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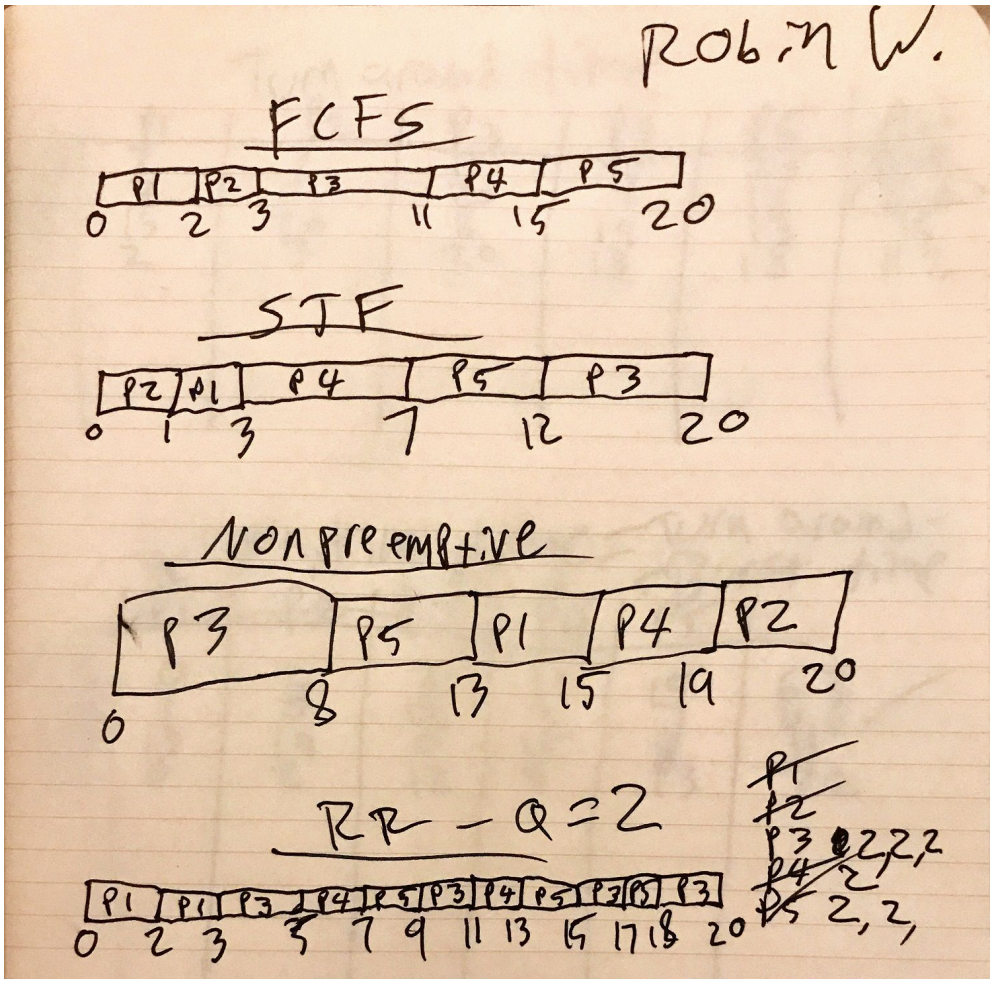
2/14/18
COMP 7506
Homework 1

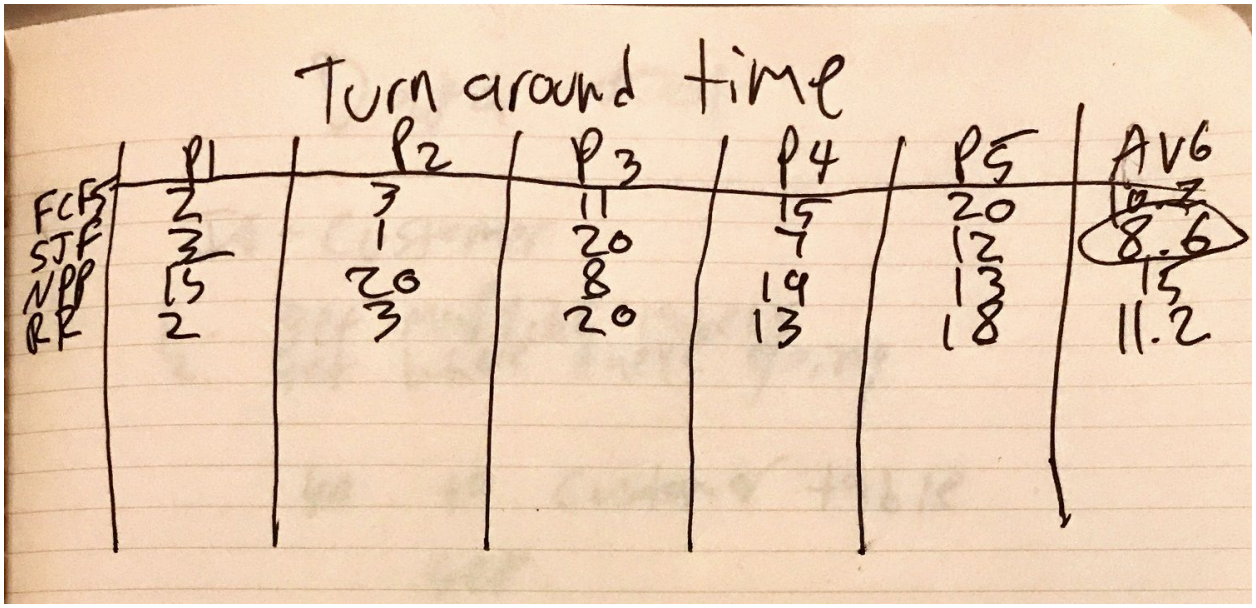
1.1
CPU utilization is increased if the overheads associated with context switching are minimized. The context switching overheads could be lowered by performing context switches infrequently. This could however result in increasing the response time for processes.

1.2
Average turnaround time is minimized by executing the shortest tasks first. Such a scheduling policy could however starve long-running tasks and thereby increase their waiting time.

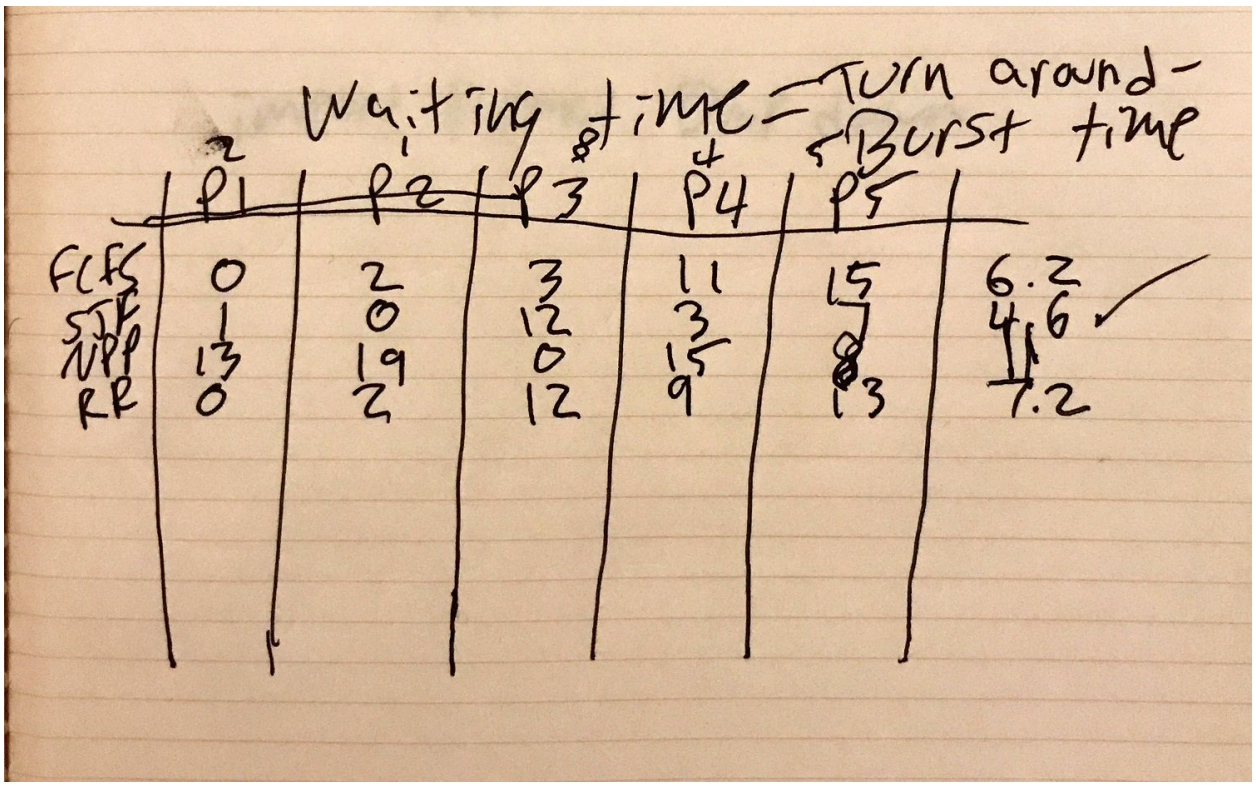
2.1



2.2


Turn around time
P1
P2
P3
P4
P5
AVG
FCFS
SJF
NPP
RR
2
3
11
15
20
7
3
1
20
7
12
8.6
15
20
8
19
13
15
2
3
20
13
18
11.2

2.3


Waiting time = Turn around - Burst time
P1
P2
P3
P4
P5
FCFS
SJF
NPP
RR
0
2
3
11
15
6.2
1
0
12
3
8
4.6
13
19
0
15
8
0
2
12
9
13
7.2

2.4
SJF

3.
Shortest job first and priority-based scheduling algorithms. The reason is because if shorter jobs or higher priority jobs continue to come in, the other jobs will starve.

4.
FCFS. Running processes have a higher priority so this would result in a FCFS.