CSCI 3310 – CPU Scheduling Exercises

1. Suppose two jobs A and B that perform CPU work only. The job length of A is 50 time units and the job length of B is 10 time units. Both jobs arrive at time 0, with job A first in the queue. Assume that context switches are free (0 time units) and that the time slice for round-robin (RR) scheduling is 1 time unit.

a. For **FCFS** scheduling, compute the **completion times** for (i) job A, (ii) job B, and (iii) the average of both jobs.

b. Now compute the **wait times** for (i) job A, (ii) job B, and (iii) the average of both jobs. Again assume **FCFS** scheduling.

c. For **RR** scheduling, compute the **completion times** (A, B, and avg).

d. Compute the **wait times** for **RR** scheduling (A, B, and avg).

2. Repeat question 1 (parts (a) through (d)), but instead assume that the length of job B is 50 time units (instead of 10). What do you notice about the relative (average) performance of FCFS and RR as compared to question 1?

3. Given five jobs A-E with the lengths indicated below, compute the completion times, wait times, and averages for FCFS, RR, and SJF scheduling. Assume that all jobs arrive at time 0 (with job A first in the queue), free context switches, and round-robin time slice of 1 time unit.

Job	Length	Completion Time			Wait Time		
		FCFS	RR	SJF	FCFS	RR	SJF
A	**50**						
B	**40**						
C	**30**						
D	**20**						
E	**10**						
Average							