


5.

CODE-

 cse16@localhost:~

```
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h> // For fork(), getpid(), getppid()

int main() {
    int pid; // Variable to hold the process ID

    // Step 3: Create a Process
    pid = fork();

    // Step 4: Print Statement Executed Twice
    printf("THIS LINE EXECUTED TWICE\n");

    // Step 5: Check for Process Creation Failure
    if (pid == -1) {
        printf("CHILD PROCESS NOT CREATED\n");
        exit(0);
    }

    // Step 6: Child Process Execution
    if (pid == 0) {
        printf("Child Process ID: %d\n", getpid());
        printf("Parent Process ID of Child: %d\n", getppid());
    }

    // Step 7: Parent Process Execution
    else {
        printf("Parent Process ID: %d\n", getpid());
        printf("Parent's Parent Process ID: %d\n", getppid());
    }

    // Step 8: Final Print Statement
    printf("IT CAN BE EXECUTED TWICE\n");

    return 0;
}
```

OUTPUT-

```
THIS LINE EXECUTED TWICE
THIS LINE EXECUTED TWICE
Child Process ID: 2805
Parent Process ID of Child: 2804
IT CAN BE EXECUTED TWICE
Parent Process ID: 2804
Parent's Parent Process ID: 2005
IT CAN BE EXECUTED TWICE
```