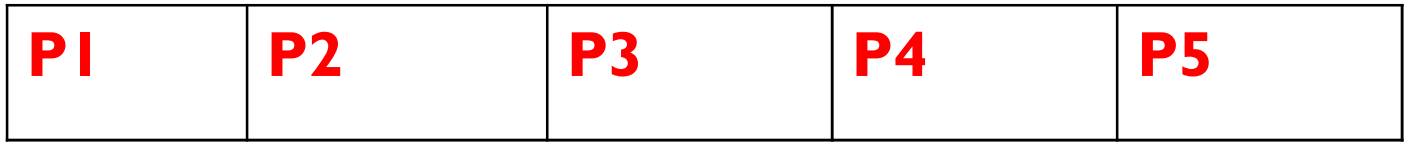
FCFS Trace

PID/P#	AT	BT	CT/FT	TAT	WT
1	0	4	4	4	0
2	1	3	7	6	3
3	2	1	8	6	5
4	3	2	10	7	5
5	4	5	15	11	6
			Average WT		19/5

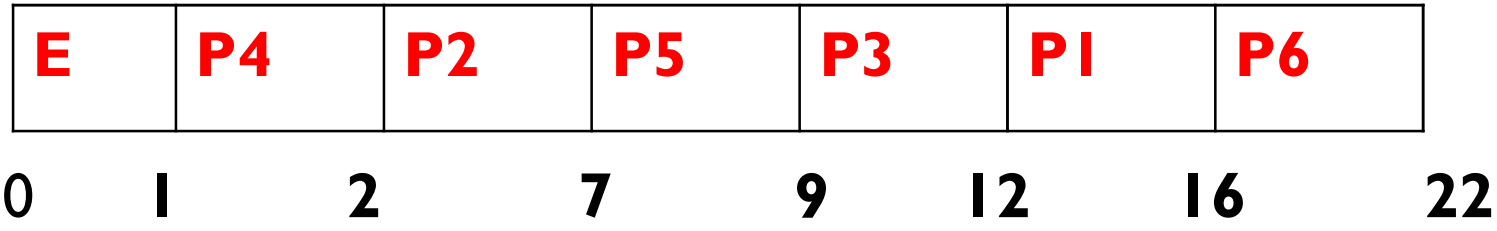


0 4 7 8 10 15

GANTT CHART

SJF – SHORTEST JOB FIRST TRACE

PID/P#	AT	BT	CT/FT	TAT	WT
1	6	4	16	10	6
2	2	5	7	5	0
3	3	3	12	9	6
4	1	1	2	1	0
5	4	2	9	5	3
6	5	6	22	17	11
			Average WT		26/6



GANTT CHART

CPU SCHEDULING ALGORITHMS

- **Convoy Effect –** FCFS suffers from this limitation when early part of the arrivals are long (service times)

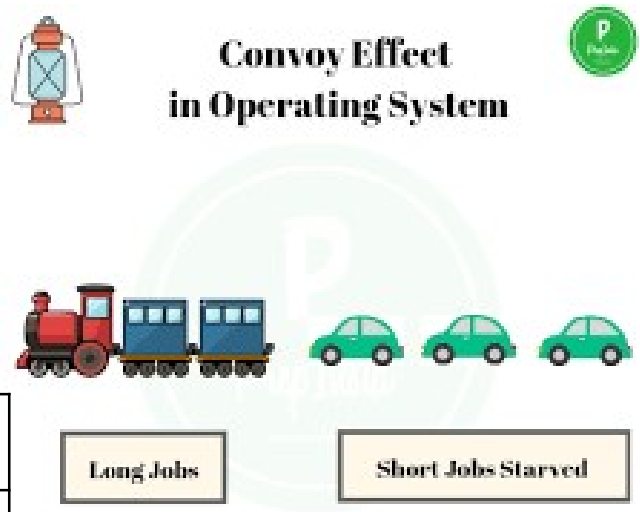
✓Long Processes may monopolize the setup – can result in poor cpu and device utiliation – low throuhgput and average wait time becomes high.

✓Not ideal for an interactive System.

Below Setup 1 (AWT =49.5),

setup 2 AWT=0

✓No Starvation as algorithm is unbiased w.r.t scheduling



P#	AT	BT
1	0	100
2	1	1

P#	AT	BT
1	1	100
2	0	1

SJF Few more Examples

PID/P#	AT	BT	CT/FT	TAT	WT
1	1	7	8	7	0
2	2	5	16	14	9
3	3	1	9	6	5
4	4	2	11	7	5
5	5	8	24	19	11
			Average WT		30/5=6

1 8 9 11 16 24

GANTT CHART

SJF Few more Examples

PID/P#	AT	BT	CT/FT	TAT	WT
1	6	1	8	2	1
2	3	3	13	10	7
3	4	6	19	15	9
4	1	5	6	5	0
5	2	2	10	8	6
6	5	1	7	2	1
			Average WT		24/6=4

E	P4	P6	P1	P5	P2	P3

0 1 6 7 8 10 13 19

On clash of Burst Times – Resolve by Earlier Arrivals

Maximises Throughput as it picks on shorter jobs

Penalizes long processes and eventually can result in starvation