

-Assignment 4-

Commands for Creating and Terminating a Process

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1 Linux/Unix

1.1 Process Creation

The steps for creating a new process in Unix/Linux are following:

1. ***fork()***: First step in creating a new process is to call the ***fork()*** syscall. This system call creates a new copy of the parent process. This new child process is the exact copy of the parent process.
2. ***exec()***: Next step in the process is to replace the program in the child by the target program.

1.2 Process Termination

Termination of a process is a single system call in Linux/Unix. Both of which provides the ***exit()*** syscall. This system call takes an exit code as a parameter which is returned to the parent process.

2 Windows

2.1 Process Creation

The steps for creating a new process in Windows is to use the system call ***CreateProcess()***, this system call expects a few parameters including the path of the program to execute. This is unlike the ***fork()*** system call from Unix/Linux which copies the address space and clones the parent.

2.2 Process Termination

There are multiple ways to terminate a process in Windows:

1. The first way is to call the ***ExitProcess*** system call which terminates the current process.
2. Another way to terminate the process is to kill it from a different process using ***TerminateProcess*** system call.