

# Unit 2 – Computers today & Basic software

Final task: Report and solve an incident.

# Computers today

- **Living in a digital age...(vidéo)**

- **Computer essentials**

What is a computer?



So...

A computer is usually composed of a Central Processing Unit (CPU), a DVD drive, USB ports, an external broadband modem or router, a keyboard, a mouse, a flat screen/monitor.

You can add a printer, a webcam etc.

Finally, software will be used inside the computer.

- Text – what is a computer?
- **Inside the system... (vidéo)**

So...

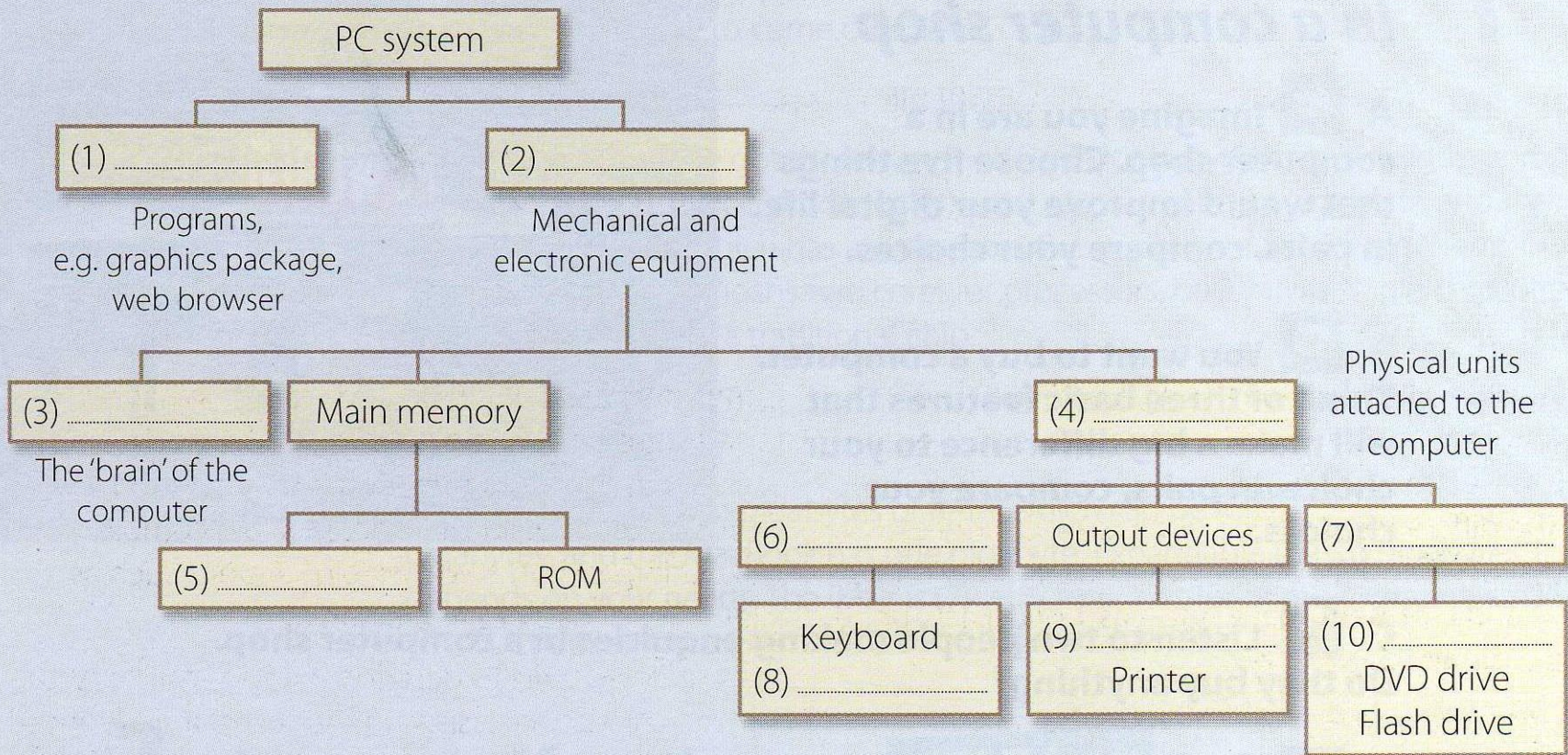
Inside a PC system there is:

- A motherboard (a circuit board that contains the most important part of the computer such as CPU or RAM)
- CPU (central processing unit / processor / brain)
- Heat sink (draws heat away from the processor)
- RAM, random access memory (short term memory)
- Hard drive (for long term memory – most hard drive use a magnetic platter to store data but the newest computer you can find solid state drive \$\$\$)
- Expansion slots (allow you to add cards such as video cards or wireless cards)
- Power supply unit (sends power to all the components)



- Text – What is inside a PC system?

## Recap on PC system



## Text – Bits and bytes

# Basic software

- The operating system (OS)

Complete the text with the words below:

application software/operating system/software/system software

The set of program instructions that tell the computer what to do is known as software. It can be classified into 2 basic categories:

- the system software, which includes all the programs that control the basic functions of a computer (e.g. operating systems, programming software, device drivers and utilities).
- the application software, which comprises programs that let you do specific tasks. Typical applications include word processing databases, educational programs, email and video games.

The operating system is a set of programs that control the hardware and software resources of a computer system. Typical functions include handling input/output operation, running programs and organizing files on disks.

# GUI operating systems

- What does user-friendly mean?
- Do you think most operating systems are user-friendly? Give reasons for your answer.

Text – GUI operating system

Interface features...



TEST – Writing a summary

- **Word processing (WP)**
  - Word processing features (exercise)
  - Word Sudoku
  - Giving and following instructions
- **Databases**

Text - Databases

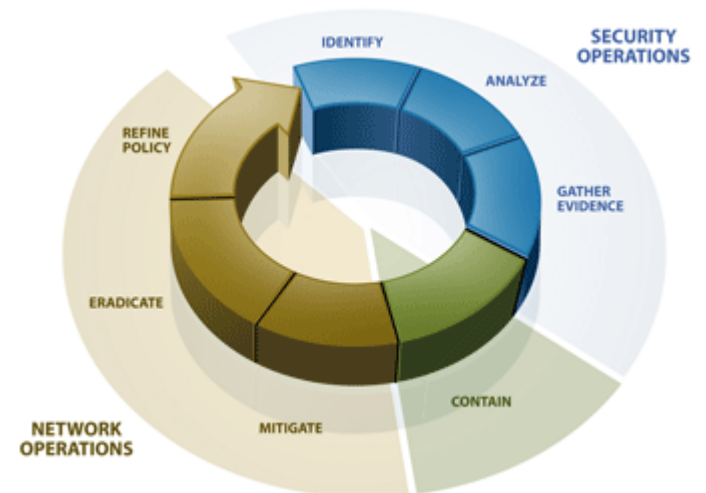
# Incident report

- Brainstorming : what kind of incidents could you have to tackle as an network administrator or as a programmer?

- What would be the different steps to handle an incident? (work in pairs)

Create a diagram to illustrate the process.

# Examples



The importance of incidents and their possible classification...

Text – Incident: homeland security

**How to report an incident?**

How would you proceed? Which format?

Create your own incident form...

# Examples

INCIDENT REPORT	
1. Type of incident	
2. Name, job of the person reporting the incident	
3, Name and/or location of the victimized system	
4. Level of danger	low
	medium
	high
5. description of the incident	
6. Impact of the incident on the PC/ software and/ or person	
7. Solutions available to tackle the problem	



# Some incidents...

- Over the course of a week, the number of phone calls coming into the organization's help line for online bill presentment and payment increases by 400 percent. Most callers complain of having to resubmit payment information multiple times, and many cannot complete their payment.
- On a Monday morning, the organization's help desk receives calls from five users on the same floor of a building who state that they are having problems with their wireless access. A network administrator who is asked to assist in resolving the problem brings a laptop with wireless capability to the users' floor. As he views his wireless networking configuration, he notices that here is a new wireless access point listed as available. Based on the insecure configuration settings transmitted by the access point, the administrator does not believe that his team deployed it.

- In the past 24 hours, several employees have called the help desk to question the validity of e-mails from the organization's official credit card provider. The e-mails cite a possible security breach in the financial institution's records and ask recipients to follow a link to the institution's Web site and create a new password, after identifying themselves by providing their existing passwords and account information.
- An employee leaves an organization unexpectedly, and the employee's manager is granted access to the former employee's desktop computer to retrieve important project information that should be stored on it. The manager finds some filenames that appear to be related to the project, but the manager cannot access the contents of the files. A system administrator looks at the system and concludes that the former employee probably encrypted the files.

Imagine, for your classmates, an incident that you would be able to solve...

Final task (EE) - Using what we studied, report and solve the incident.