

10 CD of size 700 MB for 3.500 dinars
10 DVD-sized 4.7 MB for 5 Dinars
CD Drive for 25 dinars
DVD drive+burner for 40 Dinars

**Questions:**
Find in this hardware brochure, all optical storage media offered by sellers. What are, according to you, the devices that allow reading and writing on these optical media?

**Observation:**
The optical media are CDs and DVDs.
To read data from an optical disk, you can use a player or recorder.
To write data on an optical, you must use a recorder.

a – The CD

Activity 7:
We want to move a file of 400 MB size from one computer to another. Suggest a solution to this problem.

Observation:
• The 1st proposal:
You can use a floppy disk. This solution cannot be accepted because the maximum storage capacity of a floppy disk equals to 1.44 MB and the size of the file to copy is 400 MB.
• The 2nd proposal:
You can move the hard drive to other computers but it is very difficult because we must open the computers’ boxes, mount the hard disk and copy on the computer disk recipient.
There is a storage size of up to 700 MB. Such support may be a good solution if it has its drive in the machine. This support is called Compact Disk (CD).

Definition:
A compact disk or CD is a storage device of the family of optical disks. To read data available on a CD, you can use a CD drive or burner but to write, you must use a CD burner. There are several types of compact disks which include CD-R, CD-RW, CD audio.

CD-R:
Compact Disk Recordable.
It can store data but it is not possible to erase it. The data written onto a CD-R is permanent and cannot be modified.

CD-RW:
Compact Disk ReWritable.
The data which is recorded on a CD-RW can be erased and changed.
**CD Audio (CDDA or CDA)**: An audio CD is a compact disk (CD) containing audio tracks written in CD-DA (Compact Disk Digital Audio format: audio compact disk). Audio CDs can receive approximately 74 to 80 minutes (from 640 to 700 MB) of music.

**Activity 8**: With a machine equipped with a recorder, copy to CDs the audio files that exist in the "burn CD" in Audio format.

1) Insert a CD into the CD drive.  
2) Run the burning software available.  
3) Select "CD Audio" then click "new".  
4) Open the folder "CD burning" then drag files to burn to the window "Audio"  
5) Click "burn".  

**Notice**: The burner requires special software to store data. Writing data to an optical disk is called **burning**.

---

**b - The DVD**  
Digital Versatile Disc is identical in size and shape to a CD but it can store much more information, its storage capacity is around 4.7 GB and can be a DVD-ROM, DVD-R, DVD + R, DVD + RW, DVD-RW, ...
II – 6 – The tape
This storage medium is used to save a large amount of information (archiving).

II – 7 – The USB flash drive
A USB key (or flash drive) is a storage memory. To use it, you must plug it into a USB port.

In this chapter, I have learnt ...

- A recording medium can store data permanently.
- There are several units measuring capacity memories such as byte (B), kilobyte (KB), the megabyte (MB), gigabyte (GB), …
- To make a backup of your data, you should always take two constraints into account: the device available and the amount of information to keep.
Exercise 1:
What am I?
- I am a storage medium, I am plugged into the USB port, my size is around 14 GB.
- I am a storage medium, my size is around 4.7 GB.

Exercise 2:
Complete the sentences with words from the following list:
recording medium / storage / capacity

- A storage medium is an element that can retain data. It is characterized by its storage ……………………
- The unit for measuring the storage capacity of a …………………… is a byte.
- Floppy Disks and hard drives are …………………… media

Exercise 3:
Order these units in an increasing order:
1 Kilo-byte / 1 byte / 1 Mega-byte / 1 Giga-byte
……………………<……………………<……………………<………………

Exercise 4:
1/ Create the following tree on drive C.

2/ Create the file "Storage media" of a "Microsoft Word Document" type in the "My data" folder. Open the file and provide a comparison between the CD and the DVD.
3/ Copy the file « Storage media » on the floppy disk.
Exercise 5:

You have the following files that you wish to save on memory aids.

1) Suggest the most appropriate storage medium for each file:

<table>
<thead>
<tr>
<th>Data to save</th>
<th>File or folder size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poem.doc</td>
<td>98 kb</td>
</tr>
<tr>
<td>Chiffres.xls</td>
<td>246 kb</td>
</tr>
<tr>
<td>Conjugaison.doc</td>
<td>110 kb</td>
</tr>
<tr>
<td>VTS-01-0.VOB</td>
<td>267 778 kb</td>
</tr>
<tr>
<td>VTS-01-1.VOB</td>
<td>1 048 574 kb</td>
</tr>
<tr>
<td>VTS-01-2.VOB</td>
<td>1 048 574 kb</td>
</tr>
<tr>
<td>VTS-02-0.VOB</td>
<td>358 370 kb</td>
</tr>
<tr>
<td>Svg01.ZIP</td>
<td>9 917 kb</td>
</tr>
<tr>
<td>Svg02.ZIP</td>
<td>8 969 kb</td>
</tr>
<tr>
<td>Svg03.RAR</td>
<td>10 867 kb</td>
</tr>
<tr>
<td>Svg04.RAR</td>
<td>7 989 kb</td>
</tr>
<tr>
<td>Program Files</td>
<td>4,28 Gb</td>
</tr>
<tr>
<td>Windows</td>
<td>2,17 Gb</td>
</tr>
<tr>
<td>Britney Spears.mp3</td>
<td>333 820 kb</td>
</tr>
<tr>
<td>Kat De Luna.wav</td>
<td>3 369 kb</td>
</tr>
<tr>
<td>David Guetta.wav</td>
<td>7 890 kb</td>
</tr>
<tr>
<td>Mariah Carey.mp3</td>
<td>7 899 kb</td>
</tr>
</tbody>
</table>

2) It is assumed now that all files and folders are stored on the computer hard disk. Suggest a tree solution to store data in the most appropriate way.

Have you made your choice on the work in this chapter that you will keep in your portfolio?
Self-assessment

Reproduce the following statements on your research notebook.

1) Put a cross in the box corresponding to your answer.

<table>
<thead>
<tr>
<th>Question</th>
<th>True</th>
<th>False</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>A CD-ROM is an optical disk on which you can read and write.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We can read and write on a flash disk (USB drive).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The storage capacity of a floppy disk is higher than a CD.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To read from a floppy disk, you must use an optical disk drive.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A CD-RW is an optical disk on which you can read and write.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The storage capacity of a flash disk is larger than a floppy disk.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By using a CD-ROM, I can read data contained on a DVD.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By using a DVD drive, I can write data onto a DVD.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2) Check the characteristics of each storage medium.

<table>
<thead>
<tr>
<th>Storage medium</th>
<th>CD-Rom</th>
<th>CD-RW</th>
<th>DVD-Rom</th>
<th>DVD-RW</th>
<th>Hard disc</th>
<th>Floppy disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>characteristics</td>
<td>Magnetic</td>
<td>Optical</td>
<td>Erasable</td>
<td>Uerasable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, then you should review this chapter.

Researcher’s Corner

- The mass storage (storage media) can record data on a permanent basis. Are there any other memories that can record data temporarily?
- Search other examples of removable disks around you.
OBJECTIVES
At the end of this chapter, you will be able to:
• Defining a network.
• Work in an independent way in a LAN environment.
• Sharing resources and software.

Toolbox
• A computer
• A local Area Network
• A printer
• A local messaging software.
• A file entitled "Cours.doc"

Reminders and presentation of a LAN

PLAN
I- Reminders 36
II- Computing network 37
   II-1- Presentation of a computing Network 37
   II-2- LAN and WAN 37
III- Exploitation of basic services of a local network 39
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   III-2- Printer sharing 40
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   III-4- Split Screen 42

In this chapter, I have learnt ...
I practise 43
Self assessment 44
Researcher’s Corner 44
I - Reminders

Activity 1:
Use Figure 1 to complete the following table:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of storage media</td>
<td></td>
</tr>
<tr>
<td>The number of folders in drive C</td>
<td></td>
</tr>
<tr>
<td>The number of files in the &quot;computing&quot; folder.</td>
<td></td>
</tr>
<tr>
<td>The total size in kilobytes of files in the &quot;computing&quot; folder.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1

Activity 2:
By using your knowledge, complete the following paragraph with the following terms:

media / folder / file

The storage... ... ... ... ... ... ... can store files and folders on a permanent basis. A ... ... ... ... ... is a set of data constituting a document of any kind. A ... ... ... ... ... ... is a structure containing files and folders. You can create, duplicate, move, rename and delete files and folders.

Activity 3:
1) Create the following tree on drive C.
2) Create the "date" file of a "Microsoft Excel" type in the "Spreadsheets" folder and type your date of birth in this file.
3) Copy the file "date" in your floppy disk.
II – Computing Network

II – 1 - Presentation of a Computing Network

Activity 4:
Observe carefully figure 2 below and describe it. Can you suggest a name for this figure?

![Figure 2](image)

Observation:
This figure represents the earth, because you can see continents. You can see computers and relay satellites scattered across the entire surface of the Earth and connected by various media (waves and cables). Moreover, these means of communication intertwine and cut: This is a representation of the Internet.

Activity 5:
Using what you’ve already known, complete the definition of computer network using the following terms:

- communication
- equipment
- exchange

Definition:
A computer network is a set of computer (hardware and software) connected by means of (hardware and software) to information and share resources hardware and software.

II – 2 – LAN and WAN

Activité 6:
Here are all the computers available to a company that moved into this building. By using what you’ve observed in the activity 4, can you suggest a way for every computer in company can be connected and exchange data? After depicting your solution in Figure 3, you’re asked to compare the two figures 2 and 3 depending on their geographical scope.

![Figure 3](image)
**Observation:**
The network of "Figure 3" is less extensive than that of "Figure 2". It covers a very small geographical area, it's a Local Area Network or LAN.

**Activity 7:**
The following figure represents the distribution of water in a building. We suggest you to compare the strength of the flow of water (water flow) between houses 3 and 6. To do this, complete the following table:

<table>
<thead>
<tr>
<th></th>
<th>House 3</th>
<th>House 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance in centimetres between the water source and the tap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of relays between the water source and the tap</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observation:**
Because the distances between the houses and the water point are not the same, also, the number of relays on the distribution of water is not the same between the two houses, the force of the water flow of the two houses is not the same. The flow of water from house 3 is stronger than that of house 6 because house 3 is very close to the water source. So the strength of the flow depends on the distance and the number of intermediate relays that will be necessary for the delivery of water:

*Shorter is the distance and fewer are the relays so, stronger will be the flow and vice versa.*

**Activity 8:**
By using the findings of the previous activities, complete the two definitions with the following words: high / wide / network / telephone / reduced / low.

A LAN (Local Area Network) is a ............. composed exclusively of computers located in a ............. geographical area as a building or establishment. It provides data transmission with a ............. speed.
WAN (Wide Area Network) is composed of computers in a geographical area, such as a city or a country. This kind of network can operate through a line transmission by radio waves or satellites. It provides data transmission with a flow.

III - Exploitation of basic services of a local network

Activity 9:
You have in your computer, a folder that contains text files, image files and audio files. Your friends want to have a copy of the contents of your file. Suggest possible solutions.

Observation:

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Make a copy of the folder in optical media (CD-ROM) and each of your friends will have his/her own CD-ROM. | - Waste of time  
- Loss of money                                    |
| Each time one of your friends needs one of these files, he/she will copy it to removable media. | - Loss of time caused by the numerous copies.  
- You will be disturbed by each copy, because you have to interrupt your work to allow your friends to copy the files they need. |
| Connecting these computers to share the folder. | - Solution reliable, no discomfort to the user who have the file.  
- Viewing the contents of the file at any time. |

III - 1 - Document Sharing

To share a folder in a local network, we must proceed as follows:

1) Select the folder to share
2) Right click with the mouse.
3) Choose the "Sharing and Security" command.
4) Check the option "Share this folder on the network" of the tab "Sharing"
5) Confirm with "OK".

![Sharing and Security window](image)
III - 2 - Printer sharing

Activity 10:
Open the file « Cours.doc » in drive C then print it.
Is this operation possible ? Why ?

Observation:
To print this file, you must connect the printer to your computer.

Activity 11:
Can you find another solution that will allow you to print your file without connecting the printer to your machine ?

Observation:
As for files and folders, you can share a printer on the LAN.

To share a printer installed on a LAN, you should follow the following steps :
1) Select the printer to share.
2) Right click with the mouse.
3) Select the "Sharing" option.
4) Activate the "Share this printer" radio button and suggest a share name.
5) Confirm with "OK".

III - 3 - Sending and receiving messages

Activity 12:
Remember the role of this software and the network on which you can use it.
**Observation:**
This software allows sending and receiving messages on the Internet.

**Activity 13:**
Can you send and receive messages through your LAN?

**Observation:**
Like the Internet, LAN offers the possibility to send and receive messages.

**Activity 14:**
By using what you already know about sending and receiving messages through the Internet, launch the local mail software available then send a "HELLO" message to your friends.

**Interpretation:**
1) Run the local messaging software.
2) Connect to other computers.
3) Click on "Chat".
4) Specify the receiver in the "send Zone".
5) Type the message to send in "The message area".
6) Click on "Send button".

**Question:**
Observe the illustrations carefully. Are there other ways to communicate apart from text input? Give your answer by indicating what helped you to find it.
III – 4 - Split Screen

Activity 15:
As part of your project, you have to create a PowerPoint presentation. Suggest a method of exposing your screen to your friends.

Interpretation:
1) Run the "NetMeeting" software.
2) Connect to other computers.
3) Click on "Share Program".
4) Select the application to share.
5) Click on the "Share" button.
6) To stop sharing, click on "Unshare".

In this chapter, I have learnt ...
- There are two types of networks: local area network (LAN) and wide area network (WAN).
- The network ensures the sharing of hardware and software resources and facilitates communication between distant entities.
- The network reduces distances and costs.
Exercise 1:
Complete the definition of the network with words from the following list:
equippments / speed / high / rules / area

A LAN is a set of ................. connected to a geographical ...........
(Business Administration ...) using specific ................. (communication protocol). Very often, the ........... of transmission over a local network, is .............

Exercise 2:
Create a folder named "Course" on drive C then share it.

Exercise 3:
Give three advantages of having a computer network.
...............................................................................................................................................
...............................................................................................................................................

Exercise 4:
By using the local messaging software, send your friends a message (text or voice) which contains the definition of a local network.

Exercise 5:
Complete the definition of network with words from the following list:
telecommunication / of communication / linked / exchange / computer

A.................... network is a collection ................................. of objects and information (computers, work stations network cards, modems, network printers, phone connections,...). These entities are .................... and interconnected by means of physical lines called lines. They ensure the transportation and the .................. data and information.

Exercise 6:
Make a poster that you will stick close to your computer. The poster is for all students who want to use the network to access files on your computer. It must contain at least 3 boards and 3 bonds of use of the contents of your hard disk that you kindly share and make available to others.

Have you made your choice on the work in this chapter that you will keep in your portfolio?
Reproduce the following table on your notebook research and complete it.

<table>
<thead>
<tr>
<th>Question</th>
<th>True</th>
<th>False</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet is a LAN.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A local network exchanges data with a high speed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We cannot share printers in a local network.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In a local network, we can share files.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You cannot use the mail service in a local network.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The use of local networks is very expensive.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In a local network, you can share hard drives.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The word «speed/flow» refers to the ability speed data over the network.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The distance does not affect the flow of a network.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mail is used only in a local network.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I use a computer network, I can access all computers connected and change configurations according to my needs, move files and folders on my way and block access to certain applications.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, then you should review this chapter.

**Researcher’s Corner**

- To make a connection in a local network you need a network card and cables. What is required to connect to an extended network?
- There are mobile phones equipped with the Bluetooth option. Can you explain this data transmission? Do you know similar transmission principles?
Bill Gates
Born October 28, 1955 in Seattle, he is a computer scientist and entrepreneur. American pioneer in the field of micro computers. In 1975, at the age of 20, he founded with his friend Paul Allen, Microsoft Corporation, which designed the 1st operating system MS DOS, MS Windows family and office software (MS Word, Ms Excel, MS PowerPoint, ...).

In this unit
Word processing.
Image processing
Sound processing
Presentation software.
Spreadsheet Software

CHAPTER 2

Exploitation Of Software

• Year 7
- Word processing
- Image processing

• Year 8
- Sound processing
- Presentation software

• Year 9
- Spreadsheet
<table>
<thead>
<tr>
<th>Français</th>
<th>العربية</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casque</td>
<td>خوذة</td>
<td>Headphone</td>
</tr>
<tr>
<td>Diaporama</td>
<td>عرض شرائح</td>
<td>Slideshow</td>
</tr>
<tr>
<td>Effet sonore</td>
<td>تأثير صوتي</td>
<td>Sound effect</td>
</tr>
<tr>
<td>Enregistrement</td>
<td>تسجيل</td>
<td>Saving</td>
</tr>
<tr>
<td>Graphique</td>
<td>مخطط</td>
<td>Chart</td>
</tr>
<tr>
<td>Insertion</td>
<td>إدراج/إدخال</td>
<td>Insertion</td>
</tr>
<tr>
<td>Lien hypertexte</td>
<td>رابط بين النصوص</td>
<td>Link</td>
</tr>
<tr>
<td>Logiciel de présentation</td>
<td>برمجة عرض</td>
<td>Presentation Software</td>
</tr>
<tr>
<td>Logiciel de traitement d’images</td>
<td>برمجية معالجة الصور</td>
<td>Software Image processing</td>
</tr>
<tr>
<td>Logiciel de traitement de son</td>
<td>برمجية معالجة الصوت</td>
<td>Software sound processing</td>
</tr>
<tr>
<td>Logiciel de traitement de textes</td>
<td>برمجية معالجة النصوص</td>
<td>Software word processing</td>
</tr>
<tr>
<td>Logiciel Tableur</td>
<td>برمجية معالجة جداول البيانات</td>
<td>Software Spreadsheets</td>
</tr>
<tr>
<td>Microphone</td>
<td>مصعد/ميكروفون</td>
<td>Microphone</td>
</tr>
<tr>
<td>Mise en forme</td>
<td>تشكيل النصوص</td>
<td>Formatting</td>
</tr>
<tr>
<td>Mise en page</td>
<td>إخراج</td>
<td>Layout</td>
</tr>
</tbody>
</table>
OBJECTIVES

By the end of this chapter, you will be able to:

• Use the basic functions of a software of word processor (MS Word)
• Create documents, format and lay them out
• Insert objects into a document
• Print documents

PLAN

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Toolbox

• A computer
• A wordprocessing software
• Three files of type Ms-Word:
  1/ « My first text.doc »,
  2/ « Peripherals.doc »
  3/ « Editing.doc »
I – Presentation

I-1- Introduction

Activity 1:
Observe these two texts. Are they identical or different? If you have to write a text, how do you present it, as text1 or text2?

Observation:
- There are two illustrations of the same text. One text is hand written, the other is typed using a computer.
- It is possible to identify the following differences:

<table>
<thead>
<tr>
<th>Description of text1</th>
<th>Description of text2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The text is hand written.</td>
<td>The text is entered using a computer.</td>
</tr>
<tr>
<td>It is poorly presented and unreadable.</td>
<td>It is better presented.</td>
</tr>
<tr>
<td>In case of error or omission of a word, we must rewrite the entire text (or block and rewrite).</td>
<td>The text contains no erasures.</td>
</tr>
<tr>
<td>Spacing between lines is not the same.</td>
<td>Apparently, the text contains no mistakes in grammar or spelling.</td>
</tr>
<tr>
<td>The alignment of the text is not respected.</td>
<td>The same text can be reused.</td>
</tr>
</tbody>
</table>

Interpretation: It is better to use a computer to enter a text. This text will be presented, formatted and laid out. Moreover, it can be reused.

Activity 2:
Enumerate all the accessories that you are required to write the lesson that your teacher dictates? Do you think these accessories are available on a word processing?
Observation :

- I need a blank sheet.
- I need a blue pen to write, pen color for titles, a ruler to underline, glue and scissors for cutting the images and documents to stick in my notebook ....

With a word processing:

- The specifications will be replaced by the input area.
- The pens will be replaced by a keyboard and a color palette.
- Other accessories such as scissors, a ruler and glue will be replaced by a toolbar.

Interpretation:

To capture and present text, you can use a computer with a program (software) Word Processing. Software for word processing are designed to meet the needs of users in the design of documents and put at your disposal a multitude of tools to enhance your text.

I – 2 - Definition of a word processing software

A word processing software is the basic tool for the manipulation of text on a computer. It is used to capture, edit, correct, improve, perform, record and print text. Among the word-processing software are:

- **Word** of the firm **MicroSoft**
- **Open Write** **Open Office** (Free)

In the following, we use the word processing "Microsoft Word".

I – 3 – Starting MicroSoft Word

**Activity 3**:

Do you know how to start **Microsoft Word**?

According to the illustration above, against, to start **Microsoft Word**, you can:

- First method:
  1) Expand the **Start** menu.
  2) Choose the command "**All Programs**".
  3) Select "**Microsoft Word**"
• Second method:
  Double-click the shortcut "Microsoft Word" on the desktop of your computer.

  *The home page of the MS-Word displays*

**I - 4 - Home page of MS-Word**

(Figure 1)

<table>
<thead>
<tr>
<th>N°</th>
<th>Name and role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The <strong>title bar</strong> lets you know the name of the opened document.</td>
</tr>
<tr>
<td>2</td>
<td>The <strong>menu bar</strong> that you use to select commands.</td>
</tr>
<tr>
<td>3</td>
<td>The <strong>Standard toolbar</strong> allows you to use shortcuts to commands.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Toolbar formatting</strong> allows you to use shortcuts for formatting.</td>
</tr>
<tr>
<td>5</td>
<td>The <strong>ruler</strong> allows you to know the position of the cursor.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Scrollbars</strong> will allow you to view the rest of the page.</td>
</tr>
<tr>
<td>7</td>
<td><strong>Bar design</strong> allows you to insert figures in your documents.</td>
</tr>
<tr>
<td>8</td>
<td>The <strong>status bar</strong> gives informations on the current document. (Number of pages, cursor position, language dictionary, ...)</td>
</tr>
<tr>
<td>9</td>
<td>The <strong>cursor</strong> informs you about the position of writing.</td>
</tr>
</tbody>
</table>
II – Typing and saving document
II – 1 – Typing (or entering) text

Activity 4:
1) Start the word processing software "Microsoft Word".  
2) Type the text. The symbol " " on your keyboard means that you must return to the line by pressing the button " " (Enter) of your keyboard.

A text consists of paragraphs. The paragraphs are sentences. Paragraphs always begin a new line and end with a newline.

But what "Windows XP" ?
The operating system Microsoft Windows XP allows us to run multiple application simultaneously.
The English language is rich.
WRITE IN CAPITAL.
The email address of my friend is:

foulen_ben_foulen @ edunet.tn

According to you, why didn’t we press "Enter" on the keyboard at the end of the first line of the first paragraph?

Pressing the "Enter" key will be interpreted by the software as a change of paragraph. The software automatically manages the passages to the next line. That is why it will not press "Enter" at the end of a paragraph (or a title or subtitle are considered as paragraphs).
### Activity 5:
Now that you start to use your keyboard better, do you know how to get the three characters that "Shift" and "Alt Gr" appear on the button? You can use the «Shift ‹» and «Alt Gr» keys.

<table>
<thead>
<tr>
<th>N°</th>
<th>Name and role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Caps Lock (Shift Blocked)</strong>: This button allows you to block and unblock the capitals. A green light illuminates the keyboard when the capitals are activated.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Spacebar</strong>: The longest keyboard button. This button allows you, when entering text, create a space between words.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Backspace key</strong>: This key allows you to remove one or more characters before the cursor.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Enter key</strong>: This key will allow you to return to the line in a text input.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Delete key</strong>: You use this button to delete one or more characters to the right of the cursor.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Shift keys</strong>: These keys allow you to insert one or more characters in upper case without having to use the &quot;Shift Lock&quot;. When the Shift key is pressed, the keyboard switches to uppercase. Upon being released, it returns to lowercase.</td>
</tr>
</tbody>
</table>

### II – 2 – Saving a document

**Activity 6:**
You have not finished entering text, and yet you have to interrupt your work. What must you do to keep your work and complete it later?

**Observation:**
For fear of losing the information already entered, you must save the text on a storage medium.

0 : (Character from top left): For this character, you must type on the button "... ... " and then hold it ..... this key.

à : (Character from bottom left): For this character, you must press the button "... ... " and then hold it ..... this key.

@ : (Character of bottom right) : To get the character arobase @, you must hold down the "... ... ... " then this key.
Interpretation:
Saving a file is an important operation because it allows you to recover your text. Therefore you should regularly back up your work.

Activity 7:
Underline in the following sentence what indicates the file name and location of the copy and then perform the saving requested:
"Save the text already entered by name" My first text "in your folder identified with your name and surname on drive C."

Interpretation:
1) Choose the "File" menu.
2) Choose the "Save As" command.
3) In the "Save in" area, select the parent folder.
4) Double-click the folder named by "Name and surname".
5) In the "File Name", enter the file name "My first text".
6) Click "Save".

Activity 8:
If you made any changes to your text, you need to save it again before closing. To do this, the illustration below can help you to complete the procedure.

Interpretation:
1) Choose the menu «..........................»
2) Choose the command «..........................» «or»

Click on the button located in the toolbar.
III – Closing and opening a document

III – 1 – Closing a document

Activity 9:
At the end of the session and after saving your document, what must you do before exiting the application?

Observation:
Before you close the application, I have to close my file.

Interpretation:
1) Choose the « File » menu.
2) Choose the « Close » command.

« Or »
Click on the button ✗ to close the window.

III – 2 – Opening a document

Activity 10:
Now, you want to open the saved document in the folder identified by your full name. What must you do then?

Interpretation:
1) Choose the « File » menu
2) Choose the « Open » command
3) Select the drive C then double-click the personal folder named by "name and surname".
4) Select the name of the file to open
5) Click on the button « Open »

« Or »
Click on the shortcut located in the toolbar and follow the previous process from Step 3.
IV- Print layout

Activity 11:

Compare these two texts and give conclusions.

Observation:

<table>
<thead>
<tr>
<th>Text1</th>
<th>Text2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text1 is badly divided on the map: There is not enough space before the text, and after it.</td>
<td>Text2 is balanced on the sheet.</td>
</tr>
<tr>
<td>Text1 is very close to the edges of the page and reading is difficult.</td>
<td>Text2 is well positioned on the sheet.</td>
</tr>
</tbody>
</table>

Interpretation: For the balance of your text on the sheet, it is preferable to perform a layout of the text, to specify the margins and the text direction.

Activity 12:

Apply the following layout to the document entitled "My first text".

- Top and bottom Margin = 3 cm
- Left and right Margin = 3.2 cm
- Gutter = 1 cm
- Page Orientation = portrait
- Gutter position = Left
- Paper Size = A4 (21 cm * 29.7 cm)

Interpretation:

1) Choose the « File » menu
2) Choose the « Print Layout » command
3) In the "Margins", specify the margins and orientation
4) In the tab "Paper", choose the paper size (A4, or custom size)
5) Validate by clicking on the "OK" button.
Activity 13: by using the previous picture, complete the dots of the following 3 figures with suitable suitable.

V- Correcting a document

Activity 14: Open the file « Correction.doc » located in your personal file.


Why are certain words underlined in red and some in green ?

Observation:
I note that the words underlined in red are misspelled and the words underlined in green contain grammar mistakes. Word has a utility to check the spelling and grammar of a text. This check is based by default on a standard dictionary provided with the software.
**Interpretation**:
1) Choose the «Tools» menu
2) Choose the «Grammar and Spelling» command
   (Word looks for errors and suggests corrections.)
3) Accept or reject each proposed correction.
4) Click on the «OK» button to close the window

**Activity 15**:
Type the following sentence: "*In the company of Mounir, I could admire, the souks of Gallela, the beautiful fabrics that beautiful Djerbians use to make their costume pageantry."
Why are some words underlined in red by the software while being spelled correctly? You can use a dictionary to check spelling.
Use the answer to the previous activity and complete it by adding the response to this activity.

**VI – Select, copy and move a text**

**Activity 16**:
Observe the following text of the poem. How many times does the phrase in bold appear?

---

**LA FOURMI**

Une fourmi de dix-huit mètres,
Avec un chapeau sur la tête,
Ça n’existe pas, ça n’existe pas,
Une fourmi trainant un char,
Plein de pingouins et de canards,
Ça n’existe pas, ça n’existe pas,
Une fourmi parlant français,
Parlant latin et javanais,
Ça n’existe pas, ça n’existe pas,
Et pourquoi pas?

Robert Desnos

---

**Observation**:
I note that the refrain (phrase in bold) is repeated almost at the end of each paragraph. Is there a quick way to avoid retyping the same sentence?

**Interpretation** : Justification
The manipulation of blocks is one of the most frequently used in word processing. This is reflected by three operations which will be conducted in a specific order:
1) Define the text area to handle. This is called the selection.
2) Set operation. This may be a copy or move.
3) Identify the location of the operation. This operation consists in pasting the selection in step 1.
VI - 1 - Selection

Activity 17 :
How to select a text block ?

Observation :
The selection of a text is the basis of manipulation of text in Word. It is necessary to determine the area in which there will be an operation. The selected text is highlighted or in reverse video.

<table>
<thead>
<tr>
<th>Object to select</th>
<th>Examples of action (s) to do to make your selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>A word</td>
<td>Double-click on the word.</td>
</tr>
<tr>
<td>A line</td>
<td>Click on the selection bar at the line level.</td>
</tr>
<tr>
<td>A sentence</td>
<td>Keep the &quot;Ctrl&quot; key down and then click anywhere in the sentence.</td>
</tr>
<tr>
<td>A paragraph</td>
<td>Click three times on the paragraph or double-click the selection bar on a line of the paragraph.</td>
</tr>
<tr>
<td>A block</td>
<td>Put the cursor at the beginning of the block and then drag the mouse to the end of the block.</td>
</tr>
</tbody>
</table>

Amaze your friends by finding other combinations of keys on the keyboard to make selections.

VI - 2 - Copy and move

To copy the refrain, you can follow the following steps :
1) Select the text
2) Choose the « Edit » menu
3) Choose the « Copy » command
4) Position the cursor at the location of the copy
5) Choose the « Edit » menu
6) Choose the « Paste » command
If you want to move a block of text from one area to another, you can:

1) Select the block of the text
2) Choose the «Edit» menu
3) Choose the «Cut» command
4) Get the cursor at the location of moving
5) Choose the menu «Edit»
6) Choose the «Paste» command

VII - Formatting and insertion of objects

Activity 18:
Observe these documents carefully. Which is the best? Can you say why?

Observation:

<table>
<thead>
<tr>
<th>Description of document1</th>
<th>Description of document2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The title should be placed in the middle.</td>
<td>• The title of the document is emphasized because it is centred and underlined.</td>
</tr>
<tr>
<td>• Lines of this document are close.</td>
<td>• Lines are well spaced.</td>
</tr>
<tr>
<td>• The text is poorly aligned and poorly ventilated.</td>
<td>• Paragraphs are well aligned.</td>
</tr>
<tr>
<td>• The text is not illustrated.</td>
<td>• This document contains illustrating images.</td>
</tr>
<tr>
<td></td>
<td>• The classification of devices is done in a table.</td>
</tr>
</tbody>
</table>

Interpretation: For the good presentation of your text, you can format characters and paragraphs. For a well understanding of the text, you can insert objects (images, table, ...).
Activity 19:
Open the text entitled "Peripherals.doc" located in your personnel folder. Format the characters of the text and save the changes.

<table>
<thead>
<tr>
<th>Object</th>
<th>Formatting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td><strong>Font</strong>: Arial, <strong>size</strong>: 18 pts, <strong>style</strong>: bold and underlined, <strong>color</strong>: red.</td>
</tr>
<tr>
<td>Subtitles Input and output peripherals</td>
<td><strong>Font</strong>: Arial, <strong>size</strong>: 15 pts, <strong>style</strong>: bold italic, <strong>color</strong>: orange.</td>
</tr>
<tr>
<td>Paragraph</td>
<td><strong>Font</strong>: book antiqua, <strong>Size</strong>: 12 pts, <strong>color</strong>: noire.</td>
</tr>
</tbody>
</table>

Interpretation:
1) Select the text block
2) Choose the menu "Format"
3) Choose the "Font ...
4) Select the desired formatting
5) Click on "OK"

« OR »
Choose the formatting you want directly from the toolbar layout.
b - Formatting paragraphs

**Activity 20:**
Still on the same document "Peripheral.doc" apply the following formatting to the following paragraphs. Remember to regularly save the changes.

<table>
<thead>
<tr>
<th>Objet</th>
<th>Formatting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Alignment : centred, spacing after : 18 pts</td>
</tr>
<tr>
<td>Paragraph</td>
<td>• Alignment : justified</td>
</tr>
<tr>
<td></td>
<td>• Indentation right : 1 cm</td>
</tr>
<tr>
<td></td>
<td>• Spacing before and after : 12 pts</td>
</tr>
<tr>
<td></td>
<td>• Indentation left : 1 cm</td>
</tr>
<tr>
<td></td>
<td>• First line indentation : 1,25 cm</td>
</tr>
<tr>
<td></td>
<td>• Line spacing : 1,5 lignes</td>
</tr>
</tbody>
</table>

**Interpretation:**
1) Select paragraph
2) Choose the "Format" menu
3) Choose "Paragraph"
4) Select the desired formatting
5) Validate by clicking on the "OK" button

« OR »
Choose the formatting you want directly from the toolbar layout.

VII – 2 – Inserting objects

**Activity 21:**
The text entitled "Peripheral.doc" begins to look like the document "Document2" of the activity No. 18. What else to add now?

**Observation:**
What is missing to document "Peripheral.doc" ?
• the entry table and the formatting of contents.
• illustrations (pictures).
Later in this chapter, you'll discover how to insert objects into a document.
a - Inserting a table

**Activity 22:**
Observe the table in document2 laid out in activity 18. How many lines and columns has it got?
Observe now, the menu bar of the word processing software, which is the menu that allows you to draw a picture?
Using your answers to the questions and illustrations below, complete the procedure of inserting a table in a document and apply it to the "Peripherals.doc".

**Interpretation:**

1) Position the cursor in the desired position.
2) Choose the menu "... ... ... ... ... ... ... ... ... ... ... ... ... ... ..."
3) Choose the command "... ... ... ... ... ... ... ... ... ... ..."
4) Choose the sub-command "... ... ... ... ... ... ... ... ... ... ..."
5) Specify the number of " ... ... " and " ... ... "
6) Validate by clicking on the "OK" button

---

b – Inserting images

**Activity 23:**
To complete your work, you need to add images to illustrate your document. Search in figure 1 (Home of MS-Word), the different methods to insert an image into a document. Then complete the process and apply it on your document.
Interpretation:
1) Put the cursor at the desired location.
2) Choose the menu "... ... ... ... ..."
3) Choose the command "... ... ... ..."
4) Choose the sub-command "... ..."
5) Click on the desired image

OR
Click on the shortcut located on the toolbar "Drawing" and select the desired image

VIII – Printing

Activity 24:
Your work is now finished and you want to keep it in your portfolio. Suggest one or several solutions. You'll have to use your knowledge of the previous chapter.

Observation:
It is possible to record the work on a removable auxiliary memory, as it is also possible to edit the document on a sheet.

Interpretation:
Saving a document is an operation that you already know how. Perform the printing of your document by applying the procedure below and range if you like, the document obtained in your portfolio.

Interpretation:
1) Select the "File" menu
2) Select the "Print" command
3) Choose the printer to use
4) Specify the number of copies
5) Specify the page or pages to print
6) Validate by clicking on the "OK" button

OR

Observe Figure 1 (homepage of MS Word), it is possible to find another way to print your document: Click the button on the standard toolbar and complete the dialogue box below.
In this chapter, I have learnt...

- Word processing software is used to create, manipulate and print texts.

- To save documents, you must specify a file name and location.

- To improve the ergonomics of a text, you can:
  * customize its layout and formatting,
  * illustrate by objects (table, image, ...).
Exercise 1:
1) Type the following text:
Digitization of an image is to convert its analog in a digital form. The new form can be processed using a modified image processing software such as PhotoFiltre. Scanning an image is done with several devices:

<table>
<thead>
<tr>
<th>Scanner</th>
<th>Digital camera</th>
<th>Webcam or cameoscope</th>
</tr>
</thead>
</table>

2) Save your text as "Digitization" in your personal folder.
3) Apply the following layout:
   - Top margin = 2 cm
   - Left margin = 3 cm
   - Gutter = 1 cm
   - Text orientation = portrait
   - Bottom margin = 2 cm
   - Right margin = 3 cm
   - Gutter position = Left
   - Paper size = A4 (21 cm * 29,7 cm)
4) Add the following title to your text: «DIGITIZATION OF AN IMAGE»
5) Check spelling and grammar of text
6) Apply the formatting of the following characters:
   - Title: bold, underlined and centered,
   - Name of equipment: bold, italic and blue color
   - All of the words "digital" should be underlined,
7) Apply the formatting of paragraphs follows:
   - alignment: justified
   - Indentation left and right: 1,5 cm
   - Spacing before and after = 12 pts
   - Line spacing = double
8) Save your text under the same name.
9) Print the document and class it in your portfolio.

Exercise 2:
Using word processing software, create your school ID card.

<table>
<thead>
<tr>
<th>School ID card</th>
<th>Time table</th>
</tr>
</thead>
<tbody>
<tr>
<td>School ………….</td>
<td>Monday</td>
</tr>
<tr>
<td>Schoolary year: 20… /20…</td>
<td>9-10</td>
</tr>
<tr>
<td>Name : ………………</td>
<td>9-10</td>
</tr>
<tr>
<td>Surname : ……………….</td>
<td>10-11</td>
</tr>
<tr>
<td>Class : ………………..</td>
<td>10-11</td>
</tr>
<tr>
<td>Signature of the Director</td>
<td>11-12</td>
</tr>
</tbody>
</table>

Have you made your choice on the work of this chapter that you will keep in your portfolio?
Self-assessment

Evaluation 1: Tick the styles corresponding to texts.

<table>
<thead>
<tr>
<th>Text with style</th>
<th>Normal</th>
<th>Bold</th>
<th>Italic</th>
<th>Underlined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluation 2: Check the formatting of the following paragraphs.

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Centred</th>
<th>Left aligned</th>
<th>Right aligned</th>
<th>Justified</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can use word processing to prepare a presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can use word processing to prepare a presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can use word processing to prepare a presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can use word processing to prepare a presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you have less than 7 correct answers, then you should review this chapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- How to add a border to a page?
- To avoid losing your document, following an accidental deletion, do you know a method to create a backup?
- How to select two non adjacent text blocks?
- How to change a coloured image in black and white?
OBJECTIVES

By the end of this chapter, you will be able to:

- Perform basic image processing operations.
- Use tools for creating drawings.
- Import and digitize an image from a scanner.

ToolBox

- A computer.
- An image processing software
- A scanner or digital camera.
- Images (flag, fish, bike, Harry Potter, horses, Tweety, Mario)

PLAN

I- Introduction  
II - Creating drawings with PhotoFilter  
II-1- Launch and description of the home page  
II-2- Creating a drawing  
III- Importing a digital image  
IV- Basic image processing  
In this chapter, I have learnt ...  
I practise  
Self-Assessment  
Researcher's Corner
I - Introduction

Activity 1:
After reading the two documents, try to compare them and give conclusions.

Document 1:
This device allows an immediate glimpse of the pictures and avoids the purchase of film and development costs. The images can easily be altered or modified by using an image processing software, published on the Internet or imported into a word processor.

Document 2:
This device allows for an immediate glimpse of the pictures and avoid the purchase of film and development costs. The images can easily be altered or modified by using a database of images, published on the Internet or imported into a word processor.

Observation:

<table>
<thead>
<tr>
<th>Document 1</th>
<th>Document 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The document is composed entirely of text.</td>
<td>• The document is illustrated by an image.</td>
</tr>
<tr>
<td>• The document is not aesthetic.</td>
<td>• The document is more aesthetic.</td>
</tr>
<tr>
<td>• The text may not be easily understood.</td>
<td>• The text of the document is simplified by the inclusion of an illustrative image.</td>
</tr>
<tr>
<td>• The document is badly presented.</td>
<td>• The document is well presented and easy to understand.</td>
</tr>
</tbody>
</table>

Interpretation:
The document 2 is more aesthetic, easier to understand and well presented as it contains an illustrative image. More generally, it is preferable to insert an image to aerate the text of a document or help understanding.

Activity 2:
How can you obtain images to be included in a document?

Observation:
Images can be created or copied from a CD, Internet, magazine, ...

Interpretation:
You can create your own images, as it can be copied from one medium (CD photo, internet, magazine, ...). Throughout this chapter, you will see how to create your own image or import an image into a document.
Activity 3:
1) What are the geometrical shapes that form the right figure?
2) Redraw on your notebook, the drawing of the figure-against.
3) What do you change (or add) in this design for the flag of Tunisia? Make these changes to your notebook.

Observation:
Geometric shapes that form the design are 3 circles and a rectangle.
For the flag of Tunisia, you should:
• draw the rectangle and the 3 circles,
• erase the common part (right) of the two inner circles,
• add a star
• color with red, some areas of the drawing.

Activity 4:
Can you do the design on your computer? If yes, what do you need?

Observation:
Of course, it is possible to draw the flag of Tunisia on my computer. I will need a software for creating images.

Interpretation:
Search on your computer desktop, software that allows you to make drawings. (Examples: PhotoFiltre, PhotoShop, MS Paint, ...).
The software we will use throughout this course is "PhotoFiltre".

II - Creating drawings with PhotoFiltre
II - 1 - Launch and description of the home page

Activity 5:
Do you know how to run the software «PhotoFiltre»?

Remember how you carried in the previous chapter to launch an application. You can use the following illustration to run "PhotoFiltre".

• First method:
  1) .................................................................
  2) .................................................................
  3) .................................................................

• Second method:
Double-click the shortcut "PhotoFiltre" on the desktop of your computer.
The home page of the software «PhotoFiltre» is displayed on your screen.

Activity 6:
You begin to be more and more accustomed to the homepages of the softwares. Perhaps you recognize some objects?

<table>
<thead>
<tr>
<th>Object</th>
<th>N°</th>
<th>Object</th>
<th>N°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Palette</td>
<td></td>
<td>selection tools Palette</td>
<td></td>
</tr>
<tr>
<td>Menu bar</td>
<td></td>
<td>Title bar</td>
<td></td>
</tr>
<tr>
<td>Tools Palette</td>
<td></td>
<td>Status Bar</td>
<td></td>
</tr>
<tr>
<td>Tools Bar</td>
<td></td>
<td>New file</td>
<td></td>
</tr>
</tbody>
</table>

Interpretation:
The homepage of the software "PhotoFiltre" consists of several items to facilitate the work of creating and editing images. These include the title bar, menu bar, standard toolbar, color palette, coloring tools, tools, forms, work area, the status bar...

II – 2 – Creating a drawing

Activity 7:
With the image processing software available and helping you with responses to previous activities, achieve the requested drawing of activity 3.
Interpretation :
To create this drawing, you should :
• Create a document
• Identify in the toolbox the forms to insert and then insert them.
• Erase the arcs of circles superimposed.
• Identify in the colors palette, the colors to use then color the drawing.
• Save the drawing by giving it a name and specifying a location.

a – Opening a document

Activity 8 :
You have already had several opportunities to create a document with different software that you studied in class. Complete the process below. (You can help in the illustration)

By helping you with the illustration above, try to create a new document.

Interpretation :
1) Run the image processing software available "PhotoFiltre"
2) Choose the menu "... ... ... ...
3) Choose the command "... ... ... ...

A new window appears
4) We need to define the dimensions of the design :
• the width in cm (29 cm)
• the height in cm (20 cm)
• the resolution (sharpness), example 25 pixels / cm
5) Confirm by pressing "OK"
A new window appears, it is the work area of the new design.
b - Using the tool palette selection

Activity 9:
The work area is now ready. Observe carefully the available pallets and find the buttons needed to create the forms of the drawing.

Interpretation:
1) Click the button "Rectangle" of the palette selection.
2) Move the mouse pointer in the work area.
3) While pressing the left mouse button, drag the mouse until the desired size of the rectangle.
   The outline of the rectangle will be dotted
4) Put the mouse pointer in the middle of the rectangle and right click with the mouse.
   The text menu appears
5) Select the command "Contour and filling"
6) Choose the contour (color and width).

If you want to fill the rectangle with a color, select the command "Fill the bottom" and then choose the color and style filling.

Activity 10:
Now that you have learned to draw a rectangle, try to add the missing figures (the 3 circles).

Interpretation:
You must proceed in the same way, but this time, you will have to select the circle button in the tool palette shape.

1) Click on the button "Ellipse" from the tool palette selection.
2) Repeat the same steps of the construction of the rectangle.
3) Repeat step 1 and 2, twice to draw two more circles

Activity 11:
What do you make regular, to save a document?
**Observation:**
For fear of losing a document, you must save it to a storage medium.

**Interpretation:**
Saving a document is an important operation because it allows you to keep your job. You should therefore have regular saving of your work to avoid any loss of data.

**Activity 12:**
Save your document by name "Flag" in the folder identified by your name and surname.

**Interpretation:**
1) Select the "File" menu.
2) Choose the command "Save As".
3) Choose the location where you want to save your drawing.
4) In the "File Name", area enter the filename to save.
5) Click on the "Save" button.

![Save dialog box]

**d – Coloring areas of the design**

**Activity 13:**
Compare your drawing with the Tunisian flag. What do you do on your drawing to get the same image?

**Finding:**
To get the Tunisian flag, you must:
- erase some of the central circle to form a beautiful crescent
- draw the star
- Color the rest of the drawing (the crescent and the star).
Activity 14:
How to proceed to get the crescent?

Interpretation:
To get the crescent, you must clear the arc of the central circle.

1) Click the "Rectangle" from the tool palette selection (or choose the "Lasso" or "Polygon" tool).
2) Select the central part of the arc to erase.
3) Press the "Delete" key on your keyboard to delete the selected part.

Activity 15:
Now try to draw the star by yourself.

Interpretation:
To draw a star, you must:

1) In the tool palette selection, click on "Polygon". 
   *The pointer takes the form of a polygon attached to an arrow*
2) Move the pointer to the area where you will draw the star.
3) Move the mouse while keeping the left button of the mouse pressed, to form the five branches of the star.

Activity 16:
Use the figure in Activity 13, colour the various areas.

Interpretation:
To colour (or complete) a shape that you designed, you must:

1) In the colour palette, click on the colour to use.
2) In the tool palette, click on "Filling".
3) Move the pointer (Pot of paint) to the area to colour and then left click with the mouse.
   *The area will be coloured in red*
III – Importing a digital image

**Activity 17:**
Put a cross in the hardware that allows you to scan an image

<table>
<thead>
<tr>
<th>Scanner</th>
<th>Cameoscope (Camera)</th>
<th>Printer</th>
<th>Digital Camera</th>
<th>Microphone</th>
</tr>
</thead>
</table>

**Interpretation:**
The scanner, camera and most camcorders (camera) are used to scan and digitize images.

**Activity 18:**
Using your scanner and image processing software available, scan your ID photo.

**Observation:**
To scan your ID photo, you can follow the following steps:
1) Run the image processing software available.
2) Choose the "File" menu
3) Choose the "Import Twain" command
4) Select the "Scan an image" sub-command
A new window appears on the screen.

5) In area 1, choose the desired scan settings.
6) Click on the "Preview" 2 button to view the image.
7) Check the framing of the image using the selection area 3.
8) Click on the "Scan" 4 button.
9) Save the image on a storage medium.

**Interpretation:**
Importing (scanning) images is an operation that requires resources (scanner, digital camera, ...) and software (scanning and retouching software images). To scan an image, place the paper under the lid of the scanner facing the window.
Activity 19:
Complete the following text with words from the list:

*scanners/DVD/picture/HDD/software/Colour/CD/deletion*

A digital…………………………………. is an image (drawing, image, icon, true image, photography, ...) acquired, created, processed or stored.
• **Acquired** by devices such as …………………………………. , cameras or digital camcorders
• **Created** and processed by …………………………………. that facilitate the change of size and …………………………………. , and adding or …………………………………. items.
• **Stored** on a storage medium (examples : …………………………………., …………………………………………, …………………………. )

IV – Basic image processing

Activity 20:
• Compare the following 2 images:

![Image1](mario.jpg) ![Image2](mario2.jpg)

• Can you say what is called the transformation that consists of forming image2 from image1?
• List the steps to create image2 from image1.

**Observation**:
Image1 is made up of a single character.
Image2 is made up of two characters: It is obtained by duplicating (copying) the character in image1.
**Interpretation:**

1) Run the image processing software available (Example: PhotoFiltre).
2) Open image1.
3) Select the image to be duplicated (use the selection tool).
4) Choose the "Edit" menu.
5) Select the "Copy" command.
6) Choose the "Edit" menu.
7) Choose the "Paste" command.
8) Place the pointer on the newly created image.
9) Move the selection to the desired location.
10) Put the pointer over the image to duplicate.
11) Click the mouse right button.
12) Choose the "Validate paste" command.
13) Save the new image under "Image2".
Activity 21:

Compare the 2 images below:

• According to you, is it the same image or a different one?
• What does image 2 on the right make you think of?
• Can you say what is called the transformation done to form image 2 from image 1 called?
• Find out the effect applied to image 2 then provide the steps to perform the effect to image 1.

Observation:
It is the same image on the right and on the left. Image 2 looks like the image of a puzzle. Image 2 is obtained from image 1 by applying an effect. In this example, it is the Puzzle effect.

Interpretation:
Help yourself with the illustrations below to complete the procedure.
1) Run the image processing software available (Example: PhotoFiltre).
2) Open the image ...
3) Choose the menu "...
4) Choose the command "...
5) Select the sub-command "...
6) Choose the options (colour, thickness, size of pieces)
7) Save new image as "Image2".
Activity 22:
Observe the two pictures below and say if it is the same image to which an effect has been applied or not.

Potter1  \[\rightarrow\]  Potter2

Observation:
This is the same image to which has been applied a deformation. Help yourself with the illustrations below to complete the next steps.

1) Run the image processing software available (Example: PhotoFiltre).
2) Open the image called "Potter1".
3) Choose the menu "... ... ... ... ....."
4) Choose the command "... ... ... ... ... ... ... ... ... ... ... ....."
5) Select the sub-command "... ... ... ... ... ... ... ... ... ... ... ....."
6) Choose the options (background colour, deform left, right, top and bottom).
7) Save new image as "Potter2".
Activity 23:
Observe these two images. This is a modification to the image itself and not an effect added to the image. Can you find in the "image" menu the name of this transformation and apply it on the image moto1 which is located in your personal file?

**Observation:**
The effect applied to the image of moto1 is the effect of flip horizontal.

**Interpretation:**
1) Run the image processing software available (Example: PhotoFilter).
2) Open the image called Moto1.
3) Choose the "Picture" menu.
4) Choose the "Flip horizontal".
5) Save the new image under "Moto2".

Activity 24:
Use the previous activity and add the name of the character on Potter2 image.

**Observation:**
It is possible to add text to an image.

**Interpretation:**
1) Run the image processing software available (Example: PhotoFilter).
2) Open the image called Potter2.
3) Click on the button (T) on the standard toolbar.
4) In the "Input" area, type the text.
5) Choose the font, size, alignment, ...
6) Click on "OK"

An area with dotted contours appears in the image.
7) Click in the area and move it to the desired location.
8) Click on "OK"

In this chapter, I have learnt ...

- The scanner, the camera as well as most digital cameras allow you to scan images using a scanning software.
- The image processing software is used to create, manipulate and process an image (colour, shape, effect, ...)
- To apply effects to an image, you must select the "Filter" menu and choose the effect to apply.
- To transform (resize, rotate, flip, ...) an image, select the "Picture" menu and then choose the suitable command.
Exercise 1:
By using the image processing software available, try to reproduce the image below. Save your work in the folder identified by your first name and last name on the hard drive of your computer.

Exercise 2:
Use exercise 2 of the previous chapter to scan your photo and then insert it in your school ID Card.

School ID Card
School ..............................
Academic year: 20.../20...
Name: ........................................
Surname: .....................................
Class: ........................................
Principal’s Signature

Have you made your choice on the work in this chapter to keep in your portfolio?
Reproduce the following statements on your research folder and put a cross in the correct box.

<table>
<thead>
<tr>
<th>Statements</th>
<th>True (T)</th>
<th>False (F)</th>
<th>I don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>An image processing software can process a text.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The operating system is used to import images.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To scan an image, I need a scanner only...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To insert an effect on an image, select the &quot;<strong>Adjustment</strong>&quot; menu and the &quot;<strong>Effect</strong>&quot; command.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To resize an image, select the &quot;<strong>Image</strong>&quot; menu then the &quot;<strong>Image Size</strong>&quot; command.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You cannot add text to an image.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To scan an image, I need an image processing software.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible to achieve two effects on a single image.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible to process an image with different processing software.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To erase part of an image in the software &quot;<strong>PhotoFiltre</strong>&quot;, we use the &quot;<strong>Eraser</strong>&quot; tool.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, then you should review this chapter.

**Researcher’s Corner**

- Mention some extensions of image files.
- Can you change the file extension of an image?
- Can you change the hue of an image colours?
- Can you create a shadow in your image?
OBJECTIVES
By the end of this chapter, you will be able to:

• Import and implement sound sequences.
• Apply basic processing on the sound.

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Toolbox
• A computer
• Micro headsets (or equivalent).
• A software sound processing.
• Two files called: "Melody.MP3" containing a musical parts and "Discovery_of_effects.wav" containing an array of sound effects.
• Other audio files.
I - Introduction

Activity 1:
What hardware is needed to create a sound recording on a tape (or CD) composed in relation to the poem below and the accompanying music that the music teacher asked you to prepare?
Can you do this work on a computer?

My Mom

As I think, 
I think, I think,  
I think of you, and only you  
As I feel,  
I feel, I feel,  
I feel your island perfume  
As I sing,  
I sing, I sing,  
I sing only for you  
As I see,  
I see, I see  
I see only you and no one but you.

Translated by Jawida Ben Afia  
French version written by Cyrine Sassi

Observation:
To record my poem, I must use the following equipment:

A tape or radio-cassette or an optical disc recorder

A microphone

A speaker

A tape, a CD or DVD burner to record my poem
**Interpretation**

The tape (or radio-cassette recorder or optical disk) may be replaced by a computer that has a database that allows the playback and the recording of sound sequences. To record sound sequences, we can use a microphone and to listen to a sound we can use the speakers, headsets or head phones.

**Activity 2**

The following figure represents an image of the back of your computer and the image of a microphone headset. Connect, using lines, the terminals of the microphone headset to your computer. To practise, connect your head phone and headset to your computer. What sign will help you to find the correct connection?

**Observation**

- The ports for connecting a microphone headset are coloured.
- The illustrations next to each connection port can help you, too.
- The pink form of your headset will be connected to the pink port, and the green one to the port having the same colour.

**Interpretation**

The colours and illustrations will help you to properly connect a microphone or a headset and a speaker to a computer.

**Activity 3**

The figure below represents the front of a music player. Can you find the role of each button?

---

---
**Observation:**
It is possible to perform basic operations on a sound. Among these, there are playing, pause, fast forward, stopping and recording.

**Interpretation:**
To manage a sound, you will need a software that performs these operations. Later in this chapter, use the "Sound Recorder" from Windows and the software "Audacity".

**Activity 4:**
Search in the C drive, a file type sound, then using the "Taperecorder", listen to this file and observe the application window. What do you notice?

**Observation:**
- To listen to sound files using a computer, it is necessary to have a headset or loudspeakers.
- In the main window of the "Taperecorder", you can observe waves.

**Interpretation:**
To listen to sounds, we use loudspeakers or headphones. According to the definition in the dictionary Le Petit Larousse, "The sound is the auditory sensation recorded by an acoustic wave. Indeed, a body animated by vibrations emits a sound."

In humans, sensitivity to sound corresponds to the vibrations reaching the inner ear and whose frequencies are between 15 and 20,000 Hz.

II – Presentation of «Audacity» software

II – 1 – Launching the software

**Activity 5:**
Do you know how to launch «Audacity» software?

You can use the illustration below to find a method to launch "Audacity."

- **First method:**
  1) ..............................................................
  2) ..............................................................
  3) ..............................................................

  The home page of «Audacity» appears.

- **Second method:**
By using what you already know, can you find another method to launch the software?
II - 2 - Description of the home page

<table>
<thead>
<tr>
<th>N°</th>
<th>Labels and Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The menu bar is used to select commands.</td>
</tr>
<tr>
<td>2</td>
<td>The audio control bar that you used to perform processing on the files.</td>
</tr>
<tr>
<td>3</td>
<td>The Bar mixer allows you to adjust the volume of audio devices and select the source used in the mix.</td>
</tr>
<tr>
<td>4</td>
<td>The VU meter allows you to visualize the input and output audio.</td>
</tr>
<tr>
<td>5</td>
<td>The audio track allows you to visualize the shape and length of the wave.</td>
</tr>
<tr>
<td>6</td>
<td>The status bar gives you information about the length of your audio files.</td>
</tr>
</tbody>
</table>

Activity 6:
How can you get sound sequences?

Observation:
It is possible to create your own sounds or to copy them.

Activity 7:
1) Colour in yellow the material that allows the acquisition of sound.

2) Do you know other equipments?
III – Creating, Saving and Importing a sound
III – 1 – Creation of a sound

Activity 8:
By using the sound software available, create a file in which you record the text of the poem in Activity 1.

To create a sound, we must follow the following steps:
1) Click on the «File» menu.
2) Choose the «New» command.
3) Select the source "micro Volume" of the bar mix.
4) Click on the «Save» button.
5) Read the text.
6) Click on the «Stop» button to stop the recording.
7) Click on the «Play» button to hear the sound.

III – 2 – Saving a sound

Activity 9:
To avoid losing this file, what must you do before exiting the software?

Observation:
To avoid losing my file, I must save it on a storage medium.

Interpretation:
As with any type of data, saving a sound file is an important operation that allows you to keep your data.

Activity 10:
Save your file as «Poem.wav» in your own folder in the C drive.

You can use the following illustration:
1) Choose the menu « .................. »
2) Choose the command « .................. »
3) In the area "Save in", select the parent folder
4) Open the folder named "Name and Surname"
5) In the area "File Name", enter the name
6) Click on "Save"
III - 3 - Importing a sound

Activity 11:
You have recorded your poem, you need to insert the music that will accompany your voice. Do you know how to insert the file sound "Melody.mp3" that exists in your personal folder?

Interpretation:
1) Choose the «Project» menu.
2) Choose the «Import Audio» command.
3) In the «Look» area, select the parent folder.
4) Open the «Name and surname» folder.
5) Select the file to import.
6) Click on the «Open» button.

Observation:
Another audio track entitled "Melody" is added to the file "Poem.wav". While playing the result, we hear the voice and music.

IV – Basic processing
IV – 1 – Mixing

Activity 12:
Now, you’ve got a sound file which contains two tracks, the first contains the poem and the second contains soft music to accompany your voice. Do you know how to mix the two tracks?

To mix two sound tracks, we must follow these steps:
1) Select the two tracks.
2) Choose the «Project» menu.
3) Choose the «Quick Mix» command.

Observation:
After mixing, we obtain a single audio track that contains the words of the poem and the music.
**Interpretation**: The mix of music files is an operation which consists in merging one or more files into one. The resulting file will contain all the audio tracks from all the files that were used in the mix.

### IV – 2 – Some effects

**Activity 13**: Open the file entitled "Discovery of effects.wav", located in your personal folder. Listen to the recording carefully and note your comments.

**Observation**: It is possible to add effects to a sound track.

**Interpretation**: One effect is to apply a change to all or part of a sound file. There are several types of effects such as echo, amplification, inversion, repetition etc... To apply an effect on part of a song already recorded, you can follow the following steps:

1) Select the part of the soundtrack in which we will apply an effect.
2) Click on the «Effect» menu.
3) Select the effect to apply.
4) Enter the settings and then confirm by OK.

**Activity 14**: Now that you know what a sound effect is, can you apply an effect on the file "Poem.wav" which is located in your folder?

---

**In this chapter, I have learnt...**

- To create or operate processing on a sound file, you will need a software and some devices such as microphone and speakers.
- In a musical composition, each embedded sound file is represented by an audio track.
- It is possible to make changes to a sound file. These changes are called effects.
**Exercise 1:**
What am I?
- A software utility that allows you to record your voice on a magnetic medium
- Without me, you cannot hear sound on a computer.

**Exercise 2:**
Complete the sentences with words from the following list:
- Effect / Microphone / Speaker
- A(n) …………………………… allows voice recording.
- The echo is a(n) ………………………… applied on a sound
- To listen to music, you need …………………

**Exercise 3:**
1) Run the application of sound processing available.
2) Record the reading of this text in your personal folder on the C drive, under the name "Definition.wav".

**PRESENTATION OF MP3 FORMAT**

MP3 "MPEG Audio Layer 3" is a compression format of audio data by destroying data, developed by the International Standardization Organization (ISO). This format allows you to compress at a rate of 1:12 normal audio formats (WAV or CD audio). It allows you to store the equivalent of twelve files of music albums on one CD-ROM. In addition, the mp3 format slightly alters the sound for the human ear.

3) Remove the long silences and sounds between the words of this sequence.
4) Search a musical sequence in your sound library.
5) Create a mix two sound files.
6) Save the result as "Result.wav.

Have you made your choice on the work in this chapter that you will keep in your portfolio?
Reproduce the following statements on your research notebook.

**Evaluation 1:**
Answer true or false.

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>In a musical composition, audio files are represented by audio tracks or by a range of musical notes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You can listen to a sound file through a microphone.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible to record sound only on a CD.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible to delete an effect applied to a sound file.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible to cut a part of a music file.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Evaluation 2:**
1) Write a paragraph of at least 5 lines, in which you describe everything you need as equipment and software to create a sound file.
2) Create a sound file in which you record the reading of the paragraph written in the previous question.

**Evaluation 3:**
Tick the correct answers.
The sound processing requires:

- A microphone headset, a software sound processing and magnetic media.
- A microphone, a sound processing software and the CD player.
- A microphone headset, a sound processing software and a DVD recorder
- A laser printer.

If you have less than 7 correct answers, then you should review this chapter.

---

**Researcher's Corner**

- A sound is characterized by its frequency, volume and tone. Can you find on the Internet, the explanation of each of these characteristics?
- In this chapter, you used type WAV and MP3 files. Can you give other examples of formats of audio files?
OBJECTIVES

By the end of this chapter, you will be able to:

- Adopt a standardized format to an expected production
- Create multimedia presentations

PLAN

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ToolBox

- A computer.
- A Presentation software.
- Image files.
- Sound files.

Using softwares: Presentation Software
I - Characteristics
I - 1- Introduction

Activity 1:
In the course of Life Sciences and Earth, your teacher asked you to prepare a project in your class where the audience will be your colleagues. How would you proceed to have a successful presentation?

Observation:
Write the title of the project on the board. Paste a few images to illustrate the topic. Using a written text, present the topic orally and try to interest my audience.

Today the board is replaced by a blank screen. We display presentations on the screen using a video projector connected to a computer that contains attractive presentations containing multimedia objects (images, sound and video).

Activity 2:
You want to make a presentation that shows the diets of some animals. This presentation may contain sound and will have the following form:

Les régimes alimentaires des animaux

Lapin
L'image transite de la droite vers la gauche.

Le texte défile du bas vers le haut.

Vache

Tigre

Le titre défile de la droite vers la gauche.

Do you know a software that can realize this presentation?

Observation:
With Microsoft Word, you can enter text, insert images and make some animations, but it is not possible to define specific changes to the text or even on the pages.
Interpretation:
To accomplish this presentation, we should use a presentation software.

I – 2 - Definition of a presentation software
Presentation software is a software that allows you to create an attractive multimedia document.
In the following, we will use the presentation software "Microsoft PowerPoint" to create the presentation of activity 2.

I – 3 - Presentation of MS PowerPoint

Activity 3:
Do you know how to launch Microsoft PowerPoint?

Remember how to launch an application. You can use the following illustration to launch **MS PowerPoint**.

- **First method**:
  1) Choose the menu « ……………… »
  2) Choose « …………………… »
  3) Click on « …………………….. »
  4) Click on « …………………….. »

- **Second method**:
Double-click the shortcut "**MS PowerPoint**" on the desktop of your computer.
The home page of MS-Power Point will be displayed.

I – 4 – Home page of MS- PowerPoint
<table>
<thead>
<tr>
<th>N°</th>
<th>Label and role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The title bar lets you know the name of the document.</td>
</tr>
<tr>
<td>2</td>
<td>The menu bar that you will use to select commands.</td>
</tr>
<tr>
<td>3</td>
<td>Toolbar formatting allows you to use shortcuts to some formatting commands.</td>
</tr>
<tr>
<td>4</td>
<td>The work area where you insert text, images and symbols ...</td>
</tr>
<tr>
<td>5</td>
<td>The slides window gives information on the list of slides that make up your slideshow.</td>
</tr>
<tr>
<td>6</td>
<td>The patterns of work bar allows you to switch from one mode to another.</td>
</tr>
<tr>
<td>7</td>
<td>Bar design allows you to draw figures (oblong, ellipsis, ...) or insert objects (images, text boxes, ...)</td>
</tr>
<tr>
<td>8</td>
<td>The input box allows you to add text.</td>
</tr>
</tbody>
</table>

II – Production

Activity 4:
Use activity 2, and list the actions to follow to perform the presentation using MS-PowerPoint.

Observation:
To make your presentation, you must follow the following steps:
• Create a presentation and give it a name.
• Choose a design model.
• Enter text and editing.
• Find images and sounds tailored to the theme and incorporate them into the presentation.
• Add animation effects to objects (text, images).
• Set the slide transition.

Interpretation:
Among all these steps, there are a few steps that you already know, others are specific to the presentation software (pattern design, animation effects and slide transition). Later in this chapter, we will focus mainly on these new tasks.
II – 1 – Creating a presentation

Activity 5:
Do you know how to create a presentation with MS PowerPoint?

Remember how to create a new document. You can use the following illustration.

1) Choose the menu «…………………».
2) Choose the command «………………».
3) Click on the «New presentation» window link.

Observation:

After creating a new presentation, the two windows shown below are displayed.

II – 2 – Layout slides

Activity 6:
Which layout do you choose for your slides?

Observation:
There are several types of slide layouts. The choice of the layout is a crucial choice for the rest of the creation of your presentation. To make this choice, you should ask the following questions: What is the content of my slides? Will they contain pictures? Automatic lists? etc... So, in asking these questions, you can make a considered choice on the model to adopt.
**Interpretation:**
1) Choose the "Format" menu
2) Choose the "Slides layout" command
3) Click on one of the layouts proposed in the "Slide Layout".

The software MS-PowerPoint offers several types of layouts based on the content of the slides.

---

**II – 3 – Saving a presentation**

**Activity 7:**
Now that you have created your presentation, what must you do to keep your work for a later completion?

**Observation:**
After creating the presentation and for fear of losing information, you must save it to a storage medium.

**Activity 8:**
Save your presentation as "animals" in your personal folder with your name and surname on drive C.

**Interpretation:**
1) Choose the « File » menu
2) Choose the « Save as » command
3) In the area « Save in », select the C drive.
4) Open the folder « Name & surname »
5) In the « File name » area, type the name of the file « animals »
6) Click on the « Save » button

---

**II – 4 – Insertion of a design model**

**Activity 9:**
Apply a design template to your presentation. You can look in the "Format" menu.

To apply a design model, you must follow the following steps:
1) Choose the « Format » menu.
2) Choose the « Slide design » command.
3) Choose the desired design model
Interpretation:
By choosing a design model, we define several parameters at once: the set of colours, the background (image, colour, ...), format titles, and many other things you will discover later on.
For a successful slideshow, you are strongly advised to choose the same design for the entire presentation.

II - 5 - Inserting objects

a- Insertion of a text box

Activity 10:
Observe the illustration in Activity 2, how many text boxes to insert? Find the menu that will allow you to enter these texts and perform the operations necessary for your presentation.

To insert a text box, you can follow the following steps:
1) Choose the «Insertion» menu.
2) Choose the «Text box» command.
3) Click inside the box.
4) Type the text.

b – Insertion of an image

Activity 11:
The time has come to illustrate your presentation with images. Do you know how to insert in your presentation some images from the Clipart library?

Remember how you proceeded with the word processing software to insert images. You can use the following illustration:
1) .............................................
2) .............................................
3) .............................................
4) .............................................

Find out from the previous picture how to insert an image that does not belong to the Clipart library and note the steps on your research notebook.

c – Insertion of a sound

Activity 12:
Get ideas from the previous Activity to find the steps needed to insert a sound file in your presentation.
Interpretation:
1) Choose the menu «………………».  
2) Choose the command «…………».  
3) Choose the option «………………».  
4) Click on the selected sound.

Find from the previous interpretation how to insert a sound that does not belong to the library and note it in your research notebook.

II – 6 – Formatting text boxes
The design model allows to define an automatic formatting for text boxes: the fonts, the font size and colour of titles and subtitles.
In addition to the formatting provided by the design model, Microsoft PowerPoint offers the possibility to format text boxes.
So you have several ways to define a layout. Here are a few rules you must follow to achieve harmonized presentations:
• Choose a light colour for writing and a dark colour for the background of the slide,
• Choose the same set of colours for all the slides,
• Apply no more than three animations on the same slide,
• Choose fonts with wheelbase because they are more readable,
• If the text to be included is too long, it is best to place it on two slides rather than seize on one slide which may be too loaded.

Activity 13:
Take the example in Activity 2, and apply the presentation rules that you just found out, format text boxes that you have inserted in the previous activities.

To apply formatting to a text box, you can follow the following steps:
1) Select the text box.  
2) Choose the «Format» menu.  
3) Choose the «Font» command  
4) Select the desired formatting  
5) Validate with «OK»
II – 7 – Viewing slides

Activity 14:
Your presentation is almost finished and it is time for you to have a general idea of your work. How can you get a view of your slides?

Interpretation:
1) Choose the «Diaporama» menu.
2) Choose the «View diaporama» command.

II – 8 – Slides Animation

The slides can be animated at two levels:
• The transitions that characterize the sequence of slides.
• Animations that apply to different objects on the slides.

a – Slides transition

Activity 15:
Apply a transition effect of your choice on the presentation.

Interpretation:
1) Choose the «Diaporama» menu.
2) Choose the «Transition» command.
3) Choose the desired transition.
4) Specify the parameters of the transition (Speed, Sound).
5) Specify how to switch between slides (manual or automatic).
6) Click on "Play" to test the transition.

b- Animation of objects

Activity 16:
Apply animation effects on existing objects in your presentation.

Interpretation:
1) Select an object (text box, image, table, …)
2) Choose the «Diaporama» menu.
3) Choose the «Personalize animation» command.
4) Click on the «Add an effect» button.
5) Choose the desired animation (Open, Close and trajectories, …).
6) Choose the desired animation.
7) Click on the «Read» button to test the animation.
II - 9 - Links

Activity 17:
You have a web page that contains a sensitive area. When you click on the area you move to another location. What is the name of this area?

Observation:
We call this area hyperlink. Hyperlinks are the elements of a page (underlined when it is a text) allowing users to navigate to a new address when clicked. In a presentation, you can create hyperlinks to another presentation, to the slides of the presentation, to a media file (image, sound, video) to a web page...

To create a hyperlink, you must follow these steps:

1) Select the object.
2) Choose the "Insert" menu.
3) Choose the "Link" command.
4) Specify the destination.
5) Click on "OK"
In this chapter, I have learnt ...

- A presentation software allows to realize interactive multimedia documents to be presented to a group of people.
- A slideshow presentation can be formed by one or several slides by scrolling configurable transition.
- In a slide, you can enter text, insert objects, correct spelling, edit texts, layout, insert links between presentations and slides and add multimedia objects. All these objects can have a predefined animation.
- A slide should respond to specific rules of presentation.
- In a slideshow, you can define a transition animation.
- On a subject of the slide, you can define animations.
Exercise 1:
Tick the correct answers
Some of these groups of animation effect do not exist in PowerPoint? Which ones?

<table>
<thead>
<tr>
<th>Focus</th>
<th>Input / Output</th>
<th>Closing</th>
<th>Moving</th>
<th>Trajectories</th>
<th>Opening</th>
</tr>
</thead>
</table>

What is the name of the animation when moving from one slide to another?

<table>
<thead>
<tr>
<th>Animation effect</th>
<th>Effect of chain</th>
<th>Transition effect</th>
<th>Layout</th>
<th>Type of execution</th>
</tr>
</thead>
</table>

Exercise 2:
What are the steps to implement the design model "pencils" to your presentation?

Exercise 3:
Create a presentation consisting of two slides.
1) Start the presentation software available.
2) Create a presentation and call it "My hobbies" in your working folder.
   Remember to save your work regularly.
3) Choose a design model suitable for the contents below.

<table>
<thead>
<tr>
<th>1st slide</th>
<th>2d slide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subtitle 2</strong></td>
<td><strong>Subtitle 2</strong></td>
</tr>
<tr>
<td>Our name and surname</td>
<td>8th year</td>
</tr>
<tr>
<td>8th year</td>
<td>My hobbies</td>
</tr>
<tr>
<td>My hobbies</td>
<td></td>
</tr>
</tbody>
</table>

Subtitles: different themes in your way (for example: movies, sports, reading, travel, cuisine, visits to museums)
4) For the first slide, make the following modifications:
   4.1/ Add a significant image from the Clipart library.
   4.2/ Change the format of the characters?
* **Subtitles**: Font: courier, style: normal, size: 24 points and colour: Black.

4.3/ Animations
* The title: effect: random effect; sound: zoom and introduced letter by letter.
* **Subtitles**: effect: introduced word by word
* **The image**: zoom out.

5) For the second slide, make the following modifications:
   5.1/ Add a significant image from your own library of images.
   5.2/ Format the characters
   5.3/ Animations: (free choice of the pupil)

6) Transition of page: vertical, automatic after 5 seconds.

7) Observe the work obtained. Did you respect the rules of presentation of slide shows? Justify your answer and make corrections.

Did you choose which works in this chapter you are going to keep in your portfolio?
Reproduce the following statements on your research exercise book.

**Evaluation 1**: Answer by TRUE or FALSE the questions.

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>To write a text on a slide, it is necessary to create at first a text box.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We cannot parameterize a sound so that it can continuously exist during the scrolling of several slides.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We can insert images only in a Powerpoint presentation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is not possible to use the grammar dictionary with PowerPoint.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Every model of conception proposes its own locations of images, texts …</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Every model of conception contains a particular background.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To move between slides, it is necessary to create links</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To animate (stimulate) a presentation (display), we use the transitions.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Evaluation 2**: Tick the good answers

1- **Which of these modes is not a PowerPoint display mode**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaporama</td>
<td>Plan</td>
<td></td>
</tr>
<tr>
<td>Slides</td>
<td>Sorter of slides</td>
<td></td>
</tr>
</tbody>
</table>

2- **To realize harmonious presentations, it is advised**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>to use a set of colours</td>
<td></td>
</tr>
<tr>
<td>to define a large number of different animations to amaze the public</td>
<td></td>
</tr>
<tr>
<td>to reduce the font size to make fewer slides.</td>
<td></td>
</tr>
<tr>
<td>to foresee dark colours for the background and the font so that the spelling mistakes are less visible</td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, then you have to revise this chapter.

**PowerPoint is a software which allows creating a presentation where we find effects of animations and transitions.**

Search for other software which allows creating presentations and animations.
OBJECTIVES

By the end of this chapter, you will be able to:

- Define a spreadsheet.
- Use the elementary functions of a spreadsheet.
- Construct graphics

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I – Presentation

I – 1 - Introduction

Activity 1:
You wish to calculate your average in each of the four subjects (computing, physics, English and music) and to present them in a Table:
- Do you know how to calculate your average for a given subject?
- What is the information you need to perform these calculations?
- Suggest a model of a table which will contain your calculations as well as the data which helped you obtain them.

Observation:
- I will use the following formula to calculate the average term of a given subject:
  \[
  \text{Average term} = \frac{(\text{Control Test mark} + 2 \times \text{End of Term test mark})}{3}
  \]
- I can deduce from this formula that for each subject, I would need the marks obtained in both tests.
- An example of a model table (there are several) that helps me to present my averages could be the following:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Control Test mark</th>
<th>End of term Test mark</th>
<th>Term Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing</td>
<td>12.00</td>
<td>18.50</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>13.50</td>
<td>16.00</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>12.50</td>
<td>17.00</td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>16.00</td>
<td>15.50</td>
<td></td>
</tr>
</tbody>
</table>

Table 1

I – 2 – Basic vocabulary

Activity 2:
Landmark the table
To refer to the table, you can follow the following coding:
From Table 1, of Activity 1 you can:
- enumerate each line. Start counting from 1.
- label each column with a letter. Begin with the letter A.
Find the coordinates of the following boxes:
- End of Term Test mark in Computing: Column: ......... Line: ....
- Control Test mark in English: Column: ......... Line: ....
Observation:
- A table consists of the intersection of rows and columns.
- The intersection between one row and one column is a cell.
- Each cell can receive data that can be numerical, alphabetical or other type.

Interpretation:
- Spreadsheets are the most appropriate software to make calculations. They allow typing and formatting the data to be processed, automatically perform calculations using formulas and functions, constructing graphics, ...
- To manage the data and return a value in a table, we use an address. This address is composed of the column number followed by the line number (example: D4, B2, ...).
- Your initial table will be as follows:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Subject</td>
<td>Control Test Mark</td>
<td>End of term Test Mark</td>
<td>Term Average</td>
</tr>
<tr>
<td>2</td>
<td>Computing</td>
<td>12.00</td>
<td>18.50</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Physics</td>
<td>13.50</td>
<td>16.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>English</td>
<td>12.50</td>
<td>17.00</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Music</td>
<td>16.00</td>
<td>15.50</td>
<td></td>
</tr>
</tbody>
</table>

Throughout this chapter, we will use the Microsoft Excel software.

II – Presentation of MicroSoft Excel

II – 1 – Start with MS-Excel

Activity 3:
Do you know how to launch MicroSoft Excel?

Remember how you proceeded in the previous chapters to start an application. You can use the following illustration to start with MicroSoft Excel.

- First method:
  1) ...........................................................................................................
  2) ...........................................................................................................
  3) ...........................................................................................................
• Second method:
Double-click on the shortcut "Microsoft Excel" on the desktop of your computer.
*The home page of the MS-Excel is displayed.*

II – 2 – The home page

![Microsoft Excel Home Page](image)

<table>
<thead>
<tr>
<th>N°</th>
<th>Label and role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The <strong>title bar</strong> lets you know the name of the document.</td>
</tr>
<tr>
<td>2</td>
<td>The <strong>menu bar</strong> you use to select commands</td>
</tr>
<tr>
<td>3</td>
<td>The <strong>Standard toolbar</strong> allows you to use shortcut commands.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Toolbar formatting</strong> allows you to use shortcuts for formatting.</td>
</tr>
<tr>
<td>5</td>
<td>The <strong>formula bar</strong> for editing and data entry in the active cell.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Scrollbars</strong> allow you to move in the active sheet.</td>
</tr>
<tr>
<td>7</td>
<td>The <strong>status bar</strong> gives information about the current document.</td>
</tr>
<tr>
<td>8</td>
<td>The name of the active sheet of the active folder.</td>
</tr>
<tr>
<td>9</td>
<td>The <strong>active cell pointer</strong> informs on the position of writing.</td>
</tr>
<tr>
<td>10</td>
<td>The <strong>name field</strong> allows you to know the reference of the active cell</td>
</tr>
</tbody>
</table>
II – 3 – workbooks

Activity 4:
The figure below represents an example of an Excel document. As its name suggests, it consists of sheets, which themselves are composed of rows, columns and cells.
Can you try to find the name of the workbook, the active sheet and address of the active cell.

What is the number of sheets in this workbook?

Observation:
- The software presents the tables in a workbook consisting of a set of sheets.
- In this example, the name of the folder is "Book1", the active sheet is "Sheet1" and the address of the active cell is "C2"
- There are five sheets in this workbook.

Interpretation:
- The workbook is the main document of the spreadsheet. It organizes the data in worksheets.
- To switch from one sheet to another, simply click on the name of the sheet.
- To manage a sheet, just read in the name field, the reference of the active cell.
III – Typing and saving

III – 1 – Typing data

Activity 5:
Start the spreadsheet available and type the table of Activity 1. You can use the answers to the questions in Activity 2 to put your data.

Observation:
• If you have correctly applied the guidelines in Activity 2, you should get a table that looks like this:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Note de contrôle</td>
<td>Note de synthèse</td>
<td>Moyenne trimestrielle</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Informatique</td>
<td>12</td>
<td>13.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sciences physiques</td>
<td>13.5</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Anglais</td>
<td>12.5</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Musique</td>
<td>16</td>
<td>15.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• You notice that the text data is aligned to the left by default. However, the numerical data is aligned on the right.

Interpretation:
As for entering text in a document you should be careful when entering values in a table and respect the following rules:

- Each data is entered in a single cell. When the content of a cell is large enough, check all of its contents in the formula bar.
- Start by typing the data of the table as a first step, save, perform the necessary calculations and then format your document.

III – 2 – Saving

Activity 6:
Use the illustration below to find the way that will allow you to save your workbook as "TERM" into your personal folder.
Interpretation:

1) Choose the menu « ................................... »
2) Choose the command « ............................ »
3) In the area « ................................. », select the drive C
4) Double click on the folder
5) In the area « ................................. », type the folder name
6) Click on the button « ................................. »

Remark:

If you made any changes to your folder, you need to register again before closing. To do so, you must follow these steps:

1) Choose the «File» menu
2) Choose the «Save» command

OR

Click on the shortcut from the tools bar.
IV – Selecting cells

Activity 7:
Do you remember how to select a text when using a word processor software?

Observation:
To select a text you can:
1) place the cursor at the beginning of the text to select
2) While holding the left mouse button, move the pointer until the end of the text.

Activity 8:
Uses the approach described above to select the first six cells of column A.

Interpretation:
1) Position the mouse pointer to the first cell ("A1").
2) While holding the left mouse button, move the cursor vertically to the last cell ("A6").

To select the first cells of a line, you must follow these steps:
1) Position the mouse pointer to the first cell.
2) While holding the left mouse button, move the pointer horizontally to the last cell.

To select adjacent cells, you must follow these steps:
1) Position the mouse pointer to the first cell.
2) While holding down the control key "Ctrl" click on the second cell and so on.

V – Inserting lines or columns

V – 1 – Inserting lines (rows)

Activity 9:
In the table in Activity 5, before the line of the subject "English", add the following line:

| Sport | 15.75 | 19.5 |

To insert a row, you have to follow these steps:

1) Select the line where the insertion will take place.
2) Choose the "Insert" menu.
3) Select the "Lines" command.
4) Enter data into cells.

V – 2 – Inserting columns

Use the illustration above to find the steps that allow you to insert a column.

1) Select the ....................... Where the insertion will take place
2) Choose the menu « ................... ».
3) Choose the command « .............. ».
VI – Formulas and functions of calculation

VI – 1 – The formulas

Activity 10:
Now that your table is entered, it is necessary to calculate automatically the average, whose formula is:

\[ \text{Average} = \frac{(\text{control testmark} + 2 \times \text{end of term test Mark})}{3} \]

- Perform the following experiments and complete the table:

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Text to type in cell D2</th>
<th>Value displayed in cell D2</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(12 + 2 * 18.5) / 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>= (12 + 2 * 18.5) / 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>= (B2 + 2 * C2) / 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What are the experiments that allow to get your average in Computing in cell D2? .............................................

Second case:
Replace the value of the Control test mark in Computing by 16.75 and then repeat the same experiment.

What are the experiments that allow you to get your average in Computing in cell D2? ... ... ... ... ... ... ...

- Can you explain the different results you have achieved in both cases?
- Using the previous results, write a procedure describing the steps of entering a formula in a folder.

Observation:

First case:
The difference between experiment 1 and experiment 2 shows the importance of the equal sign "=" in entering a formula. Without the "=" sign before the formula, we cannot get the result of the formula.

Experiment 3 consists in using the "=" and replacing the numerical values by their address. We also obtain the expected result.
**Second case:**

When we change the numerical values of the table, only the third formula gives the expected result. This change is because:

In both cases, in the second formula, we are referring only to numerical values, while in the third experiment, we still refer to the address of the cells that will be used in the calculation, thus ensuring a correct result, even if the contents of the cell change.

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Text to type in D2</th>
<th>Value displayed in D2</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>= (B2 + 2 * C2) / 3</td>
<td>17.9166</td>
<td>The change of the note is taken into account</td>
</tr>
</tbody>
</table>

**Interpretation:**
1) Select the cell where the calculation formula will be typed.
2) Enter the "=
3) Write the formula in its mathematical form, using the references of the cells containing the values of the calculation.

**Tip 1:**
You can either type the cell reference or simply click the corresponding cell. You will have the reference without the risk of input error!

**Tip 2:**
To get the average of the other subjects, you can copy the previous formula for all of them. To do this, you can use the following approach:
1) Select the cell containing the formula to copy (D2)
2) Position the cursor at the bottom right corner of the mouse. The sign (+) appears.
3) Drag the mouse to the last cell average (D6), to complete the copy down.

**VI – 2 - The functions**

**Activity 11:**
You now have a table of marks entered with the average of the subjects calculated. But how to know your best average? Propose possible solutions to your problem.
Observation:
- First solution:
The most natural way is to consult my table and I look for the highest value in the average column.

This solution is not very efficient because each time the marks change, the average changes as well. I will be obliged, on each occasion to seek the new maximum value in the average column. Moreover, this research becomes difficult or impossible when the table is made of a very large number of averages!

- Second solution:
The solution is to let the software find the largest value among all the numerical values of the average column. This solution seems more efficient and faster.

Interpretation:
Among the tools available to a spreadsheet, there are functions. These are very powerful and easy to use calculation tools. MicroSoft Excel classifies them into categories for ease of use.

Activity 12:
Use the previous activity responses to insert in your table, the function that allows to determine the highest average in an automatic way.

To insert a function in a cell, you may use the following steps:
1) Select the cell where the function will be inserted.
2) Click on the "Insert" menu.
3) Select the "Function" command.
4) Select the category to which the function to insert.
5) Choose the function to be inserted among the functions of the category...
6) Type the parameters of the function
7) Click on the «OK» button.

VI – 3 – Some predefined functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sum</strong></td>
<td>This function allows you to find the sum of the contents of cells</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>This function allows you to find the arithmetic average of the cells contents</td>
</tr>
<tr>
<td><strong>Max</strong></td>
<td>This function allows you to find the greatest content</td>
</tr>
<tr>
<td><strong>Min</strong></td>
<td>This function allows you to find the smallest content.</td>
</tr>
</tbody>
</table>
VII – Formatting data

**Activity 13:**
Open the file entitled "My first workbook" that you have stored into your personal folder and compare its formatting with the table in Activity 1. Then complete the following table.

<table>
<thead>
<tr>
<th>Comparative Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formatting</td>
</tr>
<tr>
<td>Width of columns</td>
</tr>
<tr>
<td>Style applied to labels for rows and columns</td>
</tr>
<tr>
<td>Alignment of digital data</td>
</tr>
<tr>
<td>Aligning Text</td>
</tr>
<tr>
<td>Number of digits after the decimal point</td>
</tr>
<tr>
<td>Border</td>
</tr>
</tbody>
</table>

**Observation:**
By observing the two tables, it is possible to realize that in the table created:
- Some data is hidden and does not appear in full, I must then increase the width of the columns or put them in two rows.
- The labels of the rows and columns are not highlighted, I need to apply a character style.
- Digital data is, by default, aligned right, you have to change their alignment.
- The texts are by default aligned to the left, you also have to change their alignment.
- The marks have a different number of decimal, we should therefore apply an identical number of decimals equal to 2 to all numerical values.
- The edge of the table is not drawn, it must be drawn.

**Interpretation:**
To change the width of the columns, you can click on the right edge of the column, then drag the mouse to get the desired result.
To apply formatting to the contents of a cell, you can follow these steps:

1) Select the cells to form.
2) Choose the "Format" menu
3) Choose the "Cell" command
4) Enter the settings for the layout by moving between the tabs of the dialogue box.
5) Confirm by clicking on the "OK" button.

The "Number" tab allows you to format numbers, dates and texts

The "Alignment" tab allows you to choose the alignment of text, numbers, ...

The "Font" tab allows you to format characters and styles (Bold, italic, ...).

The "Edge" tab allows you to regulate the cells of your table

The "Designs" tab allows you to choose the background color of your cells.

**Activity 14:**

By using the observations and the process in Activity 10, apply the necessary formatting to get the same layout as the table in Activity 1.
VIII – Graphics

**Activity 15:**
In order to have a clearer idea about your school performance, you would like to show your average obtained in each subject on a graph. But first, do the following operations on your search notebook:

- Draw a mark (x-axis and y-axis).
- What must you indicate on the x-axis? Write your answer on the axis to form the labels of the x-axis.
- What numerical value corresponds to each label that you placed on the x-axis? Write these values on the axis to form the labels of the y-axis.
- Place items on the intersection of the labels of the axes of abscissas and ordinates, for a 5-point representing your five averages.
- Connect the dots with a ruler to form a curve.
- What could you give as a title for your graphic? Where can it appear on a graph? Write the title of the graphic at the location you have selected.

**Interpretation:**
To have successful graphics, it is necessary first of all to:

- Determine the data from the spreadsheet to be represented.
- Determine the type of graphic design according to the nature of the data to represent.
- Determine the data that will be placed on each axis (depending on the chosen graph)
- Think about a significant title for the graphic.

**Activity 16:**
Use the answers of activity 12 and the procedure below to construct from your average a graphic in the shape of a curve.
Interpretation:
To get a graphic, you can follow the following steps:

1) Select the cell range to represent.

```
<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Subject</td>
<td>Control Mark</td>
<td>Global Mark</td>
<td>Term Average</td>
</tr>
<tr>
<td>2</td>
<td>Computing</td>
<td>12,00</td>
<td>18,50</td>
<td>16,33</td>
</tr>
<tr>
<td>3</td>
<td>Physical science</td>
<td>13,50</td>
<td>16,00</td>
<td>15,17</td>
</tr>
<tr>
<td>4</td>
<td>Sport</td>
<td>15,75</td>
<td>19,50</td>
<td>18,25</td>
</tr>
<tr>
<td>5</td>
<td>English</td>
<td>12,50</td>
<td>17,00</td>
<td>15,50</td>
</tr>
<tr>
<td>6</td>
<td>Music</td>
<td>16,00</td>
<td>15,50</td>
<td>15,67</td>
</tr>
</tbody>
</table>
```

The selection of two-column "Subject" and "Term Average" is done as follows:
- Place the pointer over the cell (A1) and while pressing the left button of the mouse, move the mouse to the cell (A6).
- Hold the Control key "Ctrl" key and select the "Term Average" ie the cell (D1) to the cell (D6).

2) Choose the "Insert" menu
3) Choose the "Chart" command

4) Define the parameters needed to create the chart (chart type, axis values, legend, chart title, ...).
5) Click on "End".
In this chapter, I have learnt...

- The basic functions of a spreadsheet is the realization of automatic calculations and representation of data in graphical form.
- It is possible to format the data in a folder as well as adding formulas and functions.
- Any formula begins with the sign "="
- The functions are classified into categories to facilitate their search.
- There are several categories of graphics. The choice of the graphic depends entirely on the data to be represented.
Exercise 1:
Among the definitions of a spreadsheet, choose those which are correct.
1) A spreadsheet is a software used to capture and format tables.
2) A spreadsheet is a program that lets you enter text only.
3) A spreadsheet is a software used to process images.
4) A spreadsheet is a tool for automating the calculation of formulas.

Exercise 2:
• How many sheets there are in the workbook on the right?
• Which is the active sheet?
• What is the reference of the active cell?
• Where can you see the value of the content of cell A1?

Exercise 3:
1) Start the spreadsheet software and type the following table:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product</td>
<td>Quantity</td>
<td>Unit price</td>
</tr>
<tr>
<td>2</td>
<td>CPU</td>
<td>10</td>
<td>550.000</td>
</tr>
<tr>
<td>3</td>
<td>Monitor</td>
<td>10</td>
<td>140.500</td>
</tr>
<tr>
<td>4</td>
<td>Keyboard</td>
<td>13</td>
<td>15.800</td>
</tr>
<tr>
<td>5</td>
<td>Mouse</td>
<td>15</td>
<td>2.500</td>
</tr>
<tr>
<td>6</td>
<td>Printer</td>
<td>1</td>
<td>75.000</td>
</tr>
</tbody>
</table>

2) Save your work by name "bill" in to your workbook on drive C.
3) Apply the following formatting of the characters:
   • First line: Size 13, bold, and centred.
   • The other lines: size 12 and centred.
4) Calculate the total amount for different products, where:
   Total = quantity * unit price.
5) Type the word "Total" in cell C7,
6) Insert in cell D7 the function that allows you to calculate the total sales of all products.
7) Create a graph of the unit price of each product. Justify the choice of graph type.

Have you made your choice on the work in this chapter that you will keep in your portfolio?
Redraw the following table on your search notebook and complete it by putting a cross in the correct box.

<table>
<thead>
<tr>
<th>Question</th>
<th>True</th>
<th>False</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>The creation of the tables is done using only a spreadsheet.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The creation of the tables is done with a word processing software.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A spreadsheet allows you to type, save and format tables of calculations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A sheet is composed of several folders.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A sheet consists of rows and columns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A cell can contain any type of data.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By default, all data is aligned to the left.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The contents of a cell is reflected in the title bar.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The formula starts with a &quot;+&quot;.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The spreadsheet allows the creation of several types of graphs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The type of graph is based on the available position.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, then you should review this chapter.

**Researcher’s Corner**

- How to copy a table already typed on sheet 1 on other sheets?
- How to change the name of a sheet?
- How to change the colors of a graphic?
Paul BARAN

Paul Baran is considered one of the principal actors in the creation of Internet. In 1964, he had the idea to create a network in the form of a big web in which the data will move in a dynamic way taking the least jammed route.

In this unit

Network, Internet, Web, FSI, Modem, telephone line, navigator, URL address, web page, website, hypertext link, Email account, electronic messages software, electronic mailbox, sending and receiving electronic messages, attachment, Internet use chart, downloading files.
<table>
<thead>
<tr>
<th>Français</th>
<th>العربية</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adresse URL</td>
<td>عنوان صفحة واب</td>
<td>URL</td>
</tr>
<tr>
<td>Adresse Email</td>
<td>عنوان إلكتروني</td>
<td>Email address</td>
</tr>
<tr>
<td>Boîte aux lettres électronique</td>
<td>صندوق بريد إلكتروني</td>
<td>Mailbox electronic</td>
</tr>
<tr>
<td>Charte d’usage de l’Internet</td>
<td>ميثاق استخدام الإنترنت</td>
<td>Charter to use the Internet</td>
</tr>
<tr>
<td>Envoi et réception de courrier électronique</td>
<td>إرسال واستقبال البريد الإلكتروني</td>
<td>Sending and receiving e-mail</td>
</tr>
<tr>
<td>FSI</td>
<td>مزود خدمات الإنترنت</td>
<td>Provider</td>
</tr>
<tr>
<td>Internet</td>
<td>الإنترنت</td>
<td>Internet</td>
</tr>
<tr>
<td>Lien hypertexte</td>
<td>رابط بين النصوص</td>
<td>Link</td>
</tr>
<tr>
<td>Ligne téléphonique</td>
<td>خط هاتف</td>
<td>Phone Line</td>
</tr>
<tr>
<td>Logiciel de messagerie électronique</td>
<td>برمجية البريد الإلكتروني</td>
<td>Software email</td>
</tr>
<tr>
<td>Moteur de recherche</td>
<td>محرك بحث</td>
<td>Search Engine</td>
</tr>
<tr>
<td>Navigateur</td>
<td>برمجية إبحار</td>
<td>Browser</td>
</tr>
<tr>
<td>Page web</td>
<td>صفحة واب</td>
<td>Web Page</td>
</tr>
<tr>
<td>Pièce jointe</td>
<td>ملف ملحق</td>
<td>Attach a file</td>
</tr>
<tr>
<td>Réseau</td>
<td>شبكة</td>
<td>Network</td>
</tr>
<tr>
<td>Site web</td>
<td>موقع واب</td>
<td>Website</td>
</tr>
<tr>
<td>Téléchargement</td>
<td>تحميل ملفات</td>
<td>Download</td>
</tr>
<tr>
<td>Web</td>
<td>الواب</td>
<td>Web</td>
</tr>
</tbody>
</table>
OBJECTIVES
At the end of this chapter, you will be able to:

• Define the Internet network.
• Use the Web service of the Internet to search information.
• Exploit the information the Web contains.

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I – Presentation
I - 1 – The computer network

Activity 1:
The generic term «network» defines a set of interconnected entities (objects, people, etc.). A network allows the circulation of material elements between the entities according to well-defined rules.

- transport network: set of infrastructures for people and goods transportation between different geographic zones;
- Telephone network: infrastructure allowing voice to circulate between several telephones.
- STEG network: allows linking houses to the electricity network.
- SONEDE network: allows linking houses and providing them with water.

Question: Do you know other networks?

Activity 2:
The members of a computer club are in a room with 4 computers. To prepare an oral presentation (assigned by the French teacher) about animals, two students want to use the same CD-ROM photo. What possibilities are there for the two students to use the CD-ROM?

Observation:

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Advantages and drawbacks</th>
</tr>
</thead>
</table>
| Copy the CD-ROM so that each computer has its own CD-ROM. | • Waste of time  
• Waste of money |
| Put the CD-ROM in a computer and whenever a student needs an image, he/she will copy the corresponding photo on a Flash disc. | • Loss of time during the copying  
• Disturbing the student who works on computer |
| Link the computers together and share the CD-ROM on all the computers in the club room | • Reliable Solution.  
• Consultation of the CD-ROM contents at any time without disturbing the owner of the CD-ROM of images.  
• The most appropriate solution. |

Interpretation:
When we link two computers or more, we create a computer network.
Activity 3:
With reference to the previous activities, complete the definition of the term network. Use the following words:

linked, information, resources, computers, exchange

Definition:
A computer network is a set of (2 or more) together and allowing the of and the sharing of material (printer, CD player, scanner...).

I – 2 – The Internet Network

Activity 4:

Question 1:
Link the computers of each country so they can communicate together. What do these computers form?

Question 2:
Link the networks of the three countries using a line with a different colour so they can exchange information. What do these networks form?

Interpretation:
The computers of each country form a network. The link between these three networks will constitute a huge network or a network of networks. That is the INTERNET network.
a - Definition
The Internet network is the network of networks. It is composed of several computers in a vast geographical zone (world level). These computers can communicate thanks to a transmission by a telephone line, by microwave or satellite.

b – How to connect to the Internet ?

Activity 5 :
This image represents the necessary ressources for connection to the Internet. Can you name some of them?

- **A computer:**
  PC or Macintosh type generally powerful enough. It can be a desktop or a laptop.

- **A telephone line:**
  (eventually an ADSL line, a satellite link, or cable,...) it is the physical support that transmits information from a computer to another.
• **A MODEM**:  
(Internal in the form of a card or external in the form of a case allowing the conversion of numerical signals (0 and 1) coming from your computer as analog signals circulating in the phone line and vice versa.

• **A navigation software or browser**:  
It is a software that facilitates navigation/surfing. There are several navigation software:
  - **Internet Explorer**: the most known (provided free with the Operating system);
  - **Netscape Navigator**
  - **Mozilla Fire Fox**
  - **Opéra**
  - ... **Google Chrome**

**Activity 6**:  
You have prepared all you need for an internet connection. Try to connect.

**Observation**:  
During the connection, a dialogue box is opened requiring the username, the password and the phone number.

**Where does these informations come from?**  
To get these informations, you should be registered with an Internet provider.
In Tunisia, there are public providers (edunet.tn, ...) and private ones (Planet.tn, topnet.tn, globalnet.tn, ...).
All Internet providers are connected to the Tunisian Internet Agency- (**ATI**).
c – The steps of an Internet connection

Activity 7:
What are the steps allowing a connection to the Internet network from your station to the Internet network?

The connection steps:
Your computer dials the phone number (4 digits) of your provider (which is connected to the network. As soon as there is a connection, your provider’s computer checks your (Login) and your (PassWord). If they are correct, your computer will be connected to the Internet. *Have a nice navigation!!!!!!*

I – 3 – The Web

Activity 8:
Pick out from the following text:
- The different forms of information available on the Web,
- The definition of a hypertext link,

Why according to you is the Web compared to a web?

The *World Wide Web* (or 3W or the *WWW* or the *Web*) is the most spectacular service of the Internet network. We can find all kinds of information (texts, images, sounds and even videos), thanks to web pages. In fact, all topics and themes are dealt with either by professionals or passionate amateurs. Consulting Web pages is possible with a programme called navigator (Internet Explorer, Netscape, Mozilla, …) which allows with just a click on a word or an object (called hyperlink or hypertext link) going directly to another part of the same document, or to another document placed on another computer. The multitude of those links evoke the image of a web. A set of Web pages make up a Website.
a - Internet Explorer (version 7) Browser

1. The previous button enables you to go back to the previous page.
2. The next button directs you to the next page.
3. The title bar indicates the name of the navigator used and the visited page.
4. The addresses bar enables you to write the Web address to visit.
5. The menu bar is used to select commands.
6. The refresh button will reload the current page.
7. The stop button stops loading the current page.
8. The print button allows you to print the current page.
9. The scroll bars allow you to visualize the rest of the page.

II – Searching the Web

Activity 9:
The biology teacher asked you to prepare an oral report on singing birds. How will you proceed to find the necessary information?

Observation:
1st case: Your teacher suggests to you the title of a book in which you can find information for your research.
2nd case: you must find all kinds of information (texts, images, sound, video) that will help you enrich your research.

Interpretation:
It is possible to search information on the Web by using:
- The address of a Web site, if you know it.
- Key words about the research topic.
II – 1 - Navigation through addresses
To consult a specific Web site that you have its Web address, you just need to type the complete address of the site in the address bar, then press “Enter” on your keyboard.

Be careful, a spelling mistake could be fatal, and leads you to the well-known “ERROR 404” which is like “Impossible to show page”

II – 2 – Search engine Browsing
Finding information on the Web can be difficult if we do not know the Web site address that hosts the information we need. Fortunately, there are Web sites called Search Engines that allow to search websites containing the information needed through the use of keywords and phrases typed by the user.

Search Engines sort out retrieve the information thanks to powerful robots (search software) and enable users with simple key words to find the list of the Web sites that correspond to their quest (for example: Google, Yahoo, Altavista).

Let us, now, see how to use a search engine. Let us try Google search engine:

Four hypertext links allow us to choose the type of search we want to do (Web Page, images, maps, news and videos)
In the zone above, write the key word(s) (Singing Birds) then click on the Google Search button or simply press « Enter » You will get a result page similar to the one illustrated opposite. The page consists of hypertext links corresponding to Web site. You just need to click on the title that best corresponds to what you wanted to search (you will see the hand shape of the mouse pointer); Enjoy your trip!!!!

III - Exploitation of Web information

Activity 10:
The history/geography teacher asked you to prepare an oral presentation on the climate in different regions of Tunisia. The presentation should contain both text and images. How can you copy text and images from Web pages?

III – 1 - Copying text from a Web page onto a text document.

Reminder:
Write the steps that allow you to copy a part of a text onto a Word document.
1) ..........................
2) ..........................
3) ..........................
4) ..........................
5) ..........................
6) ..........................
7) ..........................
Those steps are the same when copying a part of a Web page in a Word document.

III – 2 – Saving an image of a Web page in a hard drive

Steps:
After searching the Web site containing the image to be saved in a file in your hard drive C.

1) Place the cursor on the image to copy
2) Right click with the mouse.
3) Choose the Save image as.
5) The «Save image» window opens.
6) Choose the ………then the file where you want to stock the image. l
7) Click on the «Save»button.
In this chapter, I have learnt...

- A computer network is a set of interconnected computers.
- Internet is the network of networks, it is a set of interconnected computers in a large geographical zone (world scale).
- The Web is one of the Internet network services. It is made up of Web pages containing text, images, sound and video. These Web pages are linked by hypertext links.
- Each Web page is identified by a Web address. A Web address (or URL) can have the following form:
  

- To browse the Web, you can use one of these methods:
  - address browsing
  - Search engine browsing

- We can copy texts and images from the Web so as to exploit them later.
Exercise 1:
Write (T) if the answer is correct and (F) if it is false.

1- A MODEM is used to:

☐ Scan an image
☐ Connect a mouse
☒ Connect to the Internet network

2- Internet explorer:

☐ Is a text processing software
☐ Is an image processing software
☒ Is a software that facilitates browsing the Web

3- The Internet is:

☐ A peripheral of the computer
☐ A world network
☐ A Web address

4- The Web is:

☐ A drawing software
☐ A set of interconnected documents (Text, image, sound, …).
☒ An Internet Service Provider
Exercise 2:
Complete the following table:

<table>
<thead>
<tr>
<th>TERM</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Site</td>
<td>Sensible Zone that links Web pages to another.</td>
</tr>
<tr>
<td></td>
<td>It’s an intermediary between your computer and the Internet</td>
</tr>
<tr>
<td>MODEM</td>
<td>Allows searching Websites according to a key word.</td>
</tr>
<tr>
<td></td>
<td>Software allowing browsing the Web.</td>
</tr>
</tbody>
</table>

Have you chosen the activities in this chapter to keep in your portfolio?
Self-assessment

Evaluation 1:
Put a cross in the corresponding box.

<table>
<thead>
<tr>
<th>Statement</th>
<th>True (T)</th>
<th>False (F)</th>
<th>I do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet is a telephone network.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Web is a set of multimedia documents.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is possible to copy a whole Web page onto a Word document.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The calling number of the Service Provider (FAI) is made up of numbers and letters.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To visit a Web site whose address I know, I must use a search engine.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A search engine is a word processing software.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluation 2:
Put a cross where appropriate.

<table>
<thead>
<tr>
<th>Question</th>
<th>Possible answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the Internet?</td>
<td>□ Network of networks</td>
</tr>
<tr>
<td></td>
<td>□ A set of software</td>
</tr>
<tr>
<td></td>
<td>□ No answer</td>
</tr>
<tr>
<td>What is the origin of «WWW»?</td>
<td>□ World Wide Web</td>
</tr>
<tr>
<td></td>
<td>□ Word While Well</td>
</tr>
<tr>
<td></td>
<td>□ No answer</td>
</tr>
<tr>
<td>Each search engine has……..</td>
<td>□ A password</td>
</tr>
<tr>
<td></td>
<td>□ A Web address</td>
</tr>
<tr>
<td></td>
<td>□ No answer</td>
</tr>
<tr>
<td>To prepare a presentation on the city of Carthage, I can use…</td>
<td>□ a search engine</td>
</tr>
<tr>
<td></td>
<td>□ a cell phone</td>
</tr>
<tr>
<td></td>
<td>□ No answer</td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, you must revise this chapter.

Researcher’s Corner

- Search the Web for the Web addresses of search engines.
- You like to search information about the climate of your country. Suggest a solution.
- You launched a browsing software (Microsoft Internet Explorer). You wrote a Web address that you found in a newspaper but you saw this message on the screen:
  «The page cannot be displayed».
  Can you explain why you received this message?
OBJECTIVES

After studying this chapter, you will be able to:

• Define electronic mail.
• Create a free email box.
• Send and receive emails.
• Know the basic functions of an email software.
• Know the conditions of use and the charter of electronic mail (protection of privacy, data security, technical caution rules).

Toolbox

• A computer
• Connection to the Internet
• Web browsing software.
• Free mail box.
• Free email address.
• Electronic messaging software.

PLAN

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I - Presentation

Activity 1:
You would like to send a postal mail to a friend. What must you do? Say what you think of this method?

Observation:
After writing your letter, specifying your details and those of your friend, you must place your mail in a mailbox.

Then your mail goes through different postal services responsible for dealing with mail.

Finally your friend opens the letterbox where the postman dropped the mail you sent.

😢 This method is traditional, slow and very expensive.

Activity 2:
You visited a computer fair, one of the representatives of brands gave you the following card:

INFO-XP

Foulen BEN FOULEN
Représentant Commercial

Avenue des fleurs - Code - ville - Tunisie
☎️ : 7X 111 999 - 22 23 24 25 – 96 97 98 99
Email : Foulen.BENFOULEN@Yahoo.fr

What are the different means of contacting the INFO-XP company representative?

Observation:
I can contact the representative of the company as follows:
- Going to the place indicated on the business card,
- Dialling one of the telephone numbers,
- Sending an email message.
**Activity 3:**
Do you know how to send an email message?

**Observation:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• I create my email box.</td>
<td><img src="image1.png" alt="Create email box" /></td>
</tr>
<tr>
<td>• I type my mail.</td>
<td><img src="image2.png" alt="Type mail" /></td>
</tr>
<tr>
<td>• I specify the receiver’s address.</td>
<td><img src="image3.png" alt="Specify address" /></td>
</tr>
<tr>
<td>• I send my email.</td>
<td><img src="image4.png" alt="Send email" /></td>
</tr>
</tbody>
</table>

**Link between the two Internet service providers (yours and that of your friend).**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Link" /></td>
<td></td>
</tr>
</tbody>
</table>

• Your friend checks his/her mailbox.  
• And reads the mail you sent.  

😊 I choose to send an email message via the Internet.

**Interpretation:**
The email is transmitted via the same 3 steps as the usual post mail:  
1- I send my electronic mail to an email box.  
2- My mail goes through the Internet.  
3- The receiver finds his/her email in his/her email box.
Definition: Email (Electronic mail) is a very important Internet service. It allows users to receive and send messages. Email saves paper, is an efficient, fast means to exchange ideas and information.

Activity 4:
What do you need to get an email?

Observation:
First of all, I need an email account.

II – Electronic Mail

II.1-Free email messages

1) Choose the site where you will create your email account. (for example: Yahoo.fr)

Note: You must of course write the site address in the address bar of your browser. (www.yahoo.fr).

2) Click on the « Mail » button.
3) Click on the link « Sign! »
4) Fill in the fields with personal information.
5) Finally, click on «I accept and create my account».
6) The Email account is created as well as the email address. (mazen.tounsi@yahoo.fr).
a. Sending an email

**Activity 5:**
Now that your address is created, can you use it to send an email to a friend?

1) Launch your browser. (Internet Explorer).
2) Type the address of the website where you have an email address. (for example: www.yahoo.fr).
3) In «Open a session», click on «Mail».

4) In «Do you have a Yahoo account?» type your email address in the Yahoo account area and your password in «Password».
5) Click on «Open a session».
6) Click on the «Write» button.
7) Type your friend’s address then write your message and click on «send».
Internet

**The repertoire of your email account.**

**Labels**

<table>
<thead>
<tr>
<th>N°</th>
<th>Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The repertoire of your email account.</td>
</tr>
</tbody>
</table>
| 2  | This zone contains:  
|    | a : (To:) Receiver’s Email (your friend’s).  
|    | b : (Cc:) The address of another receiver (another friend).  
|    | c : (Subject:) The subject of the message (Letter, meeting, birthday…).  
|    | d : Formatting Toolbar.  
| 3  | Zone for writing the message to be sent. |

**Activity 6:**

Observe the following figure. What does zone n°2 correspond to? What helped you reply in zone number 1? Describe the contents of the blue zone. Do you know how to access it?

**Observation:**

Zone n°2 corresponds to the contents of my Inbox. In the blue zone, there are details of 2 received emails (sender, subject, date and time of sending, size of the message, attachments). To read messages, just click on one of them.
Activity 7:
Can you access your mailbox without using the Web?

There is software material specialised in electronic mail. It offers several functions (managing several personal accounts, managing news, ...) Look at your Windows desktop, you will see a mailing software «Outlook Express».

**a - Definition**
An email software helps send and receive all types of files such as sound, video, text documents, etc...).

1) Double click on the « Outlook Express » shortcut on your desktop.

1 : It allows you to choose one of the folders (Inbox, Outbox, Sent ...)
2 : The list of messages allows you to select the message you want to read.
3 : The contents of the selected message in zone 2.
b - Writing a new message

Activity 8:
Describe the contents of the following illustration. Mention the senders, the receivers, the message subject, the message text,... ...

![Image of a new message window]

Salut, mes ami(e)s
Mes salutations
Mazen TOUNSI

Activity 9:
You want to send a Powerpoint presentation you prepared to 2 friends (Olfa SFAXI and Tarek GABSI). How will you proceed?

Observation:
I can send a multimedia file as attachment to a message.

1) I fill in the fields « To », « Cc » with my friends’ Email addresses...
2) I also fill in the « Subject » field with the type of message I am writing.
3) I click on the « Attach» button in the toolbar.
4) I search the file to attach to my message. An attach field is added above « Subject ».
5) All I have to do is to send the message.
III – Charter for using the Internet

III – 1 – Protection of privacy

Activity 10:
Cross out the actions you must not do when using the Internet.

<table>
<thead>
<tr>
<th>Spying surfers</th>
<th>Exchanging data between friends</th>
<th>Using the surfer’s identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving one’s real identity when asked about it</td>
<td>Diffusing private information about persons without their consent</td>
<td>Giving the job of your parents for reading your Electronic mail</td>
</tr>
<tr>
<td>Attaching a document to an e-mail</td>
<td>Surfing the web</td>
<td>Reading the mail of other persons</td>
</tr>
<tr>
<td>Giving his phone number to download a game</td>
<td>Sending annoying messages to surfers</td>
<td>Listening to music</td>
</tr>
<tr>
<td>Sending messages for harming the other persons</td>
<td>Communicating his password</td>
<td>Giving your user name and password to your friends</td>
</tr>
</tbody>
</table>

→ Some actions indicated above can represent a danger for you or for your family or they can be harmful for other persons.

Interpretation
To take advantage of the power of the Internet network, you have to adopt a respectful and a careful behaviour:

- For people security, you must never provide personal information without a purpose (ask adult persons or friends for help and advice)
- For the respect of the private life of people, adopt politeness rules of use.

III.2-.Rules of caution and technical security

Activity 11:
Circle what is advised to do when you use a computer connected to the Internet
<table>
<thead>
<tr>
<th>Protecting your information using a code</th>
<th>Installing antivirus in your computer every month</th>
<th>Confirm the installation of a program that you have not requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saving your password in public computers</td>
<td>Giving your password for any request</td>
<td>Saving your important data regularly</td>
</tr>
<tr>
<td>Analyzing regularly your computer from spy, viruses..</td>
<td>Installing anti-virus and updating its database at least once a week</td>
<td>Checking the activation of the antivirus before surfing the net</td>
</tr>
<tr>
<td>Disabling the firewall which slows the connection</td>
<td>Asking your parents to customize the Internet access control</td>
<td>With the agreement of your parents, verify before giving confidential information –that you are on a secured website</td>
</tr>
<tr>
<td>Analyzing your flash disk with an antivirus before using it</td>
<td>After detecting and deleting a virus, restart your computer</td>
<td>Downloading a free antivirus and installing it on your computer</td>
</tr>
</tbody>
</table>

**Observation**

Some of the above-mentioned actions are of crucial importance for your computer and the other computers in the lab to function well. It is also important for your personal documents.

**Interpretation**

For the security of your data and the prevention of unpleasant attacks, you need to acquire certain habits when using the Internet:

*Protect your data by regularly saving them. Install an anti-virus to be updated once a week.*

*Be alert in case of transactions on the network.*

**Activity 12:**

There are other caution measures to protect privacy on the Internet.

Can you name some more measures? At least 3. Compare your answers with your friends’ and set up together your own charter of Internet use then stick it on all the lab computers.
In this chapter, I have learnt.....

- The Internet use charter contains a whole set of attitudes and behaviours that each Internet user should adopt for mutual respect of persons and intellectual property.
- Email is an Internet service.
- To send and receive email messages, you must have:
  - An Email account
  - An Email box
  - An Email address
- An Email address looks like this:
  
  \textit{Name\_user@name\_Provider}

- To send and receive messages, you can use an Email software like Outlook Express.
- You can send and receive messages using the Web. To do so, you need to have a free Email account on a site.
- You can attach a multimedia file (sound, image, video) to your Email message.
- You must follow the Charter of Internet use.
Exercise 1:
Put T for the True statements and F for the False statements.

1-When I send an Email, the receiver:

- [ ] must be connected to the Internet at that time
- [ ] can be disconnected at the time of the sent of the message
- [ ] Must have the same IP as mine.

2-I can check my Email box:

- [ ] on my personal computer only.
- [ ] on any computer connected to the Internet.
- [ ] Only when I receive an Email

3-I can attach a file to my message:

- [ ] Text only
- [ ] All types
- [ ] a PowerPoint presentation

4-When I send an Email message to a friend using the Web:

- [ ] My personal computer must be connected to the Internet
- [ ] I can use my friend’s computer
- [ ] I can use any computer connected to the Internet

Exercise 2:
Put the steps of downloading an attachment in order: steps 1 to 6

<table>
<thead>
<tr>
<th>Actions</th>
<th>Number of the action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Inbox folder</td>
<td></td>
</tr>
<tr>
<td>Click on Attachment</td>
<td></td>
</tr>
<tr>
<td>Click on Save</td>
<td></td>
</tr>
<tr>
<td>Launch the Email software</td>
<td></td>
</tr>
<tr>
<td>Choose the downloading folder</td>
<td></td>
</tr>
<tr>
<td>Select the message received</td>
<td></td>
</tr>
</tbody>
</table>
Copy the statements in your notebook.

**Evaluation 1:**
Put a cross in the corresponding box.

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>True (T)</th>
<th>False (F)</th>
<th>I do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can send the same message to several receivers without typing it again</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can send an Email without knowing the receiver’s address.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once I have read my mail, it is automatically deleted.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I give my name and my password to an Internet user who likes to communicate with me</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I see a........... next to a message, it means the sender attached a file to the message</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Evaluation 2:**
Put a cross in the box that corresponds to your choice

<table>
<thead>
<tr>
<th>Questions</th>
<th>Possible Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>When playing a game on the net, I must…</td>
<td>- deactivate the firewall</td>
</tr>
<tr>
<td>- get my parents’ permission</td>
<td>- no answer</td>
</tr>
<tr>
<td>I can only send a message if I have….</td>
<td>- an Email box</td>
</tr>
<tr>
<td>- a browser</td>
<td>- no answer</td>
</tr>
<tr>
<td>I can send a message if I have the software…</td>
<td>- of electronic mail</td>
</tr>
<tr>
<td>- browser</td>
<td>- no answer</td>
</tr>
<tr>
<td>The attached file can be a ....</td>
<td>- text</td>
</tr>
<tr>
<td>- sound or video</td>
<td>- no answer</td>
</tr>
<tr>
<td>- no answer</td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, revise this chapter

**Researcher’s Corner**
- How can you memorize the email addresses of all your friends.
- How can you check your mailbox using email software?
- Can you explain the difference between an anti-virus software and a fire wall one?
OBJECTIVES

At the end of this chapter, you will be able to:

- Be responsible when downloading
- Respect private property rules
- Behave respectfully on the Web

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Toolbox

- A computer
- An Internet connection
- A Web browser.
- A downloading address via the Web
I- Presentation:

Activity 1:
Your history and geography teacher asks you to prepare a presentation tracing the history of the independence of Tunisia, using research on the Web. You save the outcome on a floppy disk and hand it over to him. Explain how you are going to proceed in the preparation of this floppy disk for your teacher.

Observation:
With the help of a search engine, I look for the history of the independence of Tunisia. I open the web pages provided by the search engine’s results, I copy their contents in Microsoft Word documents. I save all these documents on a floppy disk and hand it over to the teacher.

Interpretation:
It is possible to save the web pages on my floppy disk without copying the content of every page on a Microsoft Word document. This operation is called “file downloading”.

Activity 2: With the answers to the preceding question in mind, complete the following definition. You can use the following words: internet, computer, files, copying

Definition:
The downloading of ................. is an ................. service, which allows the ................. and remote transfer of ................. (texts, picture, sound, software,...) from one ................. to another.
II- Downloading

II- 1- Downloading of Web pages

Activity 3:

Type the following URL “http://www.tunisie.online.fr/histoire.html”, then save this page in your personal folder.

1) Select “file”
2) Select “Save as”
3) In the zone “Save in”, select drive C.
4) Double-click on the folder entitled “Name and surname”
5) In the zone “file name”, write the file name
6) Click on the “Save” button

Interpretation:

1) The saving of web pages on a computer’s hard disk is called downloading. It makes the web page accessible when you’re off-line.

2) Some web pages are the private property of internet users, institutions, companies or schools. The authors make them available to internet users for consultation but give no permission for downloading; others allow copying and dissemination.

3) To check if the author authorizes copying or downloading, check the legal mention, the warning of the author.

4) It is possible to find a lot of information on the web but not all data are accurate.

Before downloading web pages, you must check:

* the validity of the web pages content
* if the operation is allowed by the author

After copying or downloading web pages, remember to mention the source and the name of the author.
II- 2- Downloading of Images

Activity 4:

Type the following URL “http://www.myportail.com”, click on the butterflies’ link and save images of butterflies that you choose.

1) Position the pointer on the image to be saved.
2) Right-click with the mouse.
3) Select «Save the image as… »
4) In the zone «Save in», select the C drive.
5) Double-click on the folder entitled «Name and forename»
6) In the zone «File name», write the file name
7) Click on the «Save» button

Interpretation:
The saving of images from the web on a computer’s hard disk is called downloading. These images can be used to build your personal image folder, which you can use in your projects.

II- 3- Dowloading of applications

Activity 5:

Type the following URL: http://www.01net.com, search for the free image processing software “Photofiltre”

Observation:
After the search for the key word containing the software’s name, the website provides a list of programmes which contain the key word of the programme I am looking for. Clicking on one of the links, the following window appears.
Activity 6:
Describe the window of figure 1.

Observation:
• Zone 1 represents the name of the programme to be downloaded.
• Zone 2 contains the «download» button which allows the downloading operation to start.
• Zone 3 contains a description of the programme to be downloaded.
• Zone 4 is reserved for the author or editor’s name
• Zone 5 contains the downloading button.

Activity 7:
Go back to the previous activity and see if it’s possible to download this programme. In case the operation is authorized, download the image processing programme “Photofiltre”

Observation:
From the figure of the previous activity, it is easy to see that the downloading is authorized and free.(zone 4,Licence type : free).
Activity 8:
Describe this dialogue box

Observation:
This dialogue box is entitled “file download”, it is made up of 3 zones:
- Zone 1 always contains one of the following questions:
  - Do you want to execute or save this file? Or
  - Do you like to open or save this file?
- Zone 2 contains the characteristics of the file (name, type, size) ...............
- Zone 3 contains 3 buttons: Execute/Open, Save, Delete
- Zone 4 informs the user of the risks during the downloading of the files ..........

Activity 9:
What are the steps to follow to save this file on the hard disc?

Observation:
1) Click on the «Save» button.
2) Specify the destination file.
3) Click on «Save».
A Dialogue box entitled «File downloading» indicates the progression of the downloading and the time it will take and the transfer rate.

Interpretation:
The method of downloading via a Web server is the easiest. All servers use the http protocol. You can use your Web browser to access a Web site offering free software to download. Follow these steps:
1) Enter the URL of the site.
2) Click on the link.
3) Define the downloading parameters.

In this chapter, I have learnt...

- Downloading files allows retrieving files distance.
- Downloading can be done after checking:
  - The validity and origin of the information to download
  - The author’s permission
- Respecting private property compels me to state the source and the author of the information to download.
Exercise 1:
Complete the definition of downloading with words from the following list:
Internet / computer / transmission
Downloading is the ……………… of information (programmes, data, images, sounds, videos) from a ……………………….. to another via the ……………………………...

Exercise 2:
Download some images of Tunisia and save them in your personal image library.

Exercise 3:
Download images of cartoons characters in your personal library.

Exercise 4:
Download Audacity and save it in your personal folder.

Exercise 5:
Tick the correct answer(s)

Downloading allows:

- Saving data from the Internet.
- Sending electronic letters.
- Searching data.
- Distance conversation.

We can download from the Web:

- Image files
- Sound files
- Video files
- Web Pages

To download data from an FTP server:

- We only write the username.
- We do not enter the username or the password.
- We must enter the username and the password when the server is protected.
- Downloading is not possible

Exercise 6:
Answer True or False. Put T or F in the box.

- On the Web, we find Web sites that offer software to download. [ ]
- We can execute an application instead of downloading it. [ ]
- Downloading unauthorized paying files is an illegal operation. [ ]

Have you chosen anything from this chapter to keep in your portfolio?
Write the following instructions in your research notebook. Answer True or False.

<table>
<thead>
<tr>
<th>Question</th>
<th>True</th>
<th>False</th>
<th>I do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>We cannot download files from the Web.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We cannot download pages from the web.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To access an FTP server, you just write the user name.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downloading a file is always paying.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only files of some Kilo-octets size can be downloaded.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During downloading, it is usual to provide personal information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We can download only applications.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downloading consists in moving files.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downloading is an operation that cannot be interrupted.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downloading a file can only be done with the owner’s agreement.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you have less than 7 correct answers, you must revise this chapter.

**Researcher’s Corner**

- Downloading files, email and the World Wide Web are services provided by the Internet. Do you know any other?
- Flash Get allows the downloading of files. Search the Web to find a list of software that has the same function.
Saint-EXUPERY
(June 29, 1900 – July 31, 1944)
French writer, poet, aviator,
Among his writings:
“This is why I invited educators and told them
• You will not load them with empty formulas but with pictures that vehicle structures,
• You will not fill them with dead knowledge but you will nurture a style for them.”

In this unit
Leaflet / Newspaper / Press review / Poster / Advertising Magazine / postcard

PROJECTS

• Year 7
↳ Project about text and image

• Year 8
↳ Projects about text, image and sound

• Year 9
↳ Projects about text, image, sound and automatic calculation
### Translation table

<table>
<thead>
<tr>
<th>Français</th>
<th>العربية</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiche</td>
<td>معلقة</td>
<td>Poster</td>
</tr>
<tr>
<td>Athlétisme</td>
<td>ألعاب القوى</td>
<td>Athletics</td>
</tr>
<tr>
<td>Bande dessinée</td>
<td>صورة متحركة</td>
<td>Cartoon</td>
</tr>
<tr>
<td>Carte postale</td>
<td>بطاقة بريدية</td>
<td>Postcard</td>
</tr>
<tr>
<td>Cigogne</td>
<td>لقلق</td>
<td>Stork</td>
</tr>
<tr>
<td>Commonwealth</td>
<td>الكومونولث</td>
<td>Commonwealth</td>
</tr>
<tr>
<td>Culture et art</td>
<td>ثقافة وفن</td>
<td>Culture and art</td>
</tr>
<tr>
<td>Dépliant</td>
<td>مطوية</td>
<td>Brochure</td>
</tr>
<tr>
<td>Epice</td>
<td>توابيل</td>
<td>Spice</td>
</tr>
<tr>
<td>Fraternité</td>
<td>أخوة</td>
<td>Fraternity</td>
</tr>
<tr>
<td>Héros</td>
<td>أبطال</td>
<td>Heroes</td>
</tr>
<tr>
<td>Humanité</td>
<td>إنسانية</td>
<td>Humanity</td>
</tr>
<tr>
<td>Iceberg</td>
<td>جبال الجليد</td>
<td>Iceberg</td>
</tr>
<tr>
<td>Journal</td>
<td>صحفية</td>
<td>Newspaper</td>
</tr>
<tr>
<td>Journaliste</td>
<td>صحفي</td>
<td>Journalist</td>
</tr>
<tr>
<td>Magazine</td>
<td>مجلة</td>
<td>Magazine</td>
</tr>
<tr>
<td>Mosaïque</td>
<td>فسيفساء</td>
<td>Mosaics</td>
</tr>
<tr>
<td>Oiseau migrateur</td>
<td>طيور مهاجرة</td>
<td>Migratory bird</td>
</tr>
<tr>
<td>Palmarès</td>
<td>جوائز</td>
<td>Awards</td>
</tr>
<tr>
<td>Phénicien</td>
<td>فينيقي</td>
<td>Phoenician</td>
</tr>
<tr>
<td>Reporter</td>
<td>مراسل</td>
<td>Reporter</td>
</tr>
<tr>
<td>Revue de presse</td>
<td>عرض صحفي</td>
<td>Press Review</td>
</tr>
<tr>
<td>Royaume de Morphée</td>
<td>مملكة الأحلام</td>
<td>Kingdom of Morphée</td>
</tr>
<tr>
<td>Site archéologique</td>
<td>موقع أثري</td>
<td>Archaeological Site</td>
</tr>
<tr>
<td>UNESCO</td>
<td>يونسكو</td>
<td>UNESCO</td>
</tr>
</tbody>
</table>
A list of projects is available for you. You can choose the topic you like to work on.

To achieve your work, you must think of several things before actually starting:

1. Set up a plan of the various information you intend to include. Underline the important words and plan accordingly taking into consideration the context and the topic chosen.

2. List the resource people who will help you. Your Computer Science teacher and others like your History, English and Biology teachers.

3. List the material and software resources necessary for the realisation of your project. Of course, you must think of what you learnt in class with your Computer Science teacher.

4. Set dates for each stage of your project. To help you, a grid is provided for you to indicate the different stages of your project as well as the times you think you will execute them. You will check regularly with your Computer Science teacher how much you have done.
# My project planning

**My project title:** ........................................................................................................................................................................

Besides my Computer Science Teacher, I asked for help from ....................................................................................................

I planned to start my project at the beginning of ............................................

If everything goes well, I will have finished my project by the end of ...............

The key words of my project are: .......................................................................................................................................................

This is my project plan:

<table>
<thead>
<tr>
<th>At the end of...</th>
<th>I have achieved:</th>
<th>My Computer Science teacher made these recommendations to me:</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td></td>
<td></td>
</tr>
<tr>
<td>January</td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is time to submit my work and present it to the class

<table>
<thead>
<tr>
<th>I think I achieved what I was asked to do</th>
<th>Not at all</th>
<th>Partly</th>
<th>Totally</th>
</tr>
</thead>
<tbody>
<tr>
<td>While working on my project, I learnt to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What I liked best about the project:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What I liked least while working on my project:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
OBJECTIVES

At the end of this chapter you will be able to:

- Use ICT to illustrate an idea.
- Produce a document containing text and images.
- Achieve a production respecting constraints.

Toolbox

- Computer
- Printer
- Scanner
- Internet Connection
- Pupil’s reference
- Software adapted to project content
- Different texts dealing with the projects themes
- Image library on the various themes covered

PLAN

I- Small seed will become a plant 172
II- A story in images/pictures 173
III- Mosaics, our ancestors’ art 174
IV- Guess my message 175
V- Carpet, my beautiful carpet! 176
VI- The 7 differences 177
VII- Sleep, Sleep Child….. 178
VIII- Tell me a story 179
IX- Little poet will be great 180
**Project Title**

Small seed will become a plant

**Specific Learning Aim**

Present the different stages of a seed germination, using ICT.

**Context**

You are a nature lover, and you would like to share this passion with your classmates. You decide to explain to them how a plant is born from a seed.

**Expected Output**

Your work consists in writing a four-page file where we will find:

- Texts, images and drawings on the different steps of the germination of a plant (from the seed stage to a flowered plant).
- Texts, images and drawings on the different elements necessary for the survival of a plant.

Your Computer science and Biology teachers will help you.
Project Title

A story in images/pictures

Specific Learning Aim

Produce a digital document.

Context

You are a cartoon amateur. You would like to become a cartoonist.

Expected Output

Invent and illustrate with a drawing a story of your favourite hero or character. You will produce a three-page magazine where we will find:

- A story illustrated with texts, pictures and drawings.

Constraints
Mosaics, our ancestors’ art

Specific Learning Aim

Get documentation and communicate through ICT.

Context

You are a Carthaginian craftsman having lived in the third century. Your speciality is mosaics.

Expected Output

Your task is to produce a mosaic of Carthage Tanit. It will consist in a three-page magazine containing:

- A story illustrate with texts, images and drawings describing the Tanit.
- A mosaic which you have to produce.

Constraints

Your history and geography and computer science teachers will help you.
Project Title

Guess my message

Specific Learning Aim

Communicate through images.

Context

While walking through your town, you observe...Lots of signs overwhelm you: the little green man who allows you to cross the street, the winking snake indicates a pharmacy, ...What about designing by our own signs?

Expected Output

Your task is to invent signs related to friendship, child protection, helping handicapped people,

Design three posters containing:

- A text you have written on each of the three topics
- A sign you have created to illustrate each of the three topics.

Constraints
Project Title

Carpet, my beautiful carpet!

Specific Learning Aim

Discover the art of carpets through ICT.

Context

Kairawan is famous for its magnificent wool carpets. The mergoum and klim are other carpet types we are proud of. Do you know the difference between the three types of carpets? Can you explain the difference to your classmates?

Expected Output

Your task is to present the various types of carpets that you know. It will be an advertising magazine for a shop that sells carpets.

Your work will contain:

- A descriptive text about each carpet and its region with images and drawings to illustrate each of the three types of carpets.

Constraints

Your teachers of Computer Science and Geography will help you.
**Project Title**

*The 7 differences*

**Specific Learning Aim**

How to process image through games.

**Context**

The 7 differences game consists in finding 7 differences between two images that seem identical.

**Expected Output**

Create the game and play it with your classmates. Your output will be a poster containing:

- Two overlapping images.
- The bottom image should be complete, the top image is a copy of the bottom one on which you will insert 7 differences (deletion of a part, addition of other elements, changing the colour of a zone, ...........)
- The game consists in making your classmates discover the 7 differences. If they succeed, you lose; otherwise you are a star of make belief and you win!
Project Title

Sleep, Sleep Child.....

Specific Learning Aim

Communication through image.

Context

In the shade of a palm-tree, lulled by a cool breeze, your mind wanders in the kingdom of Morphee. A strange beast with an elephant head and bird feet approaches you. What is the country where people walk with heads down?

Expected Output

Describe the strange creatures in your dream. Your work will be a large poster containing:

- Texts, images and drawings of the creatures and the country you imagined.
- All your illustrations must be inspired from animals, places or real countries but will not look normal in form.

Constraints

Your Art and Computer Science teachers will help you.
Tell me a story

Specific Learning Aim
Communication through image.

Context
Do you know how cartoons are created? Can you explain that for your classmates and illustrate the principle?

Expected Output
Illustrate a short story using cartoons. Produce a catalogue containing:
- The presentation of the principle of image animation.
- The sequence of images. That make up your story.

Constraints
You can get help from your Computer Science and Art teachers.
Little poet will be great

Specific Learning Aim
Illustration of a written text.

Context
« In Paris, there is a street,
In the street, there is a house
In that house, there is a table
On the table, there is a cage.
In the cage, there is …
Turn into a poet and imagine an end to the story.

Expected Output
Finish the poem and present it to your classmates. It will look like a postcard containing:
- The completed and illustrated poem.
- An illustrated poem about your town, written according to the same principle.

Constraints
Your project will be entirely conducted in class and you will use all the material resources and software available in the laboratory. Your teachers of Computer Science French will help you.
OBJECTIVES

At the end of this chapter you will be able to:

• Use ICT to illustrate an idea.
• Produce a digital document containing text, images and sound.
• Achieve a production respecting constraints.

Toolbox

• Computer
• Printer, scanner
• Internet connection
• Pupil’s reference
• Software adapted to project content
• Different texts dealing with project themes
• Image library on the various themes covered

PROJECT

PLAN

I - Do you speak English ? 182
II - Our ancestors the Carthaginians 183
III - Karaoké 184
IV - The Tunisian archaeology patrimony 185
V - A Reading of Writing 186
VI - Modern Times DJ 187
VII - The History of fruits and vegetables 188
VIII - Conjugate in English 189
IX - The «Vaga» storks 190
Do you speak English?

Specific Learning Aim

Get documentation and communicate using ICT.

Expected Output

You certainly like English and you would like to share this passion with your mates. Can you manage to present the commonwealth countries to them?

Constraints

Your work consists in designing an illustrated presentation of the commonwealth countries containing:

- Some texts images and pictures about these countries.
- Sound files which you will have recorded in English.

The implementation of your project will take place entirely in the classroom and will make use of all the material and software resources available in the computer lab. You can seek help from your computer and English teachers.
Project Title

Our ancestors the Carthaginians

Specific Learning Aim

Communicate and get documentation using ICT.

Context

The Carthaginians, descendants of the Phoenicians, themselves descendants of the inhabitants of the city of Tyre, settled in Tunisia in order to deal in trade.

Expected Output

Your task consists in designing an illustrated presentation on the life of the Carthaginians, their habits, their culture, the wars they fought and the main cities they founded in Tunisia. This presentation will contain:

- Texts, images, pictures and maps.
- Sound commentaries that you will have recorded through reading of a text

Constraints

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer and History teachers.
You are asked to design a karaoke of three songs (in Arabic, in French and in English) in the form of a presentation containing:

- The lyrics of each of the three songs which you will have captured yourself. These texts should scroll up slowly so that they can be read with no difficulty by the singer.
- A link to the recorded sound tape of the song. The triggering of the link should provoke the scrolling of the corresponding text.

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer, Arabic, French and English teachers.
**Project Title**

The Tunisian archaeology patrimony

**Specific Learning Aim**

Communication with the help of ICT.

**Context**

Our country abounds in archeological vestiges rich in diversity and culture. What majestic mosaics at the Bularegia amphitheatre! And what imposing coliseum at El Jem! Do you know such other monuments? Would you be able to present them to your mates?

**Expected Output**

Your task consists in designing an illustrated tourist brochure on some archeological sites of Tunisia in the form of a presentation containing:

- Texts, images, pictures and maps.
- Commentaries which you will have recorded via the reading of a text or interviewing people.

**Constraints**

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer and history teacher.
A Reading of Writing

Project Title

Specific Learning Aim

Communication with the help of ICT.

Context

Do you know that the invention of writing marked mankind’s entry in History? In fact, it was in 3500 B.C. that the first pictograms were invented in Mesopotamia. These signs were transformed in 3000 B.C. in cuneiform ones. The symbols were gradually transformed in 1200 B.C., with the Phoenicians inventing the first alphabet. Could you present these symbols to your classmates? Could you locate them on a map? Could you place them on a timeline?

Expected Output

Your job consists in designing a presentation about writing through time containing:
- Commentaries which you will have recorded via the reading of a text or interviewing people.

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer and history teacher.
Modern Times DJ

Specific Learning
Aim
Produce a digital document.

Context
Most of your favourite songs have undergone some kind of “processing” before you can listen to them. This processing can be a dubbing with another song, a repetition of a portion of a song, an echo effect, etc... In your turn, could you make these processing operations on a song? Then, let the music play!

Expected Output
Your task consists in designing a concatenation of 5 songs to which you have made some modifications. It will take the form of a sound file:

- A harmonious concatenation of 5 dubbed songs. The concatenation must proceed smoothly and without idle time.
- The dubbing operations that you’re going to make on the songs must be different from each other.

Constraints
The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer teacher.
Project Title

The History of Fruit and Vegetables

Specific Learning Aim

Communication with the help of ICT.

Context

Do you know where fruit and vegetables, which fill our stores and markets, come from? Certainly, from our cultivated and fertile lands. But do you know that some of these fruit and vegetables, such as tomatoes, pepper and spices, haven’t always existed in Tunisia? Then, where do they come from? Some come from the New World and others from Asia.

Expected Output

Your task consists in designing a display in which you present the origin of fruit, vegetables and spices which we use in our everyday cooking. You are expected to surprise your classmates by the originality of your findings! This presentation should contain:

- Texts, images, pictures and maps.
- Commentaries which you will have recorded via the reading of a text or interviewing people.

Constraints

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer and history teacher.
Conjugate in English

Your task consists to design an English exercise where you present a list of at least 20 irregular verbs with their phonetic transcriptions. Your presentation should contain:

- Texts, images and pictures illustrating the conjugated verb.
- The phonetic transcription of each conjugated verb.

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer and English teachers.

Learn through ICT.

Your vocabulary in English is getting richer and richer. Why don’t you allow your classmates to benefit from this? So play the teacher and help your friends to learn the new words.
**Project Title**

The «Vaga» storks

**Specific Learning Aim**

Communicate through ICT.

**Context**

Vaga, or the granary of Tunisia, are nicknames which, a long time ago, had been attributed to the city of Beja. Among the landmarks of this region, there’s one which you probably know, the storks. But where do they come from? When do they come to Tunisia? Do you happen to know other regions of Tunisia renowned for regularly hosting migratory birds?

**Expected Output**

Your task consists in designing an illustrated documentary about the world of migratory birds. Your presentation will include:

- Texts, images and pictures illustrating the theme of the documentary.
- Recordings of swan chants or any other bird’s chant that you can record.

The implementation of your project will be carried out wholly in the classroom and you will make use of all the material and software resources available in the computer lab. You can seek help from your computer and biology teachers.

**Constraints**
OBJECTIVES

At the end of this chapter you will be able to:

• Use ICT to illustrate an idea.
• Produce a digital document containing text and images.
• Achieve a production respecting constraints.

Toolbox

• Computer
• Printer, scanner
• Internet Connexion
• Pupil’s reference
• Software adapted to project content
• Different texts dealing with project themes
• Image library on the various themes covered

PLAN

I- Today’s Reporter, Tomorrow’s Journalist 192
II- Great inventions 193
III- Let’s save the planet 194
IV- The seven wonders of the world 195
V- I have a dream, ... 196
VI- Tell me who you are, I will tell you..... 197
VII- Ready, Steady, Go.... 198
Project Title

Today’s Reporter, Tomorrow’s Journalist

Specific Learning Aim

Get documentation and communicate using ICT.

Context

Your school, your town or your region is getting ready for a big event. Simulate the role of a reporter and have us take part in this moment via your report.

Expected Output

Your work consists in designing a newspaper illustrating an event of your choice.

Your work will be a press review containing:

- Texts, images, drawings, tables and graphics illustrating the theme of the report.
- As in a real newspaper, it should contain interviews, ads, and the texts should be presented in columns.

Constraints

You can ask for help from your Computer Science and Geography or History teachers or your school director (depending on the theme chosen).
Great inventions

Specific Learning Aim

Communicate through ICT.

Context

Thomas Edison, Louis Braille, Louis Pasteur, and others are famous characters to whom manking owes a great deal. Do you know them? Do you know any other famous people? Can you introduce them to us?

Expected Output

Your work consists in designing a magazine illustrating 5 characters whose discoveries changed the world.

Your work will be a press review containing:
- texts, images, drawings, tables and graphics illustrating the characters you have chosen.
- two of the five characters must be necessarily Arab.
- illustrations, texts, images and graphics should explain the importance of the discoveries through a comparison in time (before and after the discovery or the invention).

Constraints

You can get help from your Computer Science and Geography or History teachers as well or your Biology and Physics teachers (depending on the theme chosen).
Project Title

Let’s save the planet

Specific Learning Aim

Communicate using ICT.

Context

The ozone layer that protects us from the sun is getting fragile, the surface of icebergs is diminishing, animal species are threatened of extinction. … As a fervent protector of nature, you decide to sensitize your classmates to the topic. Will you manage?

Expected Output

Your work consists in designing a presentation meant to sensitize your classmates on the risks and on simple actions to take as a contribution to a save environment.

Your work will take the form of a presentation containing:

- texts, images, drawings, tables and graphics illustrating the protection of the planet.
- The implementation of your project will take place entirely in the classroom and will make use of all the material and software resources available in the computer lab.

You can seek help from your computer and Biology teachers.
The seven wonders of the world

Specific Learning Aim

Communicate using ICT.

Context

L’UNESCO, an international organisation which is the guarantor of the world patrimony, regularly classifies historic monuments. Can you present the monuments and explain why they have been chosen as «Wonders of the World»?

Expected Output

Your work consists in designing a presentation aiming at the promotion of culture and arts. It will contain:

- Texts, images, drawings, tables and graphics illustrating the 7 wonders of the world as classified by UNESCO.
- An apology of ‘Art and Culture.
- An «8th wonder of the world» in the form of a poem, a song, sculpture, a mosaic, ... which you will produce yourself.

You can seek help from your computer Science and History or Geography or Art teachers.
Project Title

«I have a dream, ...»

Specific Learning Aim

Communicate in a foreign language through ICT.

Context

This famous quotation is the title of a speech by Martin Luther King, on the 28th of August 1963, on the steps of the Lincoln Memorial. It is a message of hope for all mankind. What is your message to your classmates? Can you write it and read in English like Martin Luther King?

Expected Output

Your work consists in designing a presentation meant to promote fraternity and friendship. It will contain:

- texts, images, drawings, tables illustrating the topic.
- A recording of your reading of your text which must be displayed at the same time as listening to the recording.

You can ask for help from your Computer Science and English teachers.
Tell me who you are, I will tell you…..

Learn through games.

Your task is to design a game related to countries and their capitals. Can you do it?

You have to design a game aiming to test your classmates knowledge of geography. It will contain:

- At the top of each page, a text, or an image, or a drawing or even a table, a graphic illustrating the country to find out.
- At the bottom of each page, three suggestions of capitals (2 wrong and 1 right).
- When clicking on each suggestion, a sound file will send a message allowing the player to know if the answer is correct.
- Your game should relate to 15 countries and their capitals.

Your teachers of Computer Science and History or Geography can help you.
Project Title

Ready, Steady, Go….

Specific Learning Aim

Get documentation and communicate using ICT.

Context

Your passion is athletics or swimming or football … Will you be able to share your passion with your classmates? Will you succeed in promoting the benefits of the game and its origin?

Expected Output

You have to design an encyclopedia on your chosen sport.

Your presentation will contain:
- texts, images, drawings, illustrating your sport
- recordings of the text reading or of sportsmen.
- Tables and graphics illustrating the evolution of the chosen sport (number of teams or member nations, places and dates of the main latest games)

Constraints

You can get help from your teachers of Computer Science and Physical Education..
REFERENCES
**Bibliography**


**Web tography**

http://crb.ulco.free.fr/c2i/cours2i/fiches_td/
http://lecompagnon.info
http://office.microsoft.com/
http://student.e-qcm.net/
http://users.belgacom.net/bo031906/
http://wims.unice.fr/
http://www.educnet.education.fr
http://www.evalio.com/
http://www.formatis-institut.fr/
http://www.misfu.com/
http://www.nextsend.com/
https://cursus.uhb.fr/