IT 412 Platform

CHAPTER 3,4,5

The processor issues an I/O command, on behalf of a process, to an I/O module, and the process busy waits for the operation to be completed.

In interrupt-driven I/O, the processor issues an I/O command and immediately switches to another task while the I/O operation completes.

The compiler converts symbolic addresses into logical addresses during compilation, not relative addresses.

Swapping is a mechanism in which a process can be swapped temporarily out of main memory (or move) to secondary storage (disk) and make that memory available to other processes.

File System is responsible for file organization, not Memory Management.

A directory in computing is a way of organizing files and folders. It also refers to a container that holds other directories and files.

First Come First Serve – its implementation is based on a FIFO queue.

The run-time mapping between virtual address and physical address is done by a hardware device known as MMU (Memory Management Unit).

Logical Address – generated by the CPU; also referred to as virtual address.

The user never directly deals with the physical address but can determine the physical address by its corresponding logical address.

Process Control Block (PCB)

- Definition: A data structure maintained by the OS for each process, storing information to track it.

Information Maintenance

- Definition: Manages information and its transfer between the OS and user programs.

Round Robin Scheduling

- Definition: A scheduling algorithm where each process is given a fixed time to execute.

Size (File System)

- Definition: The number of bytes a file occupies in memory.

Virtual File System (VFS)

- Definition: Integrates multiple file systems into an organized structure.

Blocks (Memory Management)

- Definition: Units of memory allocated to various operating processes to improve system performance.

Hardware Architecture

- Definition: Specifies parts and relations that describe a computer system and provide a physical environment.

Counter

- Definition: A pointer to the address of the next instruction of a process.

Directory (File System)

- Definition: Also known as a folder; organizes files in a file system.

Memory Bound Violation

- Definition: A cause for process termination when a process exceeds its allocated memory bounds.

Platform Technology (repeated)

- Definition: Technologies used as a foundation for building applications, processes, or other technologies.

File Management (Operating System)

- Definition: The part of the operating system responsible for managing files.

Address Binding

- Definition: Associates instruction addresses with relocatable code when memory location is unknown at compile time.

Utility Software

- Definition: Software included with the operating system that displays open processes, their performance, and memory consumption.

Trial Software

- Definition: Software free to use and distribute for a limited time.

Cache

- Definition: A small memory location between the main memory and CPU registers holding frequently used data and instructions.

Append Operation

- Definition: Adds data to the end of a file.

Operating System

- Definition: Serves as a link between the user and the computer hardware, directing the execution of various programs.

Process Scheduling

- Definition: A function of the operating system that controls when and how long each process has access to the processor.

Platform Technology

- Definition: A group of technologies used as a base for developing applications, processes, or other technologies.