Ex. No.: 5 Date: 19.02.2025

SYSTEM CALLS PROGRAMMING

Aim:

To experiment system calls using fork(), execlp() and pid() functions.

Program:

```
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
int main() {
  int pid;
  pid = fork();
  if(pid == -1) {
    printf("CHILD PROCESS NOT CREATED\n");
  printf("THIS LINE EXECUTED TWICE\n");
  if (pid == 0) {
    printf("Child Process ID: %d\n", getpid());
    printf("Parent Process ID of Child: %d\n", getppid());
  else {
    printf("Parent Process ID: %d\n", getpid());
    printf("Parent's Parent Process ID: %d\n", getppid());
  printf("IT CAN BE EXECUTED TWICE\n");
  return 0;
```

Output:

```
THIS LINE EXECUTED TWICE
Parent Process ID: 66645
Parent's Parent Process ID: 66638
IT CAN BE EXECUTED TWICE
THIS LINE EXECUTED TWICE
Child Process ID: 66646
Parent Process ID of Child: 66645
IT CAN BE EXECUTED TWICE
```

Result:

The system calls fork(), getpid(), and getppid() were successfully used to create a child process, print process details, and show that both parent and child execute the same code.