WSL ASSIGNMENT

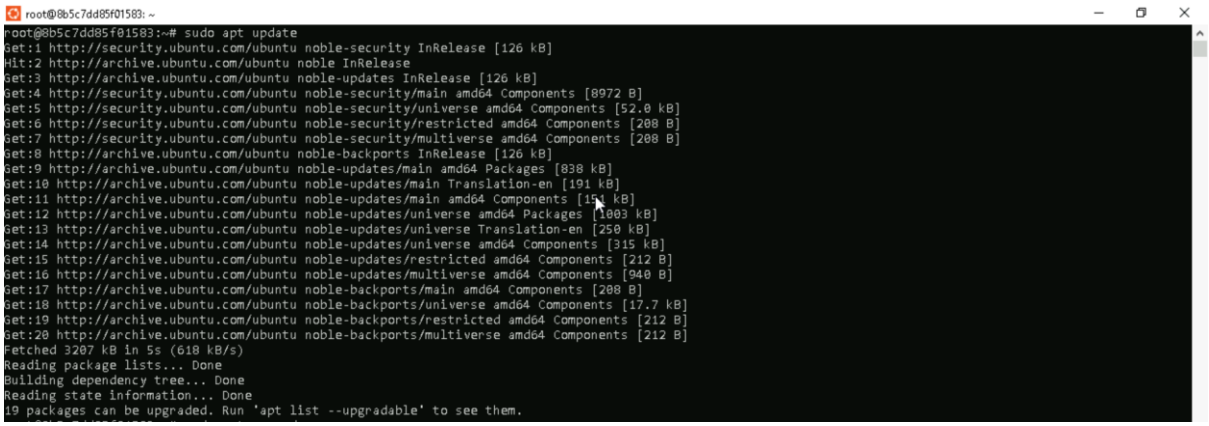
Download Linux

Step 1:To Display available list use command “wsl –list -online”. Instal the default ubuntu 20.04 distro.

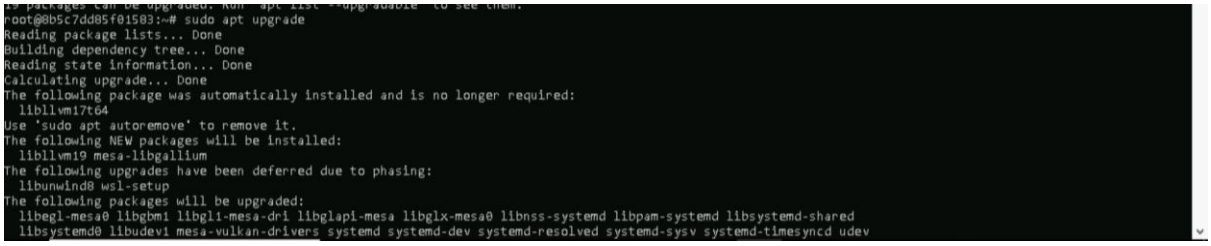
Step 2: Install a specific distro by name, such as Debian.

Launch & Update Linux

Step 1: “sudo apt update” is used to update the package list.



Step 2: “sudo apt upgrade” is used to upgrade the installed packages.



Step 3: Install the WSL Kernel .

Step 4: Update the WSL Kernel .

Step 5: Lists all installed WSL distributions with their status and version details.

Switch Between WSL1 and WSL2

```
PS C:\Users\Administrator> wsl --set-version Ubuntu 1
Conversion in progress, this may take a few minutes.
The distribution is already the requested version.
Error code: Wsl/Service/WSL_E_VM_MODE_INVALID_STATE
PS C:\Users\Administrator> wsl --set-version Ubuntu 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
Conversion in progress, this may take a few minutes.
The operation completed successfully.
```

Set a Default Linux Distribution

Step 1: It shows all the installed WSL distributions

```
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
docker-desktop (Default)
Ubuntu
```

Step 2: Sets the specified WSL distribution as the default for future wsl commands.

```
PS C:\Users\Administrator> wsl --setdefault Ubuntu
The operation completed successfully.
```

Run Linux as a Specific User

Step 1: Run the WSL distribution with specified user “pradhi”.

```
PS C:\Users\Administrator> wsl --user pradhi
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 5.15.167.4-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Tue Feb  4 09:22:00 UTC 2025

  System load:  0.09               Processes:             53
  Usage of /:   0.2% of 1006.85GB  Users logged in:       0
  Memory usage: 4%                 IPv4 address for eth0: 172.28.20.19
  Swap usage:   0%                 IPv4 address for eth0: 192.168.1.100

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

This message is shown once a day. To disable it please create the
/home/pradhi/.hushlogin file.
pradhi@8b5c7dd85f01583: /mnt/c/Users/Administrator $
```

Step 2: Creates a new directory named “backup” on the D: drive

```
PS C:\Users\Administrator> mkdir D:\backup


    Directory: D:\


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        04-02-2025     15:22                backup
```

Step 3: Exports the Ubuntu WSL distribution to a tar file named ubuntu.tar and saves it to the D:\backup directory.

```
PS C:\Users\Administrator> wsl --export Ubuntu D:\backup\ubuntu.tar
Export in progress, this may take a few minutes.
The operation completed successfully.
```

Step 4: The command wsl --unregister ubuntu removes the Ubuntu WSL distribution and deletes its data from the system.

```
PS C:\Users\Administrator> wsl --unregister Ubuntu
Unregistering.
The operation completed successfully.
```

Step 5: Creates a new directory named "wsl" on the D: drive

```
PS C:\Users\Administrator> mkdir D:\wsl


    Directory: D:\


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        04-02-2025     15:10                wsl
```

Step 6: Imports the Ubuntu WSL distribution from the ubuntu.tar file located in the D:\backup directory and installs it to the D:\wsl directory.

```
PS C:\Users\Administrator> wsl --import Ubuntu D:\wsl\ D:\backup\ubuntu.tar
Import in progress, this may take a few minutes.
The operation completed successfully.
PS C:\Users\Administrator>
```

Step 7: Sets the default user for the Ubuntu WSL distribution to <yourname>.

```
PS C:\Users\Administrator> ubuntu config --default-user pradhi
```

Step 8: The command sudo vi /etc/wsl.conf opens the WSL configuration file for editing.

```
pradhi@8b5c7dd85f01583:~$ sudo vi /etc/wsl.conf
[sudo] password for pradhi:
pradhi@8b5c7dd85f01583:~$
```

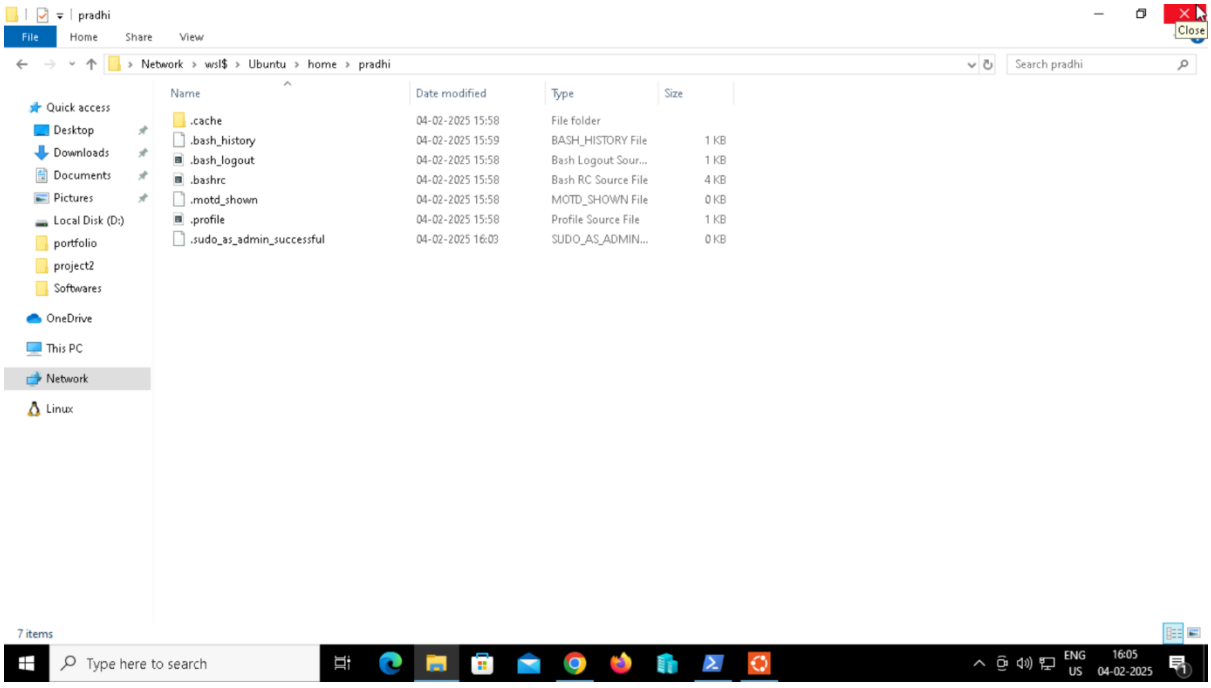
Edit file:

```
pradhi@8b5c7dd85f01583: ~
[boot]
systemd=true
[user]
default=pradhi
```

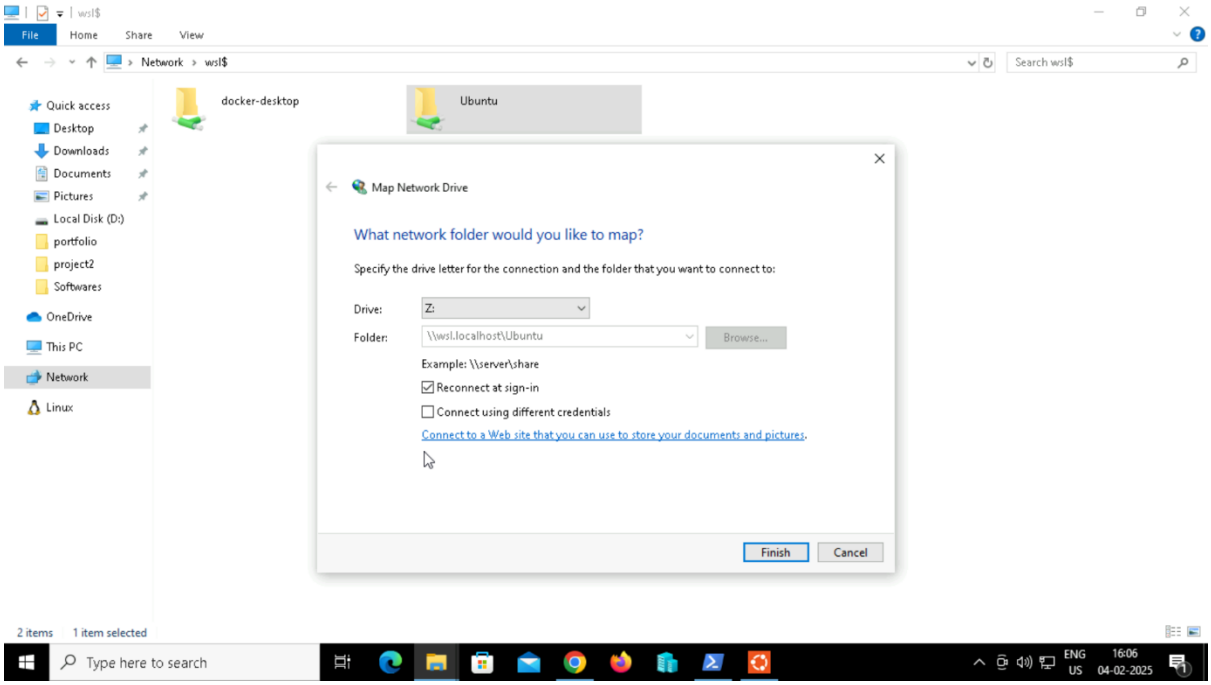
Step 9: Stops the running Ubuntu WSL distribution

```
PS C:\Users\Administrator> wsl --terminate Ubuntu
The operation completed successfully.
PS C:\Users\Administrator>
```

Access Linux Files from Windows



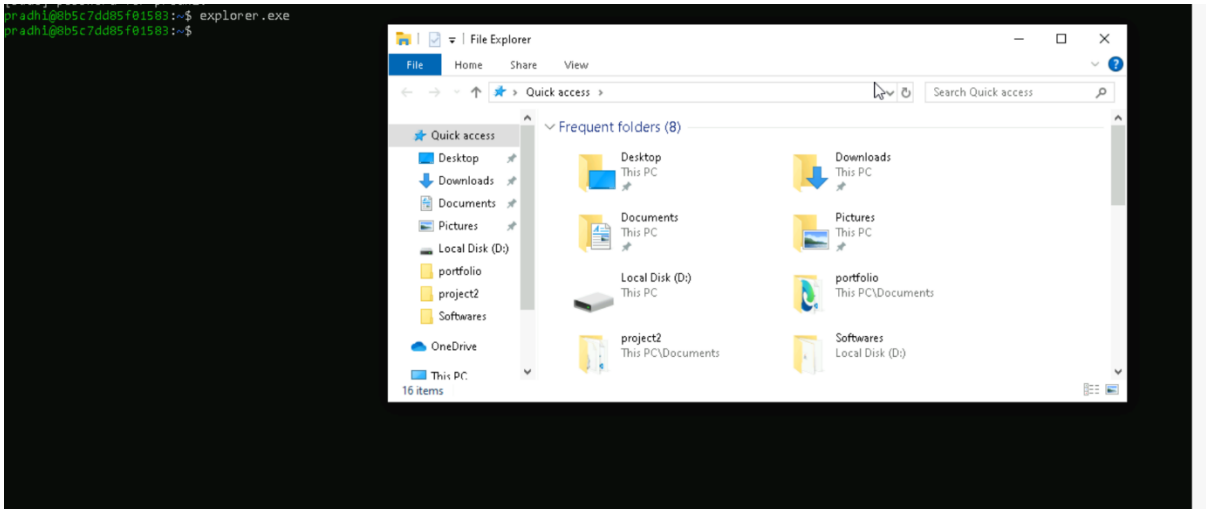
Map a Network Drive



Accessing Windows Files from Linux

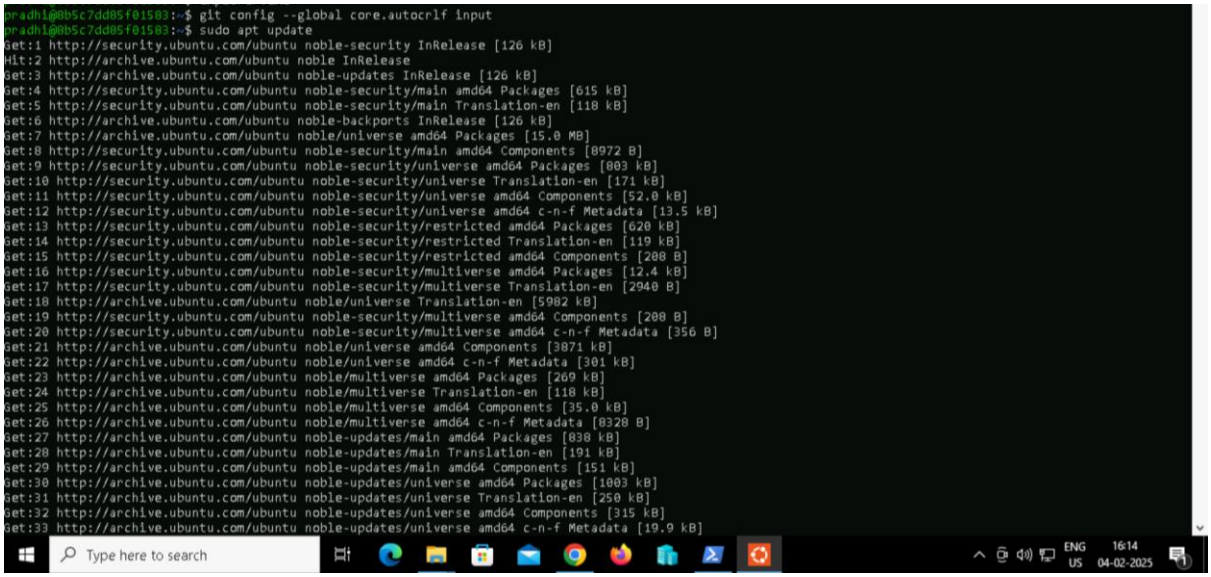
Run Linux Commands from Windows

Run Windows Applications from Linux

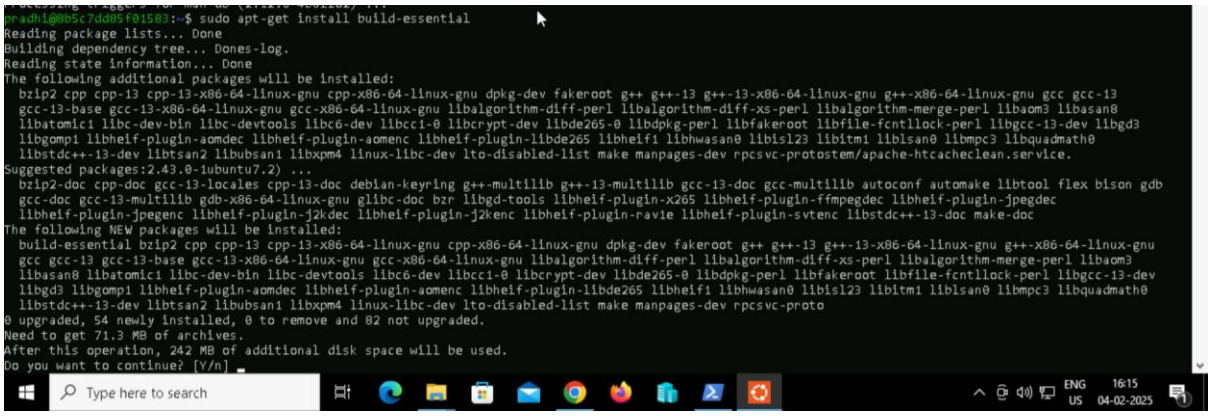


Install Applications

Step 1: It ensures Git converts CRLF to LF on commit.

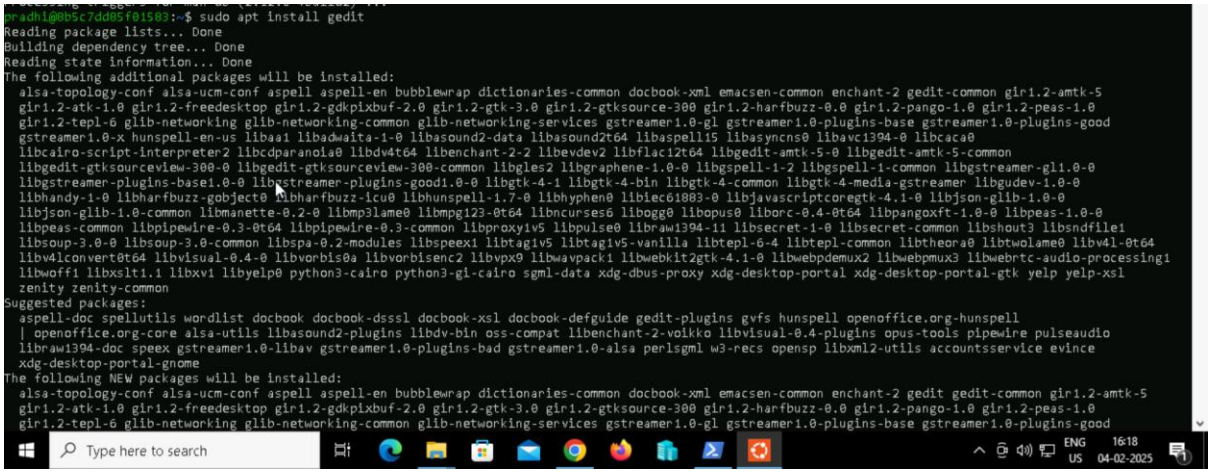


Step 2: This command installs essential packages for building software on Ubuntu, including compilers and libraries.

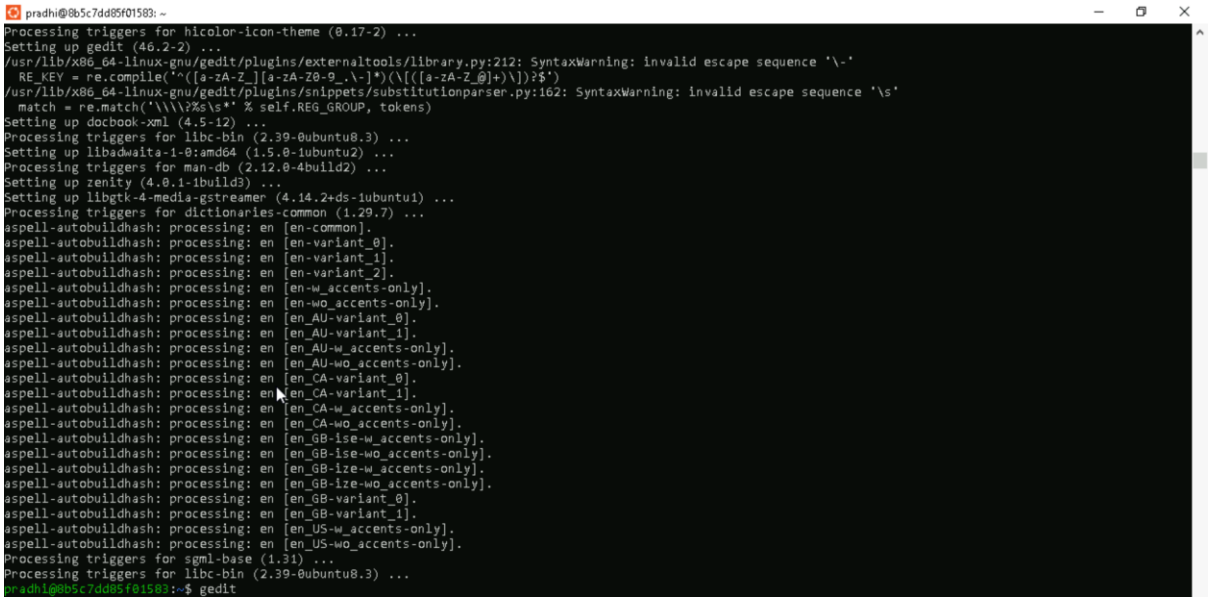


Installing Graphical Linux Applications

Step 1: It installs the Gedit text editor on Ubuntu.



Step 2: The command gedit opens the Gedit text editor in Ubuntu.



Gedit: