

OS Assignment

Scheduling Algorithms

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What are scheduling algorithms?

It is a way of selecting a process from ready queue and keep it in the CPU for its execution.

When processes are in the ram then we execute them.

Types of scheduling algorithms

Scheduling algorithms are divided into two types

- **Preemptive algorithms**
- **Non-preemptive algorithms**

Examples of scheduling algorithms

Some of the scheduling algorithms are

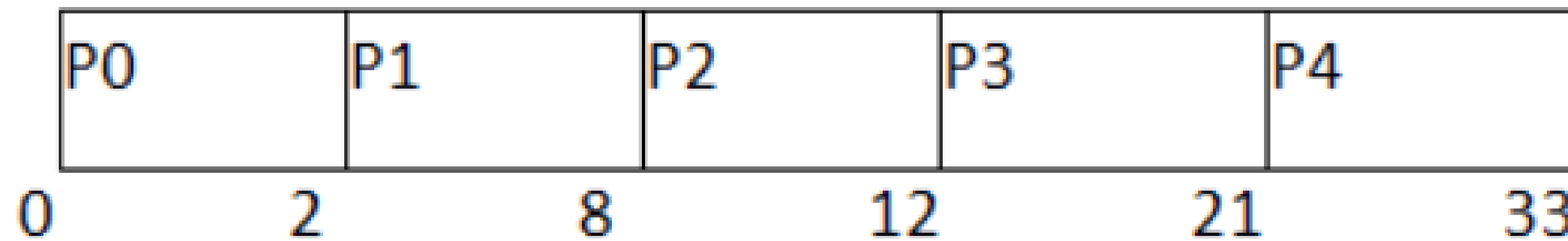
- **First Come First Serve (FCFS)**
- **Shortest Remaining Time First (SRTF)**
- **Shortest Job First (SJF)**
- **Round Robin**

First Come First Serve (FCFS)

Process ID	Arrival Time	Burst Time	Completion Time	Turn Around Time	Waiting Time
0	0	2	2	2	0
1	1	6	8	7	1
2	2	4	12	10	6
3	3	9	21	18	9
4	6	12	33	29	17

First Come First Serve (FCFS)

Gantt Chart

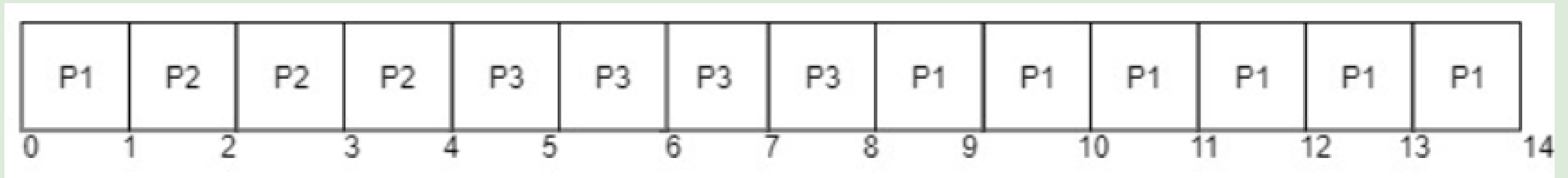


Shortest Remaining Time First (SRTF)

Process	Arrival Time	Burst Time	Completion time	Turn around Time Turn Around Time = Completion Time – Arrival Time	Waiting Time Waiting Time = Turn Around Time – Burst Time
P1	0	7	14	14-0=14	14-7=7
P2	1	3	4	4-1=3	3-3=0
P3	3	4	8	8-3=5	5-4=1

Shortest Remaining Time First (SRTF)

Gantt Chart

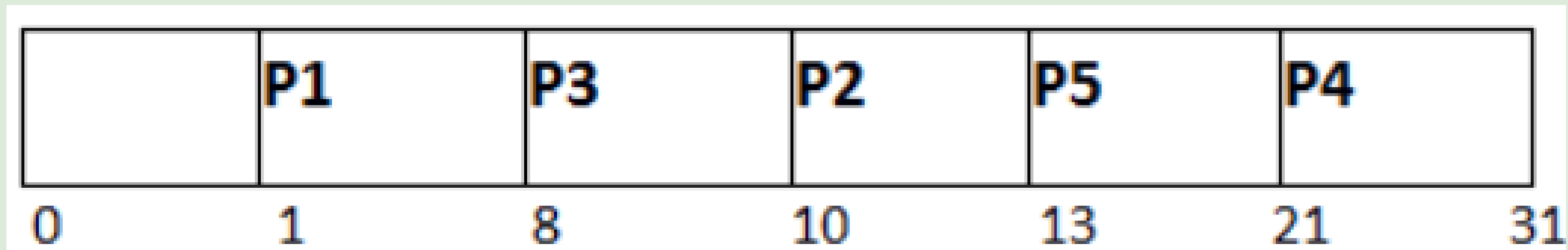


Shortest Job First (SJF)

PID	Arrival Time	Burst Time	Completion Time	Turn Around Time	Waiting Time
1	1	7	8	7	0
2	3	3	13	10	7
3	6	2	10	4	2
4	7	10	31	24	14
5	9	8	21	12	4

Shortest Job First (SJF)

Gantt Chart

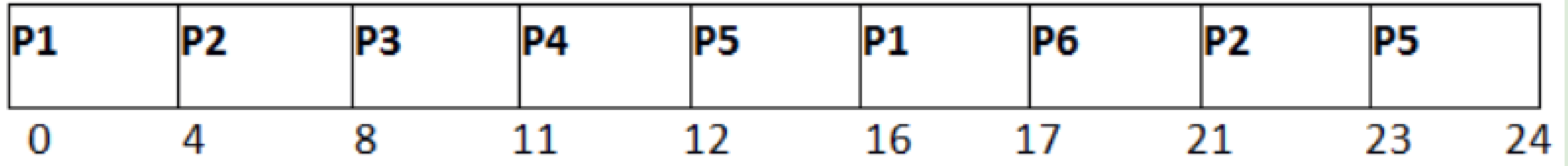


Round Robin

Process ID	Arrival Time	Burst Time	Completion Time	Turn Around Time	Waiting Time
1	0	5	17	17	12
2	1	6	23	22	16
3	2	3	11	9	6
4	3	1	12	9	8
5	4	5	24	20	15
6	6	4	21	15	11

Round Robin

Gantt Chart



Thank you!

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