

Operating system (1)

(1)

- (1) Basic Introduction → types of OS
→ process diagram
→ system calls

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- (2) Process scheduling → FIFO, SJF, Round Robin

- (3) Process synchronization → Semaphore

- (4) Deadlock and threads → Banker's Algorithm.

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- (5) Memory management → Paging
→ Segmentation
→ Fragmentation
→ Virtual memory
→ Page Replacement algo

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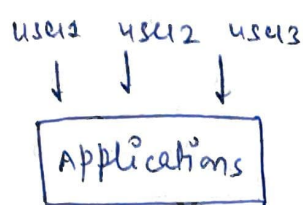
- (6) Disk scheduling → SCAN, CSCAN, FCFS

- (7) UNIX commands → ls, mkdir, chmod.

- (8) File management & security

- ↳ sequential access
↳ Random access
→ Basic security

Q L-1, 1: Introduction to operating system & Functions (2)



→ user wants to access hardware

→ This is done using operating system.

→ If OS was not there, user will have to separately write program for each hardware.

→ Primary goal of OS → convenience.

→ throughput
(no of tasks executed per unit time)

Functions of OS

(i) Resource management → important if there are multiple users. (parallel processing).

(ii) Process management → If multiple processes are open, those should be managed by OS. CPU scheduling is required to execute processes.

(iii) Storage management → secondary storage (Hard disk)
↳ done through file systems

(iv) Memory Management - RAM

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allocation and deallocation of memory. ↳ size is limited.

(4) Security and Privacy → Processes should not interfere (3)
with each others data.