

Sidharth

2K18/MC/114

Experiment 3

Aim: Write a C program that creates a new child process. The child process should be assigned to do the task of finding the length of your name.

Code:

```
// Program to find length of the string "name.c"

#include <stdio.h>

#include <unistd.h>

#include <sys/wait.h>

int main(){
    char name[30];
    printf("Enter your name: ");
    fgets(name, 30, stdin);
    int count = 0;
    for(int i=0; name[i] != '\0'; i++) count++;
    printf("Your Name contains: %d characters\n", count);
```

```
    return 0;
}

// Program for Child Process "P3.c"
#include <sys/types.h>
#include <stdio.h>
#include <unistd.h>
#include <sys/wait.h>

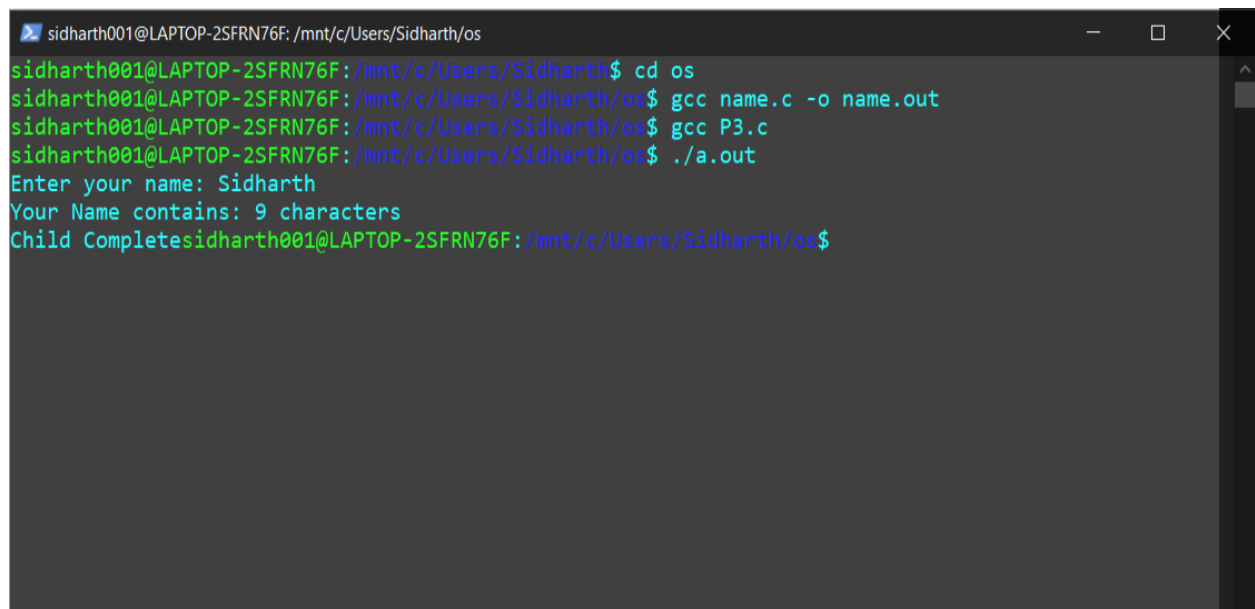
int main(){
    pid_t pid;
    pid = fork();
    if (pid < 0){
        fprintf(stderr, "Fork Failed");
        return 1;
    }
    else if (pid == 0){

        execlp("/mnt/c/Users/Sidharth/os/name.out", "./mnt/c/Users/Sidharth
/os/name.out", NULL);

    }
    else{
        wait(NULL);
    }
}
```

```
    printf("Child Complete");  
}  
return 0;  
}
```

Output:

A terminal window with a dark background and light-colored text. The window title bar shows 'sidharth001@LAPTOP-2SFRN76F: /mnt/c/Users/Sidharth/os'. The terminal content shows the user navigating to the 'os' directory, compiling 'name.c' into 'name.out', compiling 'P3.c', and running the resulting executable 'a.out'. The program prompts for a name, the user enters 'Sidharth', and the program outputs 'Your Name contains: 9 characters' and 'Child Complete' before returning to the shell prompt.

```
sidharth001@LAPTOP-2SFRN76F: /mnt/c/Users/Sidharth/os  
sidharth001@LAPTOP-2SFRN76F:/mnt/c/Users/Sidharth/os$ cd os  
sidharth001@LAPTOP-2SFRN76F:/mnt/c/Users/Sidharth/os$ gcc name.c -o name.out  
sidharth001@LAPTOP-2SFRN76F:/mnt/c/Users/Sidharth/os$ gcc P3.c  
sidharth001@LAPTOP-2SFRN76F:/mnt/c/Users/Sidharth/os$ ./a.out  
Enter your name: Sidharth  
Your Name contains: 9 characters  
Child Completesidharth001@LAPTOP-2SFRN76F:/mnt/c/Users/Sidharth/os$
```