

UIT2512---Operating Systems Practices Lab

System Calls Programming in Python

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Aim:

To write a python code to create 3-child processes from same parent process using fork ()

PARENT PROCESS → input for a number 'n' and followed by printing its PID and its PPID.

CHILD1 → printing its PID, PPID and check whether the given number 'n' is odd or even.

CHILD2 → prints its PID, PPID and computes the sum of digits of 'n'.

CHILD → prints its PID, PPID, and checks whether the given number 'n' is a palindrome or not.

CODE:

```
import os,time
```

```
def p1(n):  
    if n%2==0:  
        print("EVEN")  
    else:  
        print("ODD")
```

```
def p2(n):  
    s=0  
    n=str(n)  
    for i in n:  
        s = s + int(i)  
    print(s)
```

```
def p3(n):  
    s=str(n)  
    if s==s[::-1]:  
        print("Palindrome")  
    else:  
        print("Not palindrome")
```

```

if __name__=="__main__":
    n=int(input("Enter the number: "))
    pid = os.fork()

    if (pid != 0) :
        time.sleep(2)
        p1(n)
        print(f"child[1] --> pid = {os.getpid()} and ppid = {os.getppid()}\n")

    else:
        pid1 = os.fork()
        if (pid1 != 0):
            time.sleep(2)
            p2(n)
            print(f"child[2] --> pid = {os.getpid()} and ppid = {os.getppid()}\n")

        else:
            pid2 = os.fork()
            if (pid2 != 0) :
                time.sleep(2)
                p3(n)
                print(f"child[3] --> pid = {os.getpid()} and ppid = {os.getppid()}\n")

            else:
                time.sleep(5)
                print(f"parent --> pid = {os.getpid()}\n")

```

OUTPUT:

(i) When 'n' is ODD

```

$ python3 2.py
Enter the number: 23
ODD
child[1] --> pid = 6257 and ppid = 4706

5
child[2] --> pid = 6258 and ppid = 6257

Not palindrome
child[3] --> pid = 6259 and ppid = 6258

$ parent --> pid = 6260

```

(ii) When 'n' is EVEN

```
$ python3 2.py
Enter the number: 12
EVEN
child[1] --> pid = 6244 and ppid = 4706

3
child[2] --> pid = 6245 and ppid = 6244

Not palindrome
child[3] --> pid = 6246 and ppid = 6245

$ parent --> pid = 6247
```