

CSC 456 Operating Systems
Spring 2021
Instructor: Dr. Stephen Krebsbach
Assignment #4
20 points Due: April 6th 9:00 AM (CST)

Record Your answers using the Quiz for Assignment 4

Please do the following.

Question #1 (12) Submit up to 5 answers (will use top 3) (answer NO GRADE for any you did not do)

One type of analytic evaluation of algorithms is deterministic modeling. Use deterministic modeling and the system workload given to test the below listed scheduling algorithm(s) in terms of the performance criteria, **WAITING TIME**.

Note: make sure to look at when processes arrive. Not all algorithms need all the information provided.

Give the waiting time **for all** jobs for each algorithm. Use a quantum time of 5 if appropriate.

Job	Burst Time	Priority	Arrival Time	(priority 0 is BEST!)
1	20	5	0	
2	4	4	3	
3	10	0	8	
4	5	2	13	

- a) **Preemptive** Shortest-Job-First (Shortest Remaining Job First – SRJF)
- b) **First Come First Service (FCFS)**
- c) **Preemptive** Priority
- d) **Non-Preemptive** Priority
- e) **Round-Robin** Priority (for this assume all arrived at time 0. in 1,2,3,4 order, and 1 will start)

Question #2 (4)

When might the short term scheduler become active when using a **Preemptive** algorithm?

Question #3 (4)

When might the short term scheduler become active when using a **Non-Preemptive** algorithm?