

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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Lecture-4 By Vivek Dubey

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COMPUTER SCIENCE AND ENGINEERING

CS403PC

COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

CS403PC

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Scheme of Operating System

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S. No.	Course Code	Course Title	L	T	P	Credits
3	CS403PC	Operating Systems	3	0	0	3
6	CS406PC	Operating Systems Lab	0	0	3	1.5

UNIT-1: *Operating System - Introduction*



- **Structures –**
 - Simple Batch, Multi-programmed, Time-shared,
- **Systems –**
 - Personal Computer, Parallel, Distributed Systems, Real-Time Systems
- **System components**
- **Operating System Services**
- **System Calls**

Types of Operating System

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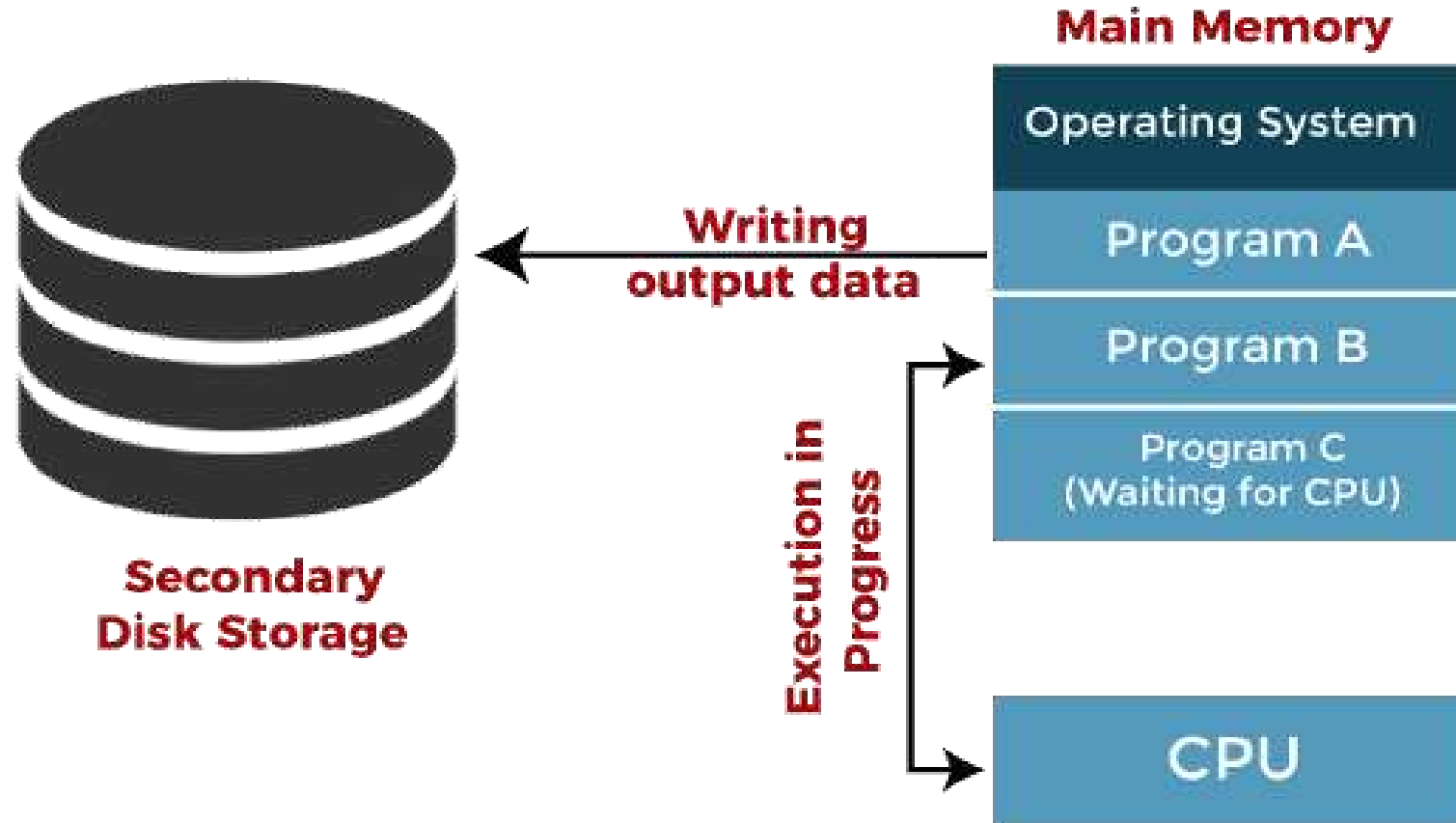
Multiprogramming Operating System



- Multiprogramming is an extension to batch processing where the CPU is always kept busy.
- Each process needs two types of system time: CPU time and IO time.
- In a multiprogramming environment, when a process does its I/O, the CPU can start the execution of other processes. Therefore, multiprogramming improves the efficiency of the system.

Structure of Multiprogramming Operating System

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Jobs in multiprogramming system

Advantages of Multi-Programmed OS



- Advantages of Multiprogramming OS
 - Throughout the system, it increased as the CPU always had one program to execute.
 - Response time can also be reduced.

Disadvantages of Multi-Programmed OS



- Disadvantages of Multiprogramming OS
 - Multiprogramming systems provide an environment in which various systems resources are used efficiently, but they do not provide any user interaction with the computer system.