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**2022-BSE-064**

**Group#B**

**Operating system**

**LAB#05**

**Submitted to Sir shehzad**

## LAB Task

Q1. Write a program using fork() system call to create two child of the same process i.e., Parent P having child process P1 and P2. Q2. Write a program using fork() system call to create a hierarchy of 3 process such that P2 is the child of P1 and P1 is the child of P.

## Code:

```
GNU nano 6.2
/rabia.c
#include<stdio.h>
#include<unistd.h>
#include<sys/types.h>
int main(){
    pid_t p1,p2;
    p1=fork();
    p2=fork();
    if(p1==0 || p2==0)
    {
        printf("i am child 1  having id: %d\n",p1);
        printf("i am child 2  having id: %d\n",p2);
        printf("my parents id is %d\n",getpid());
    }
    else
    {printf("my child 1 id  having id: %d\n",p1);
        printf("my child 2  id  having id: %d\n",p2);
        printf("my parents id is %d\n",getpid());}
    }
```

```
11300~$ nano rabia.c
~$ gcc rabia.c
~$ ./a.out
my child 1 id  having id: 1183
my child 2  id  having id: 1184
my parents id is 1182
i am child 1  having id: 0
i am child 2  having id: 1185
my parents id is 1183
i am child 1  having id: 1183
i am child 2  having id: 0
my parents id is 1184
i am child 1  having id: 0
i am child 2  having id: 0
my parents id is 1185
~$ gcc rabia.c
~$
```

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Q1. Write a program using fork() system call to create two child of the same process i.e., Parent P having child process P1 and P2. Q2. Write a program using fork() system call to create a hierarchy of 3 process such that P2 is the child of P1 and P1 is the child of P.

```
~ Tour ChatGPT... - + Pause
GNU nano 6.2
#include<sys/types.h>
int main(){
pid_t p;
p=fork();
if(p==0 )
{
printf("i am child p1 of p having id: %d\n",p);
printf("my parents p id is %d\n",getpid());
pid_t p1;
p1=fork();
if(p1==0){
printf("i am child p2 of p1 having id: %d\n",p1);
printf("my parents p1 id is %d\n",getpid());}
else
{printf("my child p2 of p1 id having id: %d\n",p1);
printf("my parents p1 id is %d\n",getpid());}}
else{
printf("my child p1 of p id having id: %d\n",p);
printf("my parents p id is %d\n",getpid());}
}
```

```
~$ nano rabia.c
~$ gcc rabia.c
~$ ./a.out
my child p1 of p id having id: 1178
my parents p id is 1177
i am child p1 of p having id: 0
my parents p id is 1178
my child p2 of p1 id having id: 1179
my parents p1 id is 1178
i am child p2 of p1 having id: 0
my parents p1 id is 1179
```