

LAB- 04 Activity

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Task 1:

```
ibadullah_shaikh@ibadullah:~$ touch q1.c
ibadullah_shaikh@ibadullah:~$ gedit q1.c
ibadullah_shaikh@ibadullah:~$ gcc -o q1 q1.c
ibadullah_shaikh@ibadullah:~$ ./q1
Child1 Process= parent: 3629, I'd: 3630
ibadullah_shaikh@ibadullah:~$ Child2 Process= Parent: 3630, I'd: 3631
Child3 Process= Parent: 3631, I'd: 3632
^C
ibadullah_shaikh@ibadullah:~$
```

```
#include<stdio.h>
#include<unistd.h>
#include<sys/wait.h>
int main()
{
int pid = fork();
if(pid == 0)
{
printf("Child1 Process= parent: %d, I'd: %d\n",getppid(), getpid());
pid=fork();
if(pid==0)
{
printf("Child2 Process= Parent: %d, I'd: %d\n", getppid(),getpid());
pid=fork();
if(pid==0)
{
printf("Child3 Process= Parent: %d, I'd: %d\n", getppid(),getpid());
}
}
}
}
}
```

Task 2:

```
ibadullah_shaikh@ibadullah:~$ touch q2.c
ibadullah_shaikh@ibadullah:~$ gedit q2.c
ibadullah_shaikh@ibadullah:~$ gcc -o q2 q2.c
ibadullah_shaikh@ibadullah:~$ ./q2
Even Sum: 20
Odd Sum: 25
ibadullah_shaikh@ibadullah:~$
```

```
#include<stdio.h>
```

```
#include<unistd.h>
```

```
int main()
```

```
{
```

```
    int even=0,odd=1,sum=0,n=5,pid=fork();
```

```
    if(pid==0)
```

```
    {
```

```
        for(int i=0;i<n;i++)
```

```
        {
```

```
            sum+=odd;
```

```
            odd+=2;
```

```
        }
```

```
        printf("Odd Sum: %d\n",sum);
```

```
    }
```

```
    else if(pid>0)
```

```
    {
```

```
        for(int i=0;i<n;i++)
```

```
        {
```

```
            sum+=even;
```

```
            even+=2;
```

```
        }
```

```
        printf("Even Sum: %d\n",sum);
```

```
    }
```

```
}
```

Task 3:

```
ibadullah_shaikh@ibadullah:~$ touch q3.c
ibadullah_shaikh@ibadullah:~$ gedit q3.c
ibadullah_shaikh@ibadullah:~$ gcc -o q3 q3.c
ibadullah_shaikh@ibadullah:~$ ./q3
Parent I'd: 3927
Odd Numbers: 1 3 5 7 9
2 4 6 8 10
Parent
ibadullah_shaikh@ibadullah:~$
```

```
#include<stdio.h>

#include<unistd.h>

#include<sys/wait.h>

int main()
{
    int pid=fork();

    if(pid < 0)
    {
        printf("Unsuccessful Child Process Creation...!!");
    }

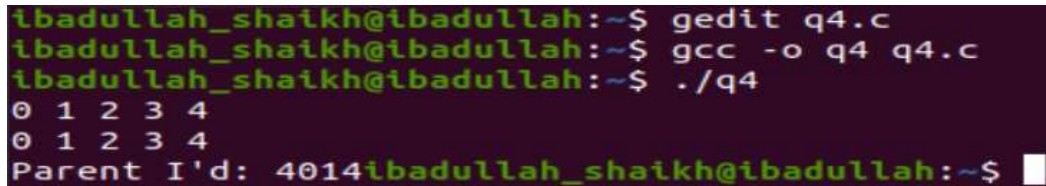
    else if(pid == 0)
    {
        printf("Parent I'd: %d\nOdd Numbers: ", getppid());
        for(int i=1;i<=10;i++)
        {
            if(i%2!=0)
            {
                printf("%d ",i);
            }
        }
        printf("\n");
    }
}
```

```

else if(pid>0)
{
    wait(NULL);
    for(int i=1;i<=10;i++)
    {
        if(i%2==0)
        {
            printf("%d ",i);
        }
    }
    printf("\nParent\n");
}
}

```

Task 4:



```

ibadullah_shaikh@ibadullah:~$ gedit q4.c
ibadullah_shaikh@ibadullah:~$ gcc -o q4 q4.c
ibadullah_shaikh@ibadullah:~$ ./q4
0 1 2 3 4
0 1 2 3 4
Parent I'd: 4014ibadullah_shaikh@ibadullah:~$

```

```

#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<sys/wait.h>
#include<sys/types.h>
int main(){
    int counter=0,pid=fork();
    if(pid==0)
    {
        for(int i=0;i<5;i++)

```

```
{  
    printf("%d ",i);  
}  
printf("\n");  
sleep(3);  
printf("Parent l'd: %d", getppid());  
system("gedit");  
exit(0);  
}  
else if(pid > 0)  
{  
    for(int i=0;i<5;i++)  
    {  
        printf("%d ",i);  
    }  
    printf("\n");  
    wait(NULL);  
}  
return 0;  
}
```

Task 5:

```

ibadullah_shaikh@ibadullah:~$ gedit q5.c
ibadullah_shaikh@ibadullah:~$ gcc -o q5 q5.c
ibadullah_shaikh@ibadullah:~$ ./q5
Child: 4195, Parent: 4194
Child: 4196, Parent: 4195
ibadullah_shaikh@ibadullah:~$ Child: 4197, Parent: 4196
total 76
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 15:34 11 فروری Desktop
drwxrwxr-x 3 ibadullah_shaikh ibadullah_shaikh 4096 13:28 22 فروری disOSLAB
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 15:34 11 فروری Documents
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 19:33 23 مارچ Downloads
drwxrwxr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 23:16 1 مارچ {letters,
drwxrwxr-x 5 ibadullah_shaikh ibadullah_shaikh 4096 17:02 4 مارچ main
drwxrwxr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 23:16 1 مارچ Misc}
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 15:34 11 فروری Music
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 23:18 1 مارچ Pictures
drwxrwxr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 23:16 1 مارچ Programs,
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 15:34 11 فروری Public
-rwxrwxr-x 1 ibadullah_shaikh ibadullah_shaikh 17000 20:12 23 مارچ q5
-rw-rw-r-- 1 ibadullah_shaikh ibadullah_shaikh 466 20:12 23 مارچ q5.c
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 15:34 11 فروری Templates
drwxr-xr-x 2 ibadullah_shaikh ibadullah_shaikh 4096 15:34 11 فروری Videos
Process 3 done
Process 2 done
Process 1 done

```

```
#include<stdio.h>
```

```
#include<stdlib.h>
```

```
#include<unistd.h>
```

```
#include<sys/wait.h>
```

```
int main()
```

```
{
```

```
    if(fork()==0)
```

```
    {
```

```
        printf("Child: %d, Parent: %d\n",getpid(),getppid());
```

```
        if(!fork())
```

```
        {
```

```
            printf("Child: %d, Parent: %d\n",getpid(),getppid());
```

```
            if(!fork())
```

```
            {
```

```
                printf("Child: %d, Parent: %d\n",getpid(),getppid());
```

```
                system("ls -l");
```

```
                printf("Process 3 done\n");
```

```
                exit(0);
```

```
        }  
        wait(NULL);  
        printf("Process 2 done\n");  
        exit(0);  
    }  
    wait(NULL);  
    printf("Process 1 done\n");  
    exit(0);  
}  
return 0;  
}
```