

## UNIT 2

### INTRODUCTION TO COMPUTING SYSTEM

**Objectives:** at the end of the lesson, students will be able to:

- 1.read and comprehend the meaning of the terms related to computer components;
- 2.use target vocabulary in speaking and writing;
- 3.apply knowledge of computing components to practical scenarios and develop problem-solving skills.

**Lead-in:** Talk about these questions

1. What is the relevance and importance of computing systems in modern society? (for communication, education, business, healthcare, etc.)
2. How do computing systems impact various aspects of our lives, from personal use to business applications?

A computing system is a system composed of hardware, software, data, and network components that work together to perform computational tasks. A computing system consists of several key components that work together to process data and perform operations. The basic elements of a computing system include:

1. **Hardware:** Hardware refers to the physical components of a computing system that can be touched and manipulated. This includes the central processing unit (CPU), which serves as the brain of the computer, as well as memory (RAM) and storage devices (such as hard drives and solid-state drives). Other hardware components include input devices (such as keyboards and mice), output devices (such as monitors and printers), and communication devices (like network adapters and modems).

2. **Software:** Software refers to the programs and applications that run on the hardware to perform specific tasks. This includes the operating system (OS), which manages hardware resources and provides a user interface, as well as applications like word processors, web browsers, and games. Software can be categorized into system software (like the OS) and application software (like Microsoft Office or Adobe Photoshop).

3. **Data:** Data refers to the raw information that is input, processed, and output by the computing system. This can include text, images, videos, numbers, and more. Data is stored and manipulated by the hardware and software components of the system to generate meaningful results.

4. **Procedures:** Procedures or instructions are sets of rules and guidelines that dictate how the hardware and software components of the system should interact to perform specific tasks. This includes algorithms, programs, and protocols that determine the sequence of operations for processing data and producing output.

5. **Users:** Users are individuals who interact with the computing system to input data, receive output, and perform tasks. Users can include both end-users who use applications and services, as well as system administrators who manage and maintain the computing system.

These basic elements work together in a computing system to process data, execute instructions, and generate output. The hardware provides the physical infrastructure, the software provides the instructions and tools to perform tasks, data serves as the input and output, procedures dictate how operations are carried out, and users interact with the system to achieve specific goals.

## **Vocabulary Building**

### **Key Terms**

**Workstation** – a very fast computer that runs powerful work programs.

***Example:** Workstations are computers that are specifically configured to meet the most demanding technical computing requirements. To be considered a workstation, systems must include key capabilities related to performance, reliability, data integrity, scalability, and expandability.*

**Tablet-** a computer that is smaller than a laptop with a touch screen and used to browse the Internet and check email.

***Example:** The tablet form factor is typically smaller than a notebook computer, but larger than a smartphone.*

**Mainframe** – a very powerful computer that can process large amounts of data.

**Example:** *The term mainframe initially referred to the large cabinet or 'main frame' that held the central processing unit (CPU) of early computer systems. The mainframe served as a central data repository or 'hub' that links workstations or terminals in an organization's data processing center.*

**Server** – is a computer that connects many computers to hardware

**Example:** *A server is a computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network.*

**Supercomputer** – is a large computer that is built to process large amounts of information at a higher speed than other computers can handle

**Example:** *Supercomputer, any of a class of extremely powerful computers. The term is commonly applied to the fastest high-performance systems available at any given time. Such computers have been used primarily for scientific and engineering work requiring exceedingly high-speed computations.*

**Activity:** Read the sentences and choose the correct word.

1. My (tablet/mainframe) notifies me when I have a meeting.
2. I have a (laptop/ supercomputer) to do work on the plane.
3. John has a (server/ desktop computer) because he only uses simple programs.
4. This (computer/server) runs programs but doesn't have Internet access.
5. A (workstation/ tablet) is smaller than a laptop, but still has a keyboard.
6. Connect to the (server /laptop) to use that printer.
7. A (supercomputer/tablet) is the most powerful machine in the world.

## **Reading**

### **Computers in the Workplace**

Computers are an important part of an employee's day. In many offices, every worker has their own personal computer. They prepare reports and other documents on it. They also check e-mail and access

the Internet with it. Usually, this machine is a desktop computer. However, nowadays employees are using laptops more often, too. Employees can take these smaller notebook computers to meetings and to business talks.

An especially portable computer is the tablet. With a tablet, an employee can keep in touch with co-workers from almost anywhere.

Special projects require more processing power. Employees take advantage of company workstations to complete these. At the end of the day, they save their work to the shared server.

**Activity:** Read the magazine article. Then, choose the correct answer.

**1. What is the main purpose of the article?**

- A. to promote the use of laptops in the workplace
- B. to describe the kinds of computers employees use
- C. to remind employees to save their work data
- D. to recommend tablet computers over other kind

**2. Which of the following is NOT an advantage of laptop and tablet computers?**

- A. Unlike desktop computers, laptops and tablets are portable.
- B. They are smaller than desktop computers.
- C. Employees can take laptops and tablets to meetings.
- D. Employees can get the most processing power from laptops and tablets.

**3. Which kind of computer works well for more demanding projects?**

- A. workstations
- B. tablets
- C. desktops
- D. notebooks

## **Speaking**

**Activity:** With a partner, act out the roles. Then, switch roles.

**Use languages such as:**

*Is that your new ...?*

*What about your ...?*

*I need to ...*

**Student A:** You are an office employee. Talk to Student B about:

- his or her new computer
- your computer
- replacing your computer

**Student B:** You are a co-worker. Talk to Student A about the advantages of your new tablet.

**Sample:**

A: Is that your new tablet?

B: Yes, it is. I just got it.

A: How do you like it?

B: It's very comfortable to use. I enjoy using it.

A: I bet. What about your old desktop?

B: I'm no longer using it.

A: Really? Maybe I should get a tablet. I need to replace my desktop.

B: You should. I don't use my desktop at all.

**Home assignment**

1. Makeup sentences using today's target vocabulary.
2. Compare a high-performance gaming PC with a standard office computer. Then, write your thoughts.