



## Lab Report

<b>Course Code:</b>	<b>Course Title:</b>
CSE324	Operating System

Experiment Details	
Experiment No	01
Experiment Name	Introduction to Linux and Shell Programming
Submission Date	15 / 09 / 2024

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## **Title: Introduction to Linux and Shell Programming**

### **Equipment:**

- ✓ Computer
- ✓ Linux OS

### **Experimentation Steps:**

#### **1. Introduction to Linux OS:**

- ✓ **Step 1:** Open the terminal.
- ✓ **Step 2:** type `lsb_release -a` to check the Linux distribution and its version.

```
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 24.04.1 LTS
Release:       24.04
Codename:      noble
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$
```

**Discussion:** Here is the all information of my running Linux Operating system.

#### **2. Creating a User Account:**

- ✓ **Step 1:** Open the terminal
- ✓ **Step 2:** Type `sudo` command for administrative access
- ✓ **Step 3:** use `adduser` command to create new user account
- ✓ **Step 4:** Set a password for new user account
- ✓ **Step 5:** then enter the all-user values to add user details

```

munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ sudo adduser munna
info: Adding user `munna' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `munna' (1001) ...
info: Adding new user `munna' (1001) with group `munna (1001)' ...
info: Creating home directory `/home/munna' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for munna
Enter the new value, or press ENTER for the default
  Full Name []: Munna Biswas
  Room Number []: 501-A
  Work Phone []: 01615102299
  Home Phone []: 01767584868
  Other []: 01971721256
Is the information correct? [Y/n] Y
info: Adding new user `munna' to supplemental / extra groups `users' ...
info: Adding user `munna' to group `users' ...
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$

```

**Discussion:** I have successfully created a new user account.

### 3. Understanding Shell and Bash:

- ✓ We Research from google to know about the Shell and Bash. We also identify the differences between shell and bash.

### 4. Basic Shell Programming:

- ✓ Here is the basic implementation of shell programming. We create 2 variables and then find the sum of these two variables.

**Result:**

```

munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ number1=20
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ number2=30
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ sum=$((number1+number2))
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ echo "Sum = $sum"
Sum = 50
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$

```

- ✓ **Step-1:** Here I am using touch to create an empty file. (.sh is the type of the file)
- ✓ **Step-2:** We use ls to check if the file is created successfully or not.

- ✓ **Step-1:** Use nano to go to in text editor.
- ✓ **Step-3:** chmod +x to access the nano file, and
- ✓ **Step-4:** ./ to show what contains in the file

## Result:

```
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ touch munna.sh
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ ls
Desktop  Documents  Downloads  munna.sh  Music  Pictures  Public  snap  Templates  Videos
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ nano munna.sh
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ chmod +x munna.sh
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$ ./munna.sh
Hello Shell Programming
munna-biswas@munna-biswas-HP-Pavilion-Laptop-15-eg1xxx:~$
```