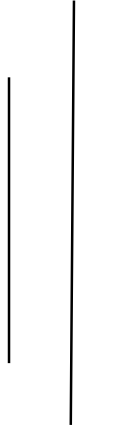


**National College of Computer Studies**  
**Paknajol, Kathmandu**



Lab Report No. 1  
**Linux Commands**  
**Operating System**

**Submitted by:**

Name: Siddhartha Shakya

Program: BIM

Roll no: 19

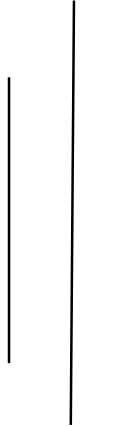
Section: B

**Submitted to:**

Arjun Gautam

**Date of submission:** 2025/08/27

**National College of Computer Studies**  
**Paknajol, Kathmandu**



Lab Report No. 2  
**Process, Thread and IPC Implementation**  
**Operating System**

**Submitted by:**

Name: Siddhartha Shakya

Program: BIM

Roll no: 19

Section: B

**Submitted to:**

Arjun Gautam

**Date of submission: 2025/08/27**

```
Siddhartha.term
Assistant Server ~/Siddhartha1

~/Siddhartha1$ cat > sid1.txt
I am sid.
I live in Dallu.~/Siddhartha1$ cat sid1.txt
I am sid.
I live in Dallu.~/Siddhartha1$
```

```
Siddhartha.term
Assistant Server ~ Terminal File

~/Siddhartha1$ cd ../
~$
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1

~/Siddhartha1$ echo "Appending text" >> sid1
~/Siddhartha1$ cat sid1.txt
I am sid.
I live in Dallu.Appending text
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1

~/Siddhartha1$ cat >> sid1.txt

Appending multiple line1
Appending multiple line2
~/Siddhartha1$ cat sid1.txt
I am sid.
I live in Dallu.Appending text
```

```
Appending multiple line1
Appending multiple line2
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1

~$ cd Siddhartha1
~/Siddhartha1$
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1 Terminal

~/Siddhartha2$ ls
sid1.txt
~/Siddhartha2$ cd ../
~$ cd Siddhartha1
~/Siddhartha1$ ls
sid1.txt
```

```
Siddhartha.term
Assistant Server ~/Siddhartha2 Terminal

~/Siddhartha2$ cp sid1.txt /home/user/Siddhartha1/
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1 Terminal

~/Siddhartha1$ rm sid1.txt
~/Siddhartha1$ ls
```

```
Siddhartha.term
Assistant Server ~ Terminal File Edit

~$ ls
Siddhartha.term Siddhartha1 Siddhartha2
~$ rm -r Siddhartha2
~$ ls
Siddhartha.term Siddhartha1
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1

~/Siddhartha1$ echo "I am sid" > sid1.txt
~/Siddhartha1$ echo sid1.txt
sid1.txt
```

```
Siddhartha.term
Assistant Server ~ Terminal
~$ mkdir Siddhartha1
~$ ls
Siddhartha.term Siddhartha1
```

```
Siddhartha.term
Assistant Server ~/Siddhartha2 Terminal
~/Siddhartha1$ mv sid1.txt /home/user/Siddhartha2/
```

```
Siddhartha.term
Assistant Server ~/Siddhartha2 Terminal
~/Siddhartha1$ ls
~/Siddhartha1$ cd ../
~$ cd Siddhartha2
~/Siddhartha2$ ls
sid1.txt
```

```
Siddhartha.term
Assistant Server ~ Terminal
~$ pwd
/home/user
```

```
Siddhartha.term
Assistant Server ~/Siddhartha1
~/Siddhartha1$ touch sid1.txt
~/Siddhartha1$ ls
sid1.txt
```

```
Hello Siddhartha!, process_id(pid) = 1843
Hello Siddhartha!, process_id(pid) = 1844
```

```
Hello Sid
Hello Sid
Hello Sid
Hello Sid
Hello Sid
Hello Sid
Hello Sid
Hello Sid
```

Created a new thread

Child received: Hello from parent process!

1. Press 1 for Producer
2. Press 2 for Consumer
3. Press 3 for Exit

Enter your choice:2

Buffer is empty!

Enter your choice:1

Producer produces item 1

Enter your choice:1

Producer produces item 2

Enter your choice:2

Consumer consumes item 2

Enter your choice:2

Consumer consumes item 1