Date .....

=> Short Term Scheduling Policies

-> Also known as CPU scheduling.

-> Determine which process should be brought into running state and when to take that decision.

Preemptive

-> Currently running process may be interrupted and moved to ready state by the OS.

-> Preemption may occur when new process arrives, or an interrupt, or periodically

Non Preemptive

-> Once a process is in the running state. It will continue until it terminates or blocks itself for I/O

=> Selection function :- It determines which process, among ready processes, is selected next for execution.

=> Imp Time Instances

(1) Arrival Time (AT) :- Instance of time at which the process arrives at the ready Queue.

(2) Service Time / Burst Time (BT) :- Time required by a process for execution at the processor.

(3) Completion Time (CT) :- Instances of time at which the process completes its execution.

(4) Turnaround Time (TAT) :- Total time from arrival of a process to its completion.

$$TAT = CT - AT$$

→ Gantt Chart :- A Gantt chart is a visual view of tasks scheduled over time. It can be used to visualize the execution schedule of processes based on different scheduling policies.

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① First come first served (FCFS)

=> Each process joins the Ready queue
=> When the current process ceases to execute, the process that has waited the longest in the Ready queue is selected for execution next.
=> Decision Mode : Non-preemptive
=> Selection fun: max [waiting Time] or min [Arrival Time]

★ Advantages

- Easy to implement with simple FIFO Queues.
- Fair; Each process at some point in time would get the processor.

★ Disadvantages

- A short process may have to wait a very long time before it can execute.
- Inefficient use of Processor and I/O Devices.

Date .....

=) First come First serve

①

PRCS	A.T	B.T	CT	TAT	WT	RT
A	0	3	3	3	0	0
B	2	6	9	7	1	1
C	4	4	13	9	5	5
D	6	5	18	12	7	7
E	8	2	20	12	10	10

Gantt Chart:

A	B	C	D	E
0	3	9	13	18	20

②

PRCS	AT	BT	CT	TAT	WT	RT
P_1	2	6	17	15	9	9
P_2	5	3	24	19	16	16
P_3	1	8	11	10	2	2
P_4	0	3	3	3	0	0
P_5	4	4	21	17	13	13

Gantt Chart :

P_4	P_3	P_1	P_5	P_2
0	3	11	17	21	24