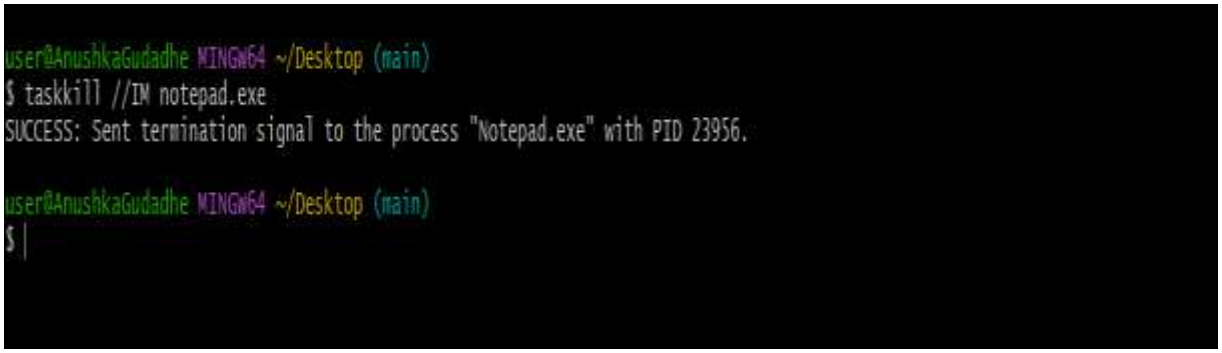
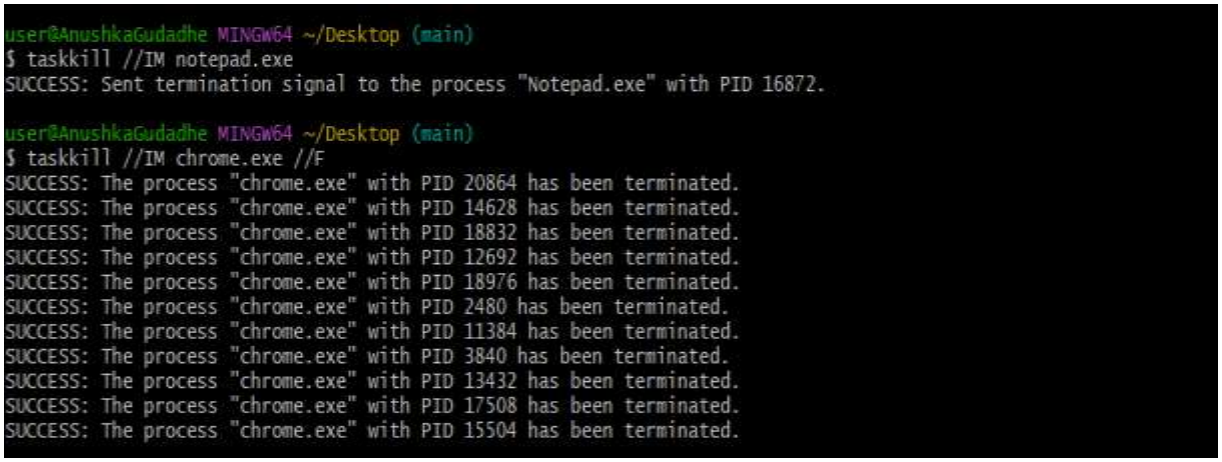
Practical : 03

Aim: Implement process creation using the fork() system call in Linux to generate parent and child processes, retrieve their PID and PPID, and analyse system behaviour by creating orphan and zombie processes.

1. Adam is working in an IT company. He has been given a task to reduce the load of a system by killing some of the processes running in the LINUX operating system. Which commands will he use to complete the given task with the help of the following operation?

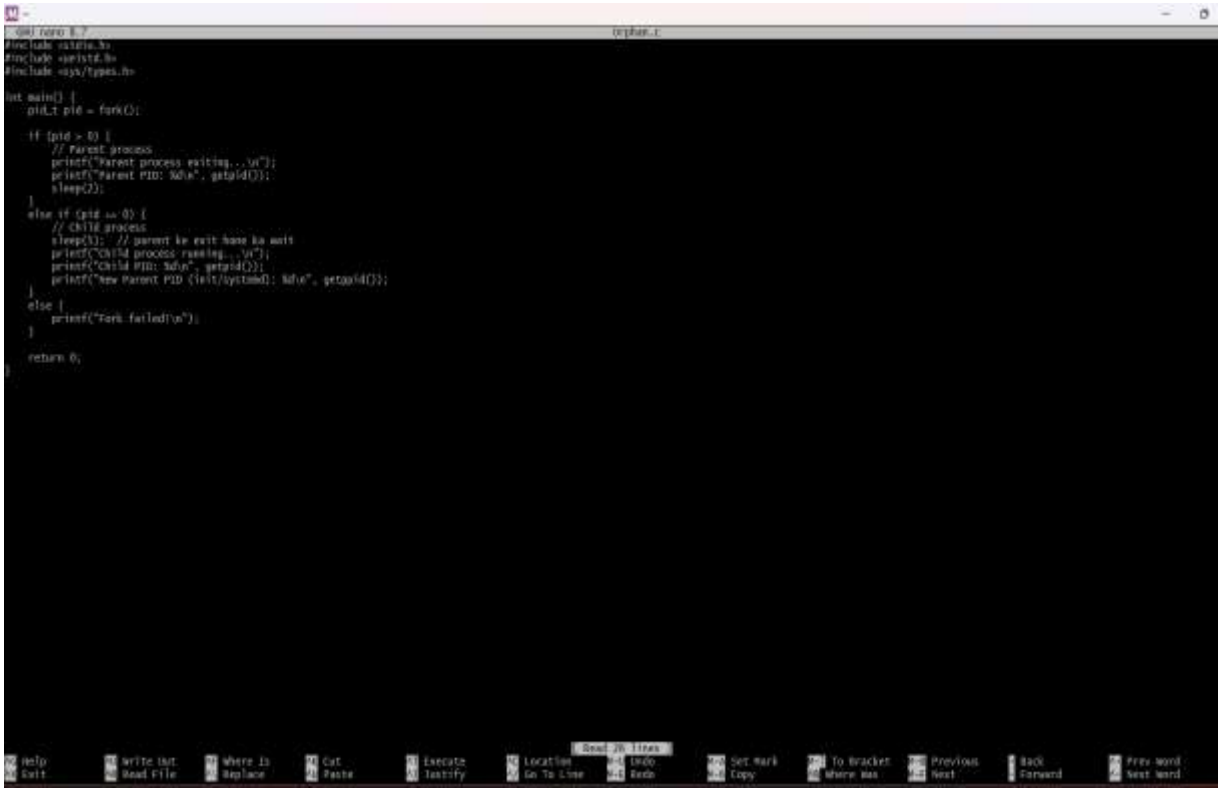
   - Kill processes by name
   - Kill a process based on the process name
   - Kill a single process at a time with the given process ID





2. **Write a program for process creation using C**

- **Orphan Process**



OUTPUT:

```
~

user@AnushkaGudadhe MSYS ~
$ nano Orphan.c

user@AnushkaGudadhe MSYS ~
$  gcc Orphan.c -o Orphan

user@AnushkaGudadhe MSYS ~
$ ./Orphan
Parent process exiting...
Parent PID: 2423
```

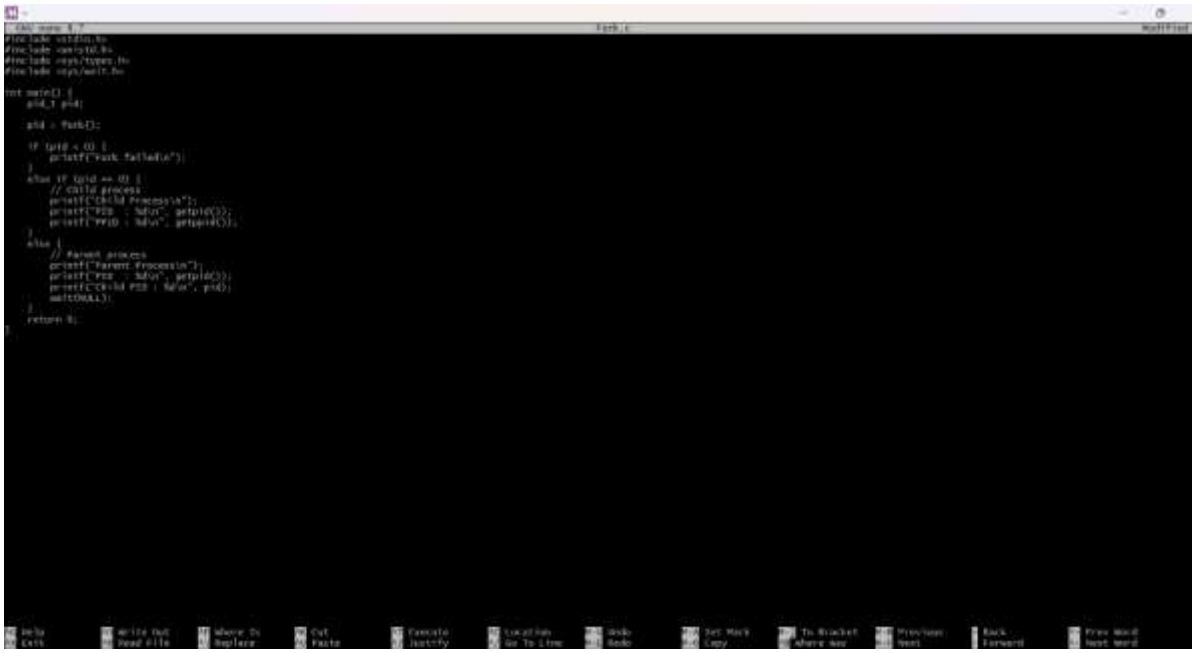
▪ **Zombie Process**

OUTPUT:

```
~

user@AnushkaGudadhe MSYS ~
$ nano Zombie.c

user@AnushkaGudadhe MSYS ~
$ gcc Zombie.c -o Zombie

user@AnushkaGudadhe MSYS ~
$ ./Zombie
Child exiting
Parent running
```

3.Create the process using fork () system call.

- Child Process creation
- Parent process creation
- PPID and PID



OUTPUT:

```
user@AnushkaGudadhe MSYS ~
$ nano Fork.c

user@AnushkaGudadhe MSYS ~
$ gcc Fork.c -o Fork

user@AnushkaGudadhe MSYS ~
$ ./Fork
Parent Process
PID  : 2440
Child PID : 2441
Child Process
PID  : 2441
PPID : 2440
```