

4.9 Homework (Simulation)

1. a. The CPU should be in 100% utilization, or less for demand for switch time 90%-95%.
I know this as there must be usages of the CPU to complete the processes, the only possible down time would be with perfect switches.

b. Yes it was 100% usage

2. a. Should take 200 ms to complete. 80% usage as I/O requires some time to wait

b. Time was 10, CPU 50%,
40 40%

3. a. Switching the order should matter, it could cause the program to take longer to execute by waiting for I/O to completely finishing before continuing

6. It does matter, but it was
Actually more efficient, I suspect
this is because while it was waiting
for I/O it executed the normal
processes

4. This took time to finish. I
suspect this is because rather than
doing other work while waiting it
just waited, causing the time to blow

5. This should just as fast as
simply running to first of note of
running - SWITCH-ON-END, as
now it switches on waiting rather
than being forced to wait for I/O
to finish

6. It allows the CPU still
runs in a good time, as the
CPU still carries switches while
it waits for I/O to a minuscule. The
difference is what order to run I/O
or process when they're ready. Which
shouldn't make a difference.

7. CPU use time was 100%
It may be smart to run IO immediately as it could wait again in the future when it requests from the IO again

8. It seems the most efficient method is to run immediately for IO & to switch on IO.