**CS342 Operating Systems – Spring 2022**

**Project2 / Synchronization and Scheduling**

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**Part B - Experiments**

arrival time, finish time, total waiting time in the ready queue,

**FCFS**

* + FCFS has the most significant number in terms of average waiting time since every coming process has to wait for the processes in front of it. Therefore, if the processes in front of the queue have a longer burst time, then FCFS will give the most unwanted(longest) waiting time.

**SJF**

* + Unlike the FCFS, SJF gives the optimum output in terms of average waiting time. Since it first executes the shortest job, other processes wait for the shortest job. Therefore, there is no possibility that a longer CPU burst will be executed before a shorter process. Thus, in the end, average waiting time becomes the smallest possible.

**RR(q)**

* + Compared to the other two algorithms, RR does not provide any better than FCFS in terms of average waiting time. Since every process after executed “q” milliseconds will wait for other processes, waiting for time increases instead of decreasing. However, RR is the most efficient algorithm in terms of response time since processes do not wait for other processes to finish. They just wait for them to be executed “q” milliseconds. Moreover, while q increases, the data for RR resembles the data from FCFS. If the quantum value is more significant than the longest burst time in the queue, RR will give the same data/result as FCFS.