

## **TASK 1: Linux Environment Setup & Exploration**

### **1. Objective**

The objective of this task is to install and explore the Linux operating system, understand basic Linux commands, and become familiar with the Linux terminal environment.

### **2. System Requirements**

- Operating System: Windows 10 / 11
- Linux Distribution: **Ubuntu 22.04 LTS**
- Installation Method:
  - Virtual Machine (VirtualBox) **OR**
  - Windows Subsystem for Linux (WSL)

### **3. Linux Installation Process**

**Method Used: Windows Subsystem for Linux (WSL)**

**Steps Followed:**

1. Open **Command Prompt / PowerShell** as Administrator
2. Run the command:

wsl –install

1. Restart the system after installation
2. Set username and password for Linux
3. Ubuntu Linux terminal opened successfully

 Linux environment installed successfully.

### **4. Basic Linux Commands Practiced**

#### **Command Description**

`pwd`

Shows present working directory

```
What kind of permission is denied?  
ls: examples:  
Permission denied.  
Screenshots of terminal usage  
Summary markdown document  
Final Outcome:  
Intern becomes confident navigating and managing Linux systems.
```

Task Submission Guidelines

Time Window:

You can complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10:00 PM

Self-Research Allowed:

You are free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

Debug Yourself:

Try to resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

No Paid Tools:

If the task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

GitHub Submission:

Create a new GitHub repository for each task.

Add everything you used for the task - code, datasets, screenshots (if any), and a short README.md explaining what you did.

Submit Here:

After completing the task, paste your GitHub repo link and submit it using the link below:

```
[Submission Link] romioontrack@Shashi:~/test$ rm file.txt
romioontrack@Shashi:~$ rmdir ..
rmdir: missing operand
Try 'rmdir --help' for more information.
romioontrack@Shashi:~$ rmdir test
romioontrack@Shashi:~$ whoami
romioontrack
romioontrack@Shashi:~$ uname -a
Linux Shashi 6.6.87.2-microsoft-standard-WSL2 #1 SMP PREEMPT_DYNAMIC Thu Jun 5 18:30:46 UTC 2025 x86_64 x86_64 x86_64
romioontrack@Shashi:~$
```



Search



```
romioontrack@Shashi:~/test
Provisioning the new WSL instance Ubuntu
This might take a while...
Create a default Unix user account: romioontrack
New password:
Retype new password:
passwd: password updated successfully
To run a command as administrator (user "root"), use "sudo <com
See "man sudo_root" for details.

romioontrack@Shashi:~$ sudo_root
sudo_root: command not found
romioontrack@Shashi:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 24.04.3 LTS
Release:        24.04
Codename:       noble
romioontrack@Shashi:~$ pwd
/home/romioontrack
romioontrack@Shashi:~$ ls
romioontrack@Shashi:~$ ls -l
total 0
romioontrack@Shashi:~$ mkdir test
romioontrack@Shashi:~$ ls
test
romioontrack@Shashi:~$ ls -l
total 4
drwxr-xr-x 2 romioontrack romioontrack 4096 Jan 15 21:40 test
romioontrack@Shashi:~$ cd test
romioontrack@Shashi:~/test$ touch file.txt
romioontrack@Shashi:~/test$ cat file.txt
romioontrack@Shashi:~/test$
```

## **5. Directory & File Operations**

- Created directories using mkdir
- Navigated directories using cd
- Created files using touch
- Viewed file content using cat
- Deleted files and folders using rm and rmdir

## **6. System Information Commands**

- Checked Linux version using:
- lsb\_release -a
- Checked kernel details using:

`uname -a`

## **7. Learning Outcomes**

- Understood Linux environment and terminal usage
- Learned basic Linux commands
- Gained confidence in navigating directories and files
- Learned how Linux differs from Windows OS

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## **8. Conclusion**

Linux environment was successfully installed and explored. Basic commands were executed without errors, and essential Linux concepts were understood. This task helped build a strong foundation for working with Linux-based systems.