

1.

we must use `./scheduler.py -p SJF -l 200,200,200 -c` to see the results for SJF scheduling method.

as we know in SJF, shortest job must run first. in this case we have 3 jobs with equal length so they run normally. sequence of running job is 0,1,2.

in second part we must use `./scheduler.py -p FIFO -l 200,200,200 -c` to see the results for FIFO scheduling method.

as we know in FIFO, first job comes is the first job that runs. so job 0 runs first and job 1 and job 2 run after this job.

Execution trace:

[time 0] Run job 0 for 200.00 secs (DONE at 200.00)

[time 200] Run job 1 for 200.00 secs (DONE at 400.00)

[time 400] Run job 2 for 200.00 secs (DONE at 600.00)

Final statistics:

Job 0 -- Response: 0.00 Turnaround 200.00 Wait 0.00

Job 1 -- Response: 200.00 Turnaround 400.00 Wait 200.00

Job 2 -- Response: 400.00 Turnaround 600.00 Wait 400.00

Average -- Response: 200.00 Turnaround 400.00 Wait 200.00

this output occurs for both of them.

2.

in this case, we have different length for jobs but because input jobs are sorted increasingly we have same sequence for running in SJF and FIFO. (0,1,2)

first job has 0 response time because it has responded right after it comes.

second and third job must wait to finish previous job so they have 100 and 300 response time

and finish time for every job is the sum of length of executed jobs.

turnaround time is also same logic.

Execution trace:

[time 0] Run job 0 for 100.00 secs (DONE at 100.00)

[time 100] Run job 1 for 200.00 secs (DONE at 300.00)

[time 300] Run job 2 for 300.00 secs (DONE at 600.00)

Final statistics:

Job 0 -- Response: 0.00 Turnaround 100.00 Wait 0.00

Job 1 -- Response: 100.00 Turnaround 300.00 Wait 100.00

Job 2 -- Response: 300.00 Turnaround 600.00 Wait 300.00

Average -- Response: 133.33 Turnaround 333.33 Wait 133.33

this output occurs for both of them.

3.

in this part we must use `./scheduler.py -p RR -q 1 -l 100,200,300 -c` comand to see the results of round robin method.

in this case we set time slide to 1 to see that in every second which job is executing.

we see switch between jobs in every second until t=298 that job 1 is Done.

after t=298 we see switchin between job 1 and 2 until t=499 that job 1 is Done and then job 2 execute lonely until t=600

4.

for types that sequence of input jobs are sorted increasely.it means first job is shortest job too.

5.

if quantum=

6.

if we increase length of jobs in SJF the first job have 0 response time again. but the second and third job have bigger response time.

7.

as we increase length of jobs, first job have same response time=0 and other jobs have bigger response time.

This term is used for the maximum time taken for execution of all the tasks.

dt = Denote detection time when a task is brought into the list

st = Denote switching time from one task to another

et = Denote task execution time

$T_{\text{worst}} = \{(dt_i + st_i + et_i)\} + (dt_i + st_i + et_i)^2 + \dots + (dt_i + st_i + et_i)^N + (dt_i + st_i + et_i + et_i) N + t_l$