# RR Queue Process

#### **Process Arrival**

- Process 1 arrives at time 1 with burst time 2
- Process 2 arrives at time 2 with burst time 3
- Process 3 arrives at time 3 with burst time 4
- Process 4 arrives at time 4 with burst time 5
- Process 5 arrives at time 5 with burst time 6
- Process 6 arrives at time 6 with burst time 7
- Process 7 arrives at time 7 with burst time 8
- Process 8 arrives at time 8 with burst time 9

## Queue States

#### **Process Execution**

At time 1, the queue is:



Process 1 is selected for execution.

#### Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)

At time 3, the queue is:



Process 2 is selected for execution.

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)

At time 6, the queue is:



Process 4 is selected for execution.

#### Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)

At time 10, the queue is:



Process 7 is selected for execution.

#### Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)

At time 14, the queue is:



Process 8 is selected for execution.

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)

At time 18, the queue is:

P5 P6 P3 P4 P7 P8
-------------------

Process 5 is selected for execution.

#### Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)

At time 22, the queue is:

P6	Р3	P4	P7	P8	P5
----	----	----	----	----	----

Process 6 is selected for execution.

## Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)
P6	[22, 26)

At time 26, the queue is:

Р3	P4	P7	P8	P5	P6
----	----	----	----	----	----

Process 3 is selected for execution.

## Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)
P6	[22, 26)
P3	[26, 30)

At time 30, the queue is:

P4	P7	P8	P5	P6
----	----	----	----	----

Process 4 is selected for execution.

## Gantt Chart after this step

Process	Execution Interval			
P1	[1, 3)			
P2	[3, 6)			
P4	[6, 10)			
P7	[10, 14)			
P8	[14, 18)			
P5	[18, 22)			
P6	[22, 26)			
P3	[26, 30)			
P4	[30, 31)			

At time 31, the queue is:



Process 7 is selected for execution.

Process	Execution Interval			
P1	[1, 3)			
P2	[3, 6)			
P4	[6, 10)			
P7	[10, 14)			
P8	[14, 18)			
P5	[18, 22)			
P6	[22, 26)			
P3	[26, 30)			
P4	[30, 31)			
P7	[31, 35)			

At time 35, the queue is:



Process 8 is selected for execution.

## Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)
P6	[22, 26)
P3	[26, 30)
P4	[30, 31)
P7	[31, 35)
P8	[35, 39)

At time 39, the queue is:



Process 5 is selected for execution.

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)
P6	[22, 26)
P3	[26, 30)
P4	[30, 31)
P7	[31, 35)
P8	[35, 39)
P5	[39, 41)

At time 41, the queue is:



Process 6 is selected for execution.

## Gantt Chart after this step

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)
P6	[22, 26)
P3	[26, 30)
P4	[30, 31)
P7	[31, 35)
P8	[35, 39)
P5	[39, 41)
P6	[41, 44)

At time 44, the queue is:



Process 8 is selected for execution.

Process	Execution Interval
P1	[1, 3)
P2	[3, 6)
P4	[6, 10)
P7	[10, 14)
P8	[14, 18)
P5	[18, 22)
P6	[22, 26)
P3	[26, 30)
P4	[30, 31)
P7	[31, 35)
P8	[35, 39)
P5	[39, 41)
P6	[41, 44)
P8	[44, 45)

# Step by Step Execution

Process	Arrival Time	Burst Time	Start Time	Completion Time	Turnaround Time
P1	1	2	1	3	2
P2	2	3	3	6	4
P3	3	4	26	30	27
P4	4	5	6	31	27
P5	5	6	18	41	36
P6	6	7	22	44	38
P7	7	8	10	35	28
P8	8	9	14	45	37