SJF EXAMPLE WITH DIFFERENT ARRIVAL TIMES

- If at time T, we have multiple processes in the ready queue, then select the process with least burst time and Schedule it on the cpu

- If the burst time of multiple processes are same, pick the one with least arrival time(FCFS)

- Even if the arrival time are same for multiple processes, pick the one which is above in the table. → P_1 → P_2

- SJF is nonpreemptive

- SJF gives minimum average waiting time for a set of processes — Advantage

- Predicting next burst time of a process is a tough task. —

FCFS $P_1 .. P_n$
SJF ←
A1
A2
A3

	AT	BT	ST	CT	TAT	WT	RT
P_1	2	2	2	4	2	0	0
P_2	2	2	4	6	4	2	2
P_3	4	3	6	9	5	2	2
P_4	3	5	13	18	15	10	10
P_5	5	4	9	13	8	4	4

////	P_1	P_2	P_3	P_5	P_4
0–2	2–4	4–6	6–9	9–13	13–18

$TAT = CT - AT$

$WT = TAT - \text{CPU Burst} - \text{I/O Burst}$

$RT = ST - AT$

$$\text{Avg } TAT = (2+4+5+15+8)/5 = \frac{34}{5}$$

$$\text{Avg } WT = (0+2+2+10+4)/5 = \frac{18}{5}$$

$$\text{Avg } RT = (0+2+2+10+4)/5 = \frac{18}{5}$$

P_1	24
P_2	2
P_3	2

24

$$\text{CPU utilization} = \frac{16}{18} \times 100$$

$$\text{Throughput} = \frac{5}{Max(CT) - Min(AT)} = \frac{5}{18-2} = \frac{5}{16}$$

process/unit time