

Processes :- The Process Model.

Conceptually, every process has its own Virtual CPU. but in reality CPU switches back and forth from process to process, but to understand the system, it is much easier to think about a collection of processes running in (pseudo) parallel than to try to keep track of how the CPU switches from program to program. This rapid switching back and forth is called Multiprogramming.

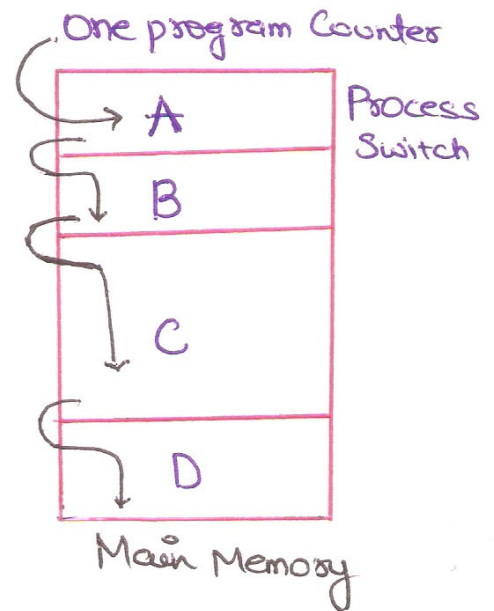
First Model : Multi programming :

In this, there is four programs in memory.

We have single shared processor by all programs

There is only one program counter for all programs in memory.

In this first - program counter is initialized to execute the part of program A then with the help of Process Switch it transfers control to program B and execute some part of this. After that program counter for program C is active and execute some part of it and so on to program D, then all these step continues may be randomly with the help of process switches until all program

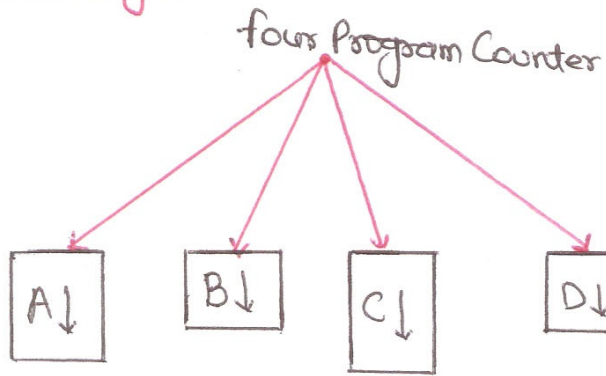


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2nd Model : Multiprocessing :-

There is 4 processes, each with its own flow of control (ie its own logical program counter), and each

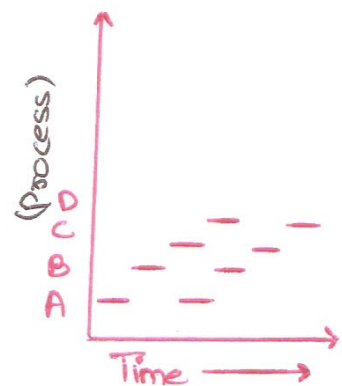


One running independently of the other ones. There is only one physical program counter, so when each process runs, its logical program counter is loaded into the real program counter. When it is finished (for the time being), the physical program counter is saved in the process stored logical program counter in memory.

3rd process Model : One program at one

At any given instant only ^{one} process runs and other process after some interval of time.

In other point of view all processes progress but only one process actually runs at given instant of time.



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