

KARACHI EDU • COACHING CENTER NOTES

Chap 2: Fundamentals of Operating System

Grade 9 Computer Science • Sindh Textbook Board (STBB)

What is an Operating System?

Core system software managing computer hardware and application programs.



Resource Manager

Allocates CPU time, memory space, and I/O devices efficiently.



User Interface

Acts as a bridge between computer hardware and end users.

Objectives of an Operating System

Primary goals governing modern computing environments.

Convenience

Makes computer system easy and user-friendly to operate.

Efficiency

Maximizes system throughput and resource utilization.

Evolution

Permits effective development and testing of new system functions.

Key Functions of Operating System

How the OS manages hardware subsystems.

Process Management

Schedules, creates, and terminates CPU tasks.

Memory Management

Tracks primary RAM allocation and deallocation.

Device Management

Controls peripheral devices through specific drivers.

File Management

Organizes directories, files, and disk storage securely.

User-System Interface Types

Methods used by humans to interact with the operating system.

Command Line Interface (CLI)

Users type textual commands via keyboard prompts.
Requires lower memory and CPU time (e.g., MS-DOS).

Graphical User Interface (GUI)

Uses Windows, Icons, Menus, and Pointers (WIMP).
Highly user-friendly and intuitive (e.g., Windows 10/11).

Classification of Operating Systems

Categorized by processing methods and user capacity.

Single-User OS

Designed for single person use (e.g., MS-DOS).

Multi-User OS

Supports multiple users simultaneously (e.g., UNIX, Linux).

Batch Processing

Collects jobs in batches before execution (e.g., Payroll).

Real-Time OS

Processes data with strict time constraints (e.g., Robotics).

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End of Chapter 2 Notes

Prepare well for your Sindh Board Secondary School
Certificate examinations!

