

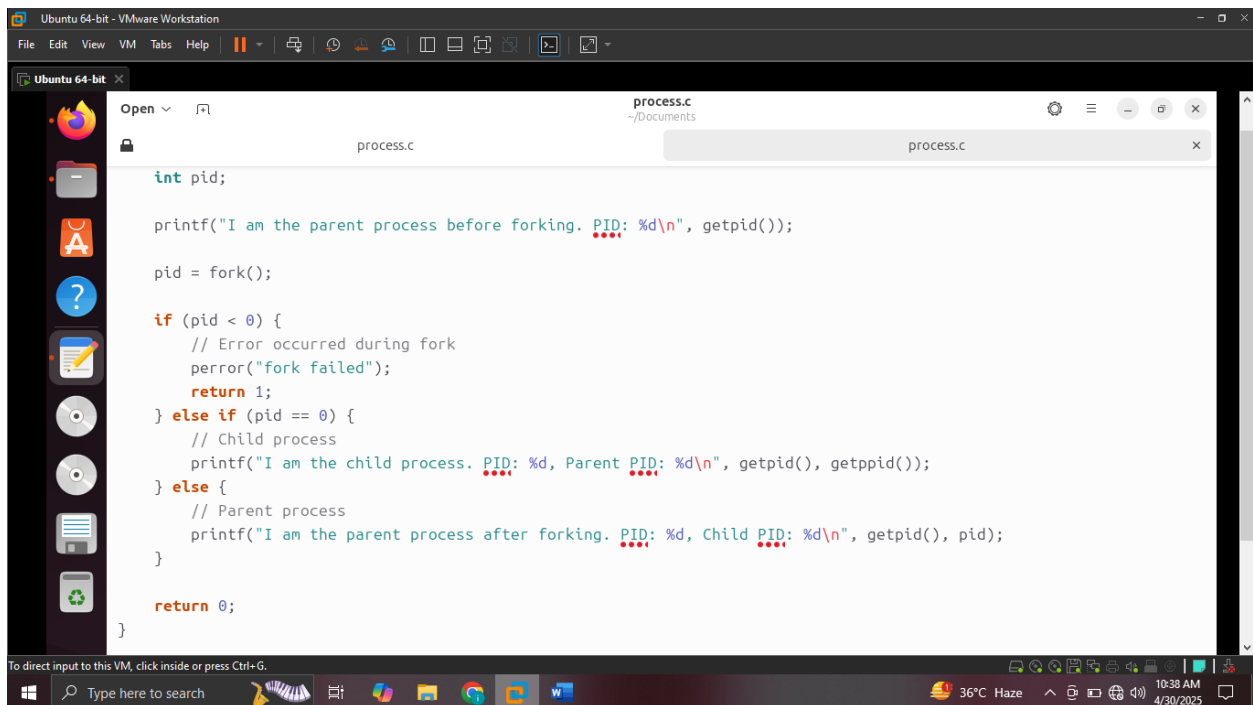
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Lab task 7

Task 1



```
int pid;

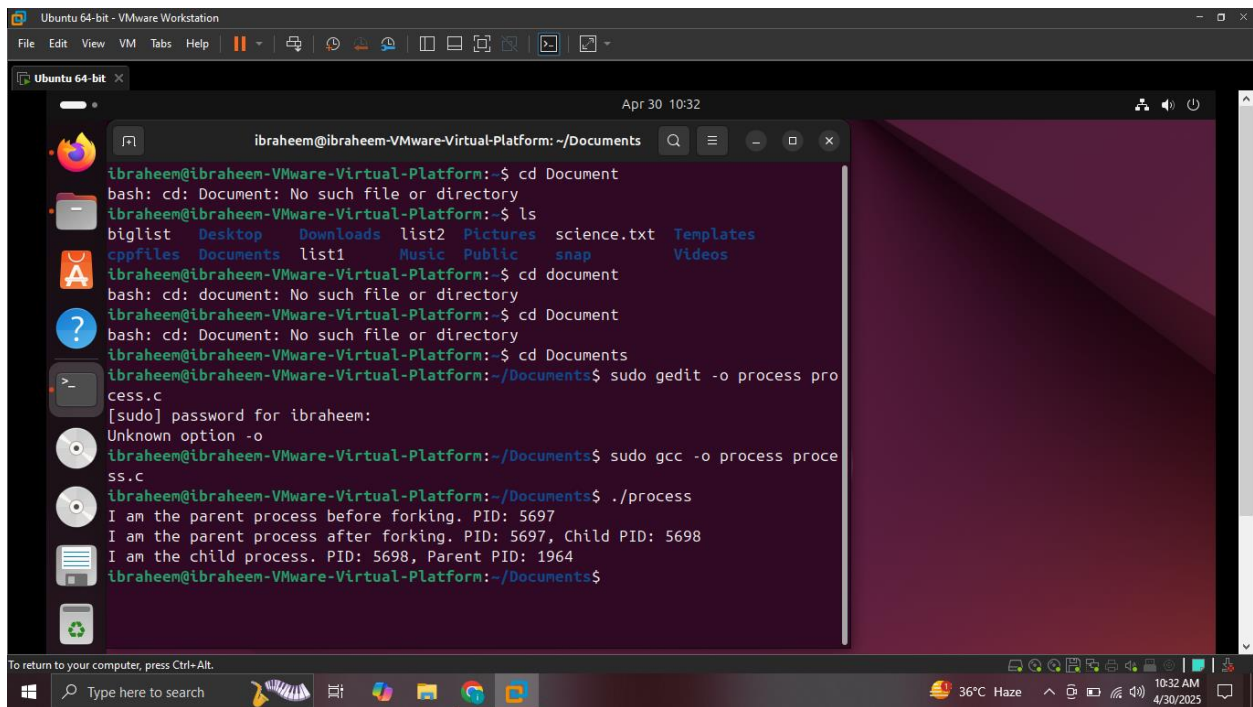
printf("I am the parent process before forking. PID: %d\n", getpid());

pid = fork();

if (pid < 0) {
    // Error occurred during fork
    perror("fork failed");
    return 1;
} else if (pid == 0) {
    // Child process
    printf("I am the child process. PID: %d, Parent PID: %d\n", getpid(), getppid());
} else {
    // Parent process
    printf("I am the parent process after forking. PID: %d, Child PID: %d\n", getpid(), pid);
}

return 0;
```

Output



```
ibraheem@ibraheem-VMware-Virtual-Platform:~$ cd Document
bash: cd: Document: No such file or directory
ibraheem@ibraheem-VMware-Virtual-Platform:~$ ls
biglist  Desktop  Downloads  list2  Pictures  science.txt  Templates
cppfiles Documents list1  Music  Public  snap        Videos
ibraheem@ibraheem-VMware-Virtual-Platform:~$ cd document
bash: cd: document: No such file or directory
ibraheem@ibraheem-VMware-Virtual-Platform:~$ cd Document
bash: cd: Document: No such file or directory
ibraheem@ibraheem-VMware-Virtual-Platform:~$ cd Documents
ibraheem@ibraheem-VMware-Virtual-Platform:~/Documents$ sudo gedit -o process pro
cess.c
[sudo] password for ibraheem:
Unknown option -o
ibraheem@ibraheem-VMware-Virtual-Platform:~/Documents$ sudo gcc -o process proce
ss.c
ibraheem@ibraheem-VMware-Virtual-Platform:~/Documents$ ./process
I am the parent process before forking. PID: 5697
I am the parent process after forking. PID: 5697, Child PID: 5698
I am the child process. PID: 5698, Parent PID: 1964
ibraheem@ibraheem-VMware-Virtual-Platform:~/Documents$
```

Task 2

Code



```
#include <stdio.h>
#include <unistd.h>

int main() {
    printf("PID %d: Here I am just before first forking statement\n", getpid());

    pid_t pid1 = fork();

    if (pid1 == -1) {
        perror("First fork failed");
        return 1;
    }

    printf("PID %d: Here I am just after first forking statement\n", getpid());

    pid_t pid2 = fork();

    if (pid2 == -1) {
        perror("Second fork failed");
        return 1;
    }
}
```



```
#include <stdio.h>
#include <unistd.h>

int main() {
    printf("PID %d: Here I am just before first forking statement\n", getpid());

    pid_t pid1 = fork();

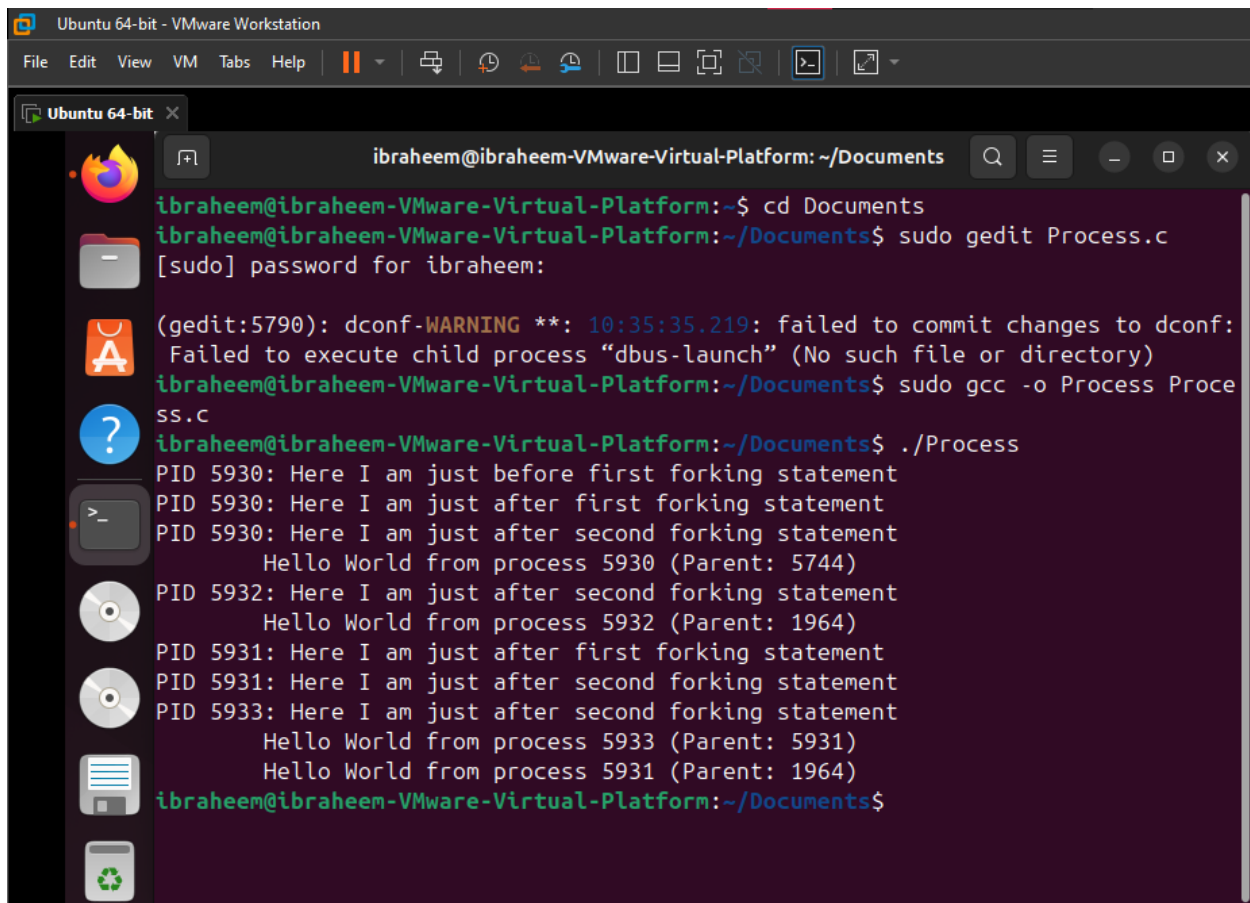
    if (pid1 == -1) {
        perror("First fork failed");
        return 1;
    }

    printf("PID %d: Here I am just after first forking statement\n", getpid());

    pid_t pid2 = fork();

    if (pid2 == -1) {
        perror("Second fork failed");
        return 1;
    }
}
```

Output :



```
ibrahheem@ibrahheem-VMware-Virtual-Platform: ~/Documents
ibrahheem@ibrahheem-VMware-Virtual-Platform:~/Documents$ cd Documents
ibrahheem@ibrahheem-VMware-Virtual-Platform:~/Documents$ sudo gedit Process.c
[sudo] password for ibrahheem:
(gedit:5790): dconf-WARNING **: 10:35:35.219: failed to commit changes to dconf:
Failed to execute child process "dbus-launch" (No such file or directory)
ibrahheem@ibrahheem-VMware-Virtual-Platform:~/Documents$ sudo gcc -o Process Proce
ss.c
ibrahheem@ibrahheem-VMware-Virtual-Platform:~/Documents$ ./Process
PID 5930: Here I am just before first forking statement
PID 5930: Here I am just after first forking statement
PID 5930: Here I am just after second forking statement
        Hello World from process 5930 (Parent: 5744)
PID 5932: Here I am just after second forking statement
        Hello World from process 5932 (Parent: 1964)
PID 5931: Here I am just after first forking statement
PID 5931: Here I am just after second forking statement
PID 5933: Here I am just after second forking statement
        Hello World from process 5933 (Parent: 5931)
        Hello World from process 5931 (Parent: 1964)
ibrahheem@ibrahheem-VMware-Virtual-Platform:~/Documents$
```