

### **Fork\_wait.c**

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
#include <stdlib.h>

int main() {
    pid_t pid;
    int status;

    printf("Parent process started. PID: %d\n", getpid());

    pid = fork(); // Create child process

    if (pid < 0) {
        perror("fork failed");
        exit(1);
    }
    else if (pid == 0) {
        // Child process
        printf("Child process started. PID: %d, Parent PID: %d\n", getpid(), getppid());
        sleep(3); // Simulate work
        printf("Child process exiting.\n");
        exit(0);
    }
    else {
        // Parent process
        printf("Parent waiting for child to finish...\n");
        wait(&status); // Wait for child to exit
        printf("Child finished with status %d\n", WEXITSTATUS(status));
        printf("Parent process exiting.\n");
    }

    return 0;
}
```

### **OUTPUT:-**

```
pict@mplab-12:~/Desktop/33164$ gcc fork_wait.c -o fork_wait
pict@mplab-12:~/Desktop/33164$ ./fork_wait
Parent process started. PID: 8912
Parent waiting for child to finish...
Child process started. PID: 8913, Parent PID: 8912
Child process exiting.
Child finished with status 0
Parent process exiting.
```