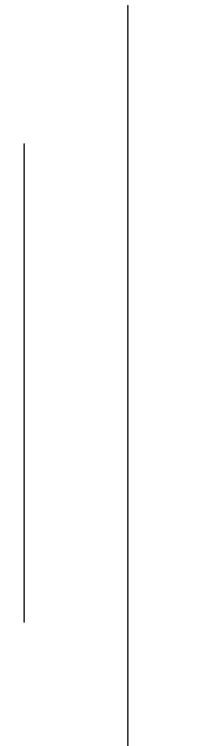


Gandaki College of Engineering and Science



AOS Lab Report 3

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OBJECTIVE: TO STUDY CHILD PROCESS CREATION USING PYTHON

PROGRAM:

1)

```
import os  
os.fork()  
print("hello world")
```

Output:

```
hello world  
hello world
```

Description:

In above program, the `os.fork()` function creates another process(child process) which will resume at exactly same place as the parent process. Here the string 'hello world' is printed by parent process and then by child process.

2)

```
import os  
os.fork()  
os.fork()  
print("hello world")
```

Output:

```
hello world  
hello world  
hello world  
hello world
```

Description:

In above program the `os.fork()` in line 2 creates a child process. And, both process are executed. While executing these processes, the `os.fork()` in line 3 creates a child process for both the processes. So, there will be 4 process running. And, each process will execute the print statement.

3)

```
import os
os.fork()
print("Process id= %s" % os.getpid())
```

Output:

```
Process id= 3800
Process id=3801
```

Description:

In above program, `os.fork()` will create a child process. Then, both child and parent process will execute the print statement. First parent process is executed, so parent process id is printed first and then child's.

4)

```
import os
import time
ide=os.fork()
a=1
b=1
if ide==0:
    a=a+1
    b=b+1
else:
    time.sleep(5)
print("a= %s , b=%s " %(a,b))
```

Output:

```
a=2 , b=2
a=1 , b=1
```

Description:

In above program, os.fork() creates a child process. It also returns child process id for parent and 0 for child process. Then the parent process is executed first. As the value of ide for parent process will be the pid of child process, it will enter the else part. The function time.sleep(5) holds the process for 5 sec. In this time, the child process is executed increasing the value of a and b by 1. The child process will print the increased value of a and b. And after 5 seconds, the parent process resumes and the value of a and b is printed.