

Test case 1 (without deadlock):

PID	Arrival Time	Priority	CPU / IO Bursts
0	0	0	CPU{10} IO{30} CPU{10}
1	0	0	CPU{20}

Gantt Chart

P0		P1		idle		P0	
0	10		30		40		50

Test case 2 (with deadlock):

Assume the time quantum $q = 10$, and a lower priority number implies a higher priority

PID	Arrival Time	Priority	CPU / IO Bursts
0	0	1	CPU{R[1], 15, R[2], 10, F[1], F[2]}
1	0	1	CPU[5, R[2], R[1], 10, F[2], F[1]]
2	0	0	CPU{50}

Deadlocked processes: P0 and P1

Gantt Chart (**assuming that deadlock detection is applied whenever a resource is requested and deadlock recovery is achieved by terminating P1, i.e., P1 should run again from the beginning**)

P2		P0	P1	P0	P0	P1
0	50	60	65	70	80	95



Deadlock is detected, P1 is terminated

and resource 2 is preempted