

Operating System and System Administration



Tutorial 05 Year 02 Semester 01 2020

1. Given the following set of processes with their arrival times and burst times.

| Process | Arrival time in milliseconds | Burst time in milliseconds |
|---------|------------------------------|----------------------------|
| A | 0 | 5 |
| B | 1 | 3 |
| C | 2 | 8 |
| D | 3 | 6 |

2. Draw a Gantt chart for First come first serve scheduling and compute the average waiting time. Given the following set of processes with their arrival times and burst times.

| Process | Arrival time in milliseconds | Burst time in milliseconds |
|---------|------------------------------|----------------------------|
| A | 0 | 5 |
| B | 1 | 3 |
| C | 2 | 8 |
| D | 3 | 6 |

Draw a Gantt chart for shortest job first scheduling and compute the average waiting time and average turnaround time.

3. Given the following set of processes with their arrival times and burst times.

| Process | Arrival time in milliseconds | Burst time in milliseconds |
|---------|------------------------------|----------------------------|
| A | 0 | 8 |
| B | 1 | 3 |
| C | 5 | 2 |
| D | 7 | 3 |

Draw a Gantt chart for round-robin (quantum = 3 milliseconds) scheduling and compute the average waiting time.

4. Given the following set of processes with their arrival times and burst times.

| Process | Arrival time in milliseconds | Burst time in milliseconds |
|---------|------------------------------|----------------------------|
| A | 0 | 7 |
| B | 1 | 5 |
| C | 5 | 4 |
| D | 11 | 3 |

Draw a Gantt chart for round-robin (quantum = 3 milliseconds) scheduling considering the **context switching** time as 0.1 milliseconds. Compute the average waiting time.