



Preparation of computer specifications

Grade 9

Lesson 01

This chapter will cover the following

- Computer and peripheral devices
- Selection of device for the user requirement
- Creating computer specifications
- Non-technical factors to be considered in purchasing a computer

1.1 Identify the user

- The term "user" typically refers to anyone who operates a computer, with various designations for users in different fields of Information and Communication Technologies..

Table 1.1 : Types of users and their work

User name	Task
Programmer	Develops computer programs
Network Administrator	Manages and maintains computer networks
System Analyst	Designs information systems
Software Engineer	Develops software
Computer Application Assistant	Uses office application packages for office related tasks
Web Developer	Develops and maintains websites

1.2 Selection of a computer to suit user requirements

User requirements pertain to tasks performed using a computer, with examples illustrated in Figure 1.1.



- **Non –portable computers**
- Non-portable computers, such as server computers, workstations, desktop computers, and all-in-one computers, require a main electricity power supply. Due to their large size and weight, they are typically used in fixed locations like houses, schools, and offices.

Computers for mobile use

- Computers for mobile use Laptops, notebooks, tablet computers and a smart phones can be considered for mobile use. They operated with re-chargeable batteries. Therefore, they can be used when traveling in buses, trains, aero planes or from any convenient place.



Figure 1.2 : Examples for types of computers that are available in the market

1.3 Computer peripheral devices

- Peripheral devices include input devices for feeding data into a computer, storage devices for data retention, and output devices for delivering processed information.

Input	Output	Storage
Keyboard	Monitor	Hard disk drive
Mouse	Printer	Optical disk drive
Microphone	Speaker	Flash drive
Touch screen		Magnetic tape drive

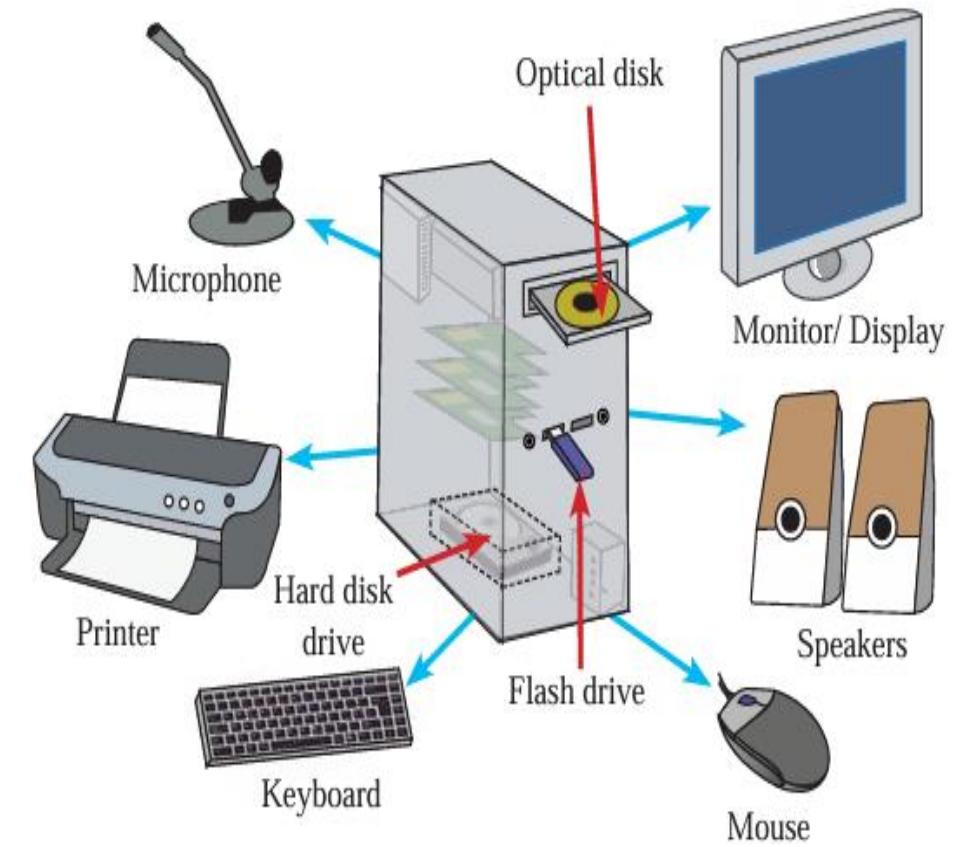


Figure 1.3 : Computer peripheral devices

Computer specification

- Computer specifications refer to the essential features and quality metrics of an item prior to purchase, including dimensions and material thickness, which help assess its value and quality. An example provided is the basic specifications of an exercise book.

Processor	4 th generation Intel® Core™ i7 quad-core [3.4GHz, 8MB Shared Cache]
Operating system	Windows 8.1 64 bit
Memory	16GB DDR3 - 1600MHz
Hard drive	2TB 7200 RPM SATA
Graphics	2GB AMD Radeon R7 240 [DVI, HDMI, & DVI to VGA]
Screen	23" LED Display

Specifications of computers and peripheral devices

- The processor
- Much like the human brain, the Central Processing Unit (CPU) is the most crucial component of a computer, as it processes data rapidly and is often referred to as the "Brain" of the computer.



The side that connects to the mother board

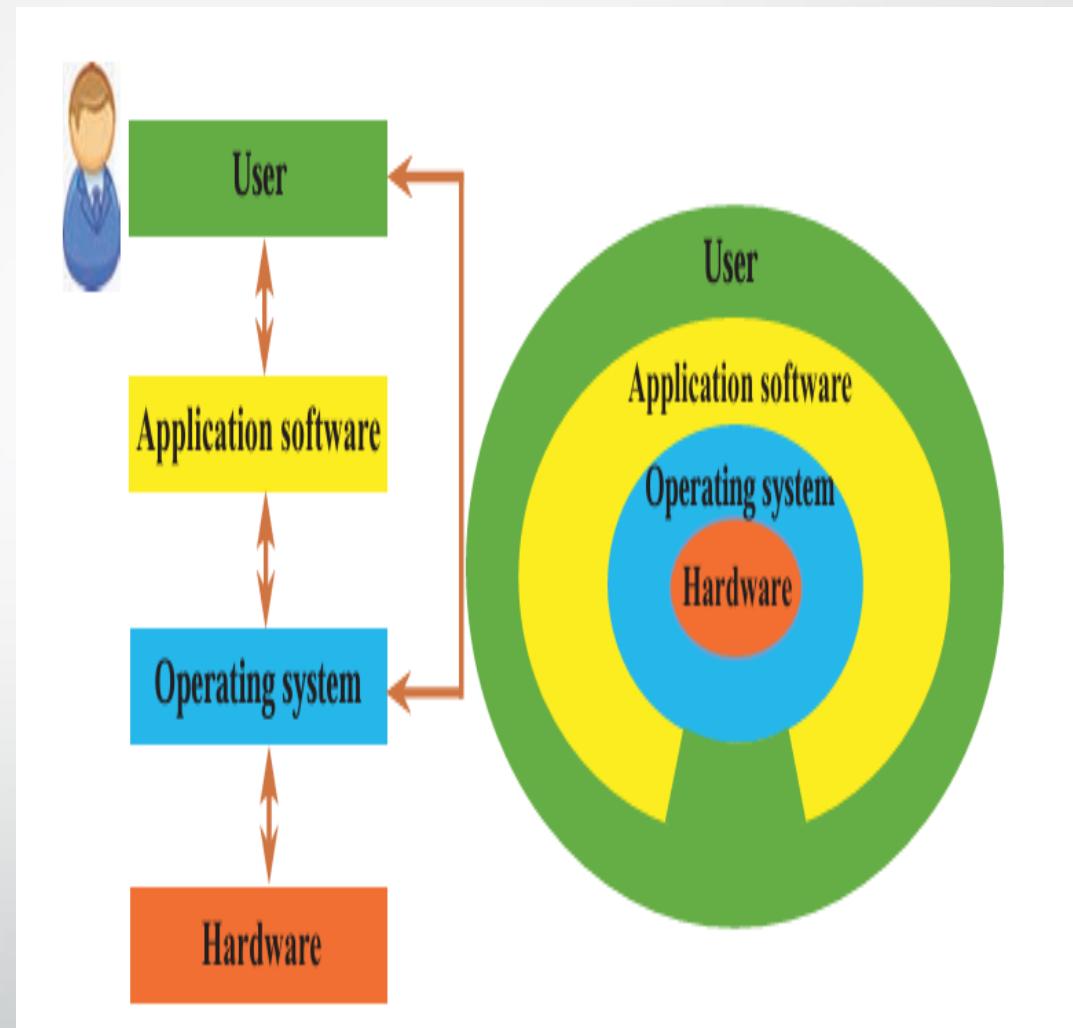


View from above

- Processor manufacturers
- Several processor manufacturing companies, Apple, Intel and AMD (Advanced Micro Devices) exists.
- The hard disk
- is the primary secondary storage device in a computer, offering permanent storage for data and software installation. Its capacity determines how much data can be stored, similar to how a larger exercise book provides more writing space than a smaller one.
- The monitor display
- The main output device of a computer is its monitor display. Most often, a user interacts with a computer via its monitor/display

Type	Name	Examples
Single Core	<i>Pentium I, II, III, IV</i>	
Dual Core	<i>Dual Core/Core 2 Duo</i>	
Quad Core	<i>Core i3, i5, i7, i9</i>	

- Pre-Installed software
- An operating system serves as the interface between the user and hardware, enabling the execution of application software. Once installed, it allows for the subsequent installation of necessary application software
- Free and open source operating systems, like Linux and Ubuntu, can be obtained at no cost, while licensed systems such as Windows 8 and 10 require purchase. Limited trial versions of operating systems, such as Windows 10, are available for temporary use. The choice of application software depends on user needs. When purchasing a desktop or laptop, it is vital to check if the operating system is pre-installed, as many come with only DOS or Linux. Computers with licensed software typically cost more than those with free and open source systems



Summary

- Several types of computers are available to suit user requirements;
 - Server
 - Workstation
 - Desktop
 - All-in-one
 - Laptop
 - Notebook
 - Tablet
 - Smart phone
- Computer peripheral devices are input, output and storage devices.
- Specification is a detailed description of a material with respect to its quality or quantity.

- Basic specifications for a computer and peripheral devices are:
 - Processor type and speed
 - Random Access Memory (RAM) capacity
 - Hard disk capacity
 - Monitor size and technology
 - Video Graphic Adapter and sound
- Other non-technical factors to be considered in purchasing a computer;
 - Warranty
 - Pre-installed software
 - After-sales services



Thank you