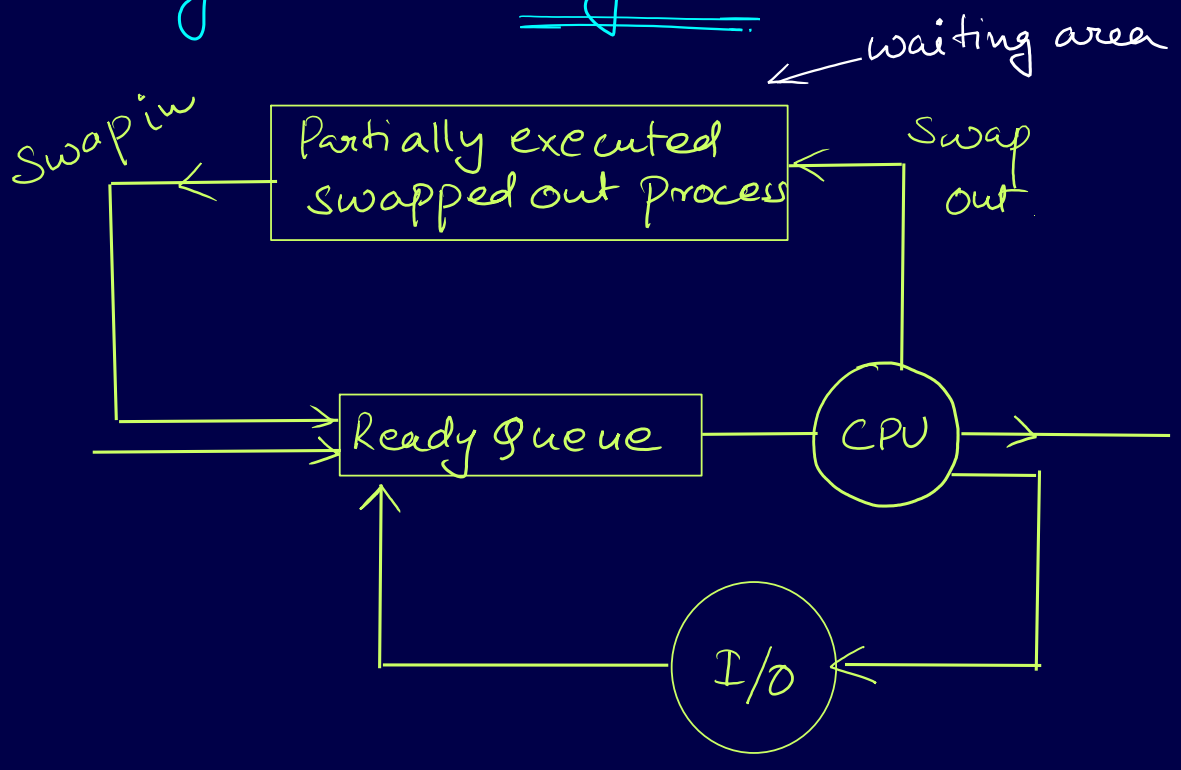
Time Complexity

- There is no concept of multi-tasking.
- Working in a Single Core



Suppose there are 3 tasks in the queue, the CPU picks one (acc. to FIFO) and executes some part of it and sends it to the "waiting Area". Similarly, the other 3 processes are are executed partially and sent to the W.A. Now, the process swap in to the queue again resulting in the same cycle again.
Now, suppose an I/O operation takes place, this is also placed in the "Ready Queue" and is taken up by CPU when time comes.

(*) Modern CPUs can execute ~10^8 instructions in 1 sec.

⇒ In multicore, this same thing happens parallelly.

Experimental Analysis ⇒ Analysis where we measure actual time of the algorithm ran.

This strategy is not that great as different machines can give different values for the exact same algo.

But something can be inferred:

① input — what, size, how it is given — directly affects the course of algo execution.

Asymptotic Analysis