

CSCI 315 Operating Systems Design
Fall 2016 - Prof. Felipe Perrone
Activity 10

Source: Operating Systems Concepts, Silberschatz, Galvin, and Gagne, 9th edition.
Consider the following set of processes, with the length of the CPU burst given in milliseconds:

Process	Burst Time	Priority
P ₁	10	3
P ₂	1	1
P ₃	2	3
P ₄	1	4
P ₅	5	2

The processes are assumed to have arrived in the order {P₁, P₂, P₃, P₄, P₅} all at time 0. Consider the following scheduling algorithms: first-come, first-serve (FCFS), shortest-job first (SJF), nonpreemptive priority (a smaller number implies a higher priority), round-robin (RR) with *quantum*=1, and RR with *quantum*=2.

For each of the algorithms above:

- Draw a Gantt chart to illustrate the execution of these processes
- Calculate individual process turnaround times and the average turnaround time
- Calculate individual waiting times and average waiting time