M T W T F S S

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YOUVA

Assignment No.1

Title: Process Management
(Process Control)

FAQs

1. Explain fork system call with an example.

→ fork system call creates a new process from existing process. The existing process called parent process & new process created called child process. Every process have its own PID (Process ID). If fork() failed in execution returns -ve value. init() is the parent of all process of PID = 1. Using PID function the child returns zero value & parent returns the PID of childprocess. Using getpid() we get the process id of process & using getppid returns the parent process id. After a process created, both processes will execute the next instruction following the fork() system call. Data type of processor id pid_t defined in sys/types.h header file.

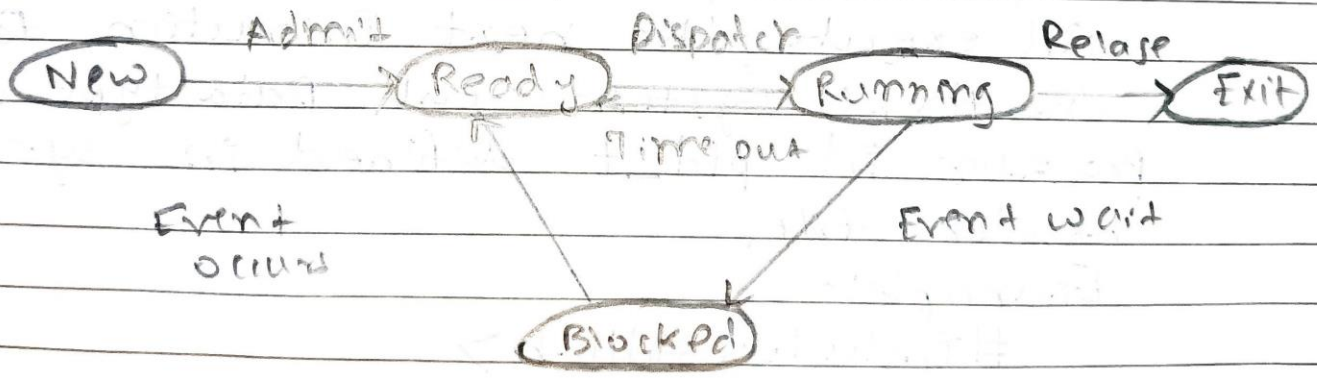
Example:-

```
#Include< stdio.h>
#include< sys/types.h>
#include< unistd.h>

Pid_t p;
main()
  {
```

```
p = fork();
if (p == 0){
printf (" This is child process of
    PID ", getpid());
}
else if ( p>0) {
printf ( " The process is parent
process of PID", getpid());
}
else
{
printF (" New process not created");
}

}
```

2. Explain the five state process model with a neat diagram.

→



1) Running :- It means a process that is currently being execute assuming the system is of single process, there will be at most one process executing

at a time.

2) Ready:- A process which is prepared to be executed but is waiting for processor executing at a time allotment.

3) New:- A process which has been created but is not ready for execution and is not loaded in main memory. It's process control block has been created.

4) Blocked:- A process which is waiting for some event like I/O event to occur is in blocked state it cannot continue its execution till the event occurs.

5) Exist:- A process which has completed its execution.

3. Explain mode switching & context switching.

→ A process can be executed in user mode and kernel mode. A process while executing changes its mode of execution i.e user to kernel or kernal to user due to a system call then this is called as mode switching.

Context switching refers to a technique/method used by the os to switch processes. Eg. If process A is executing then the dispatcher will switch the process to B. This is done with the help of commands reload and save.

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