FIRST COME FIRST SERVED(FCFS)

Scheduling Algorithm

What is FCFS ?

❑ In FCFS, CPU is allocated to the process in the order of their arrival.

❑ It is implemented with a FIFO(First In First Out) queue.

❑ It is a non-preemptive scheduling algorithm.

Note:

- **Non-Preemptive** means algorithm designed such that once a process is allocated to CPU, it does not free CPU until it completes its execution.

- **Preemptive** algorithm is one in which CPU is taken away from the process during execution. If any high priority process arrives, CPU from currently executing low priority process is allocated to it.

❑ FCFS is not recommendable for heavy workload.

➢ If we assume that arrival time is 0. Consider the following example:

Process(pid)	Arrival	Burst Time
1	3	13
2	1	9
3	2	3

✓ The Gantt chart shows the result:

P2	P3	P1

0   9   12   25

❖ **Turnaround Time(T.A.):** It is the sum of execution time of process and wait time.

Turnaround Time = Burst Time + Wait Time

Now we will see the turnaround time of each process, total turnaround time and average turnaround time.

Turnaround Time = Burst Time + Wait Time

T.A time of P2= 9 + 0 = 9
T.A time of P3= 3 + 9= 12
T.A time of P1= 13 + 12 = 25

Total T.A time = T.A time of P2 + T.A time of P3 + T.A time of P1
                 =   9   +   12   +   25
                 =   46

Average T.A time = Total T.A time / No. of Process
                 =   46   /   3
                 =   15.33

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