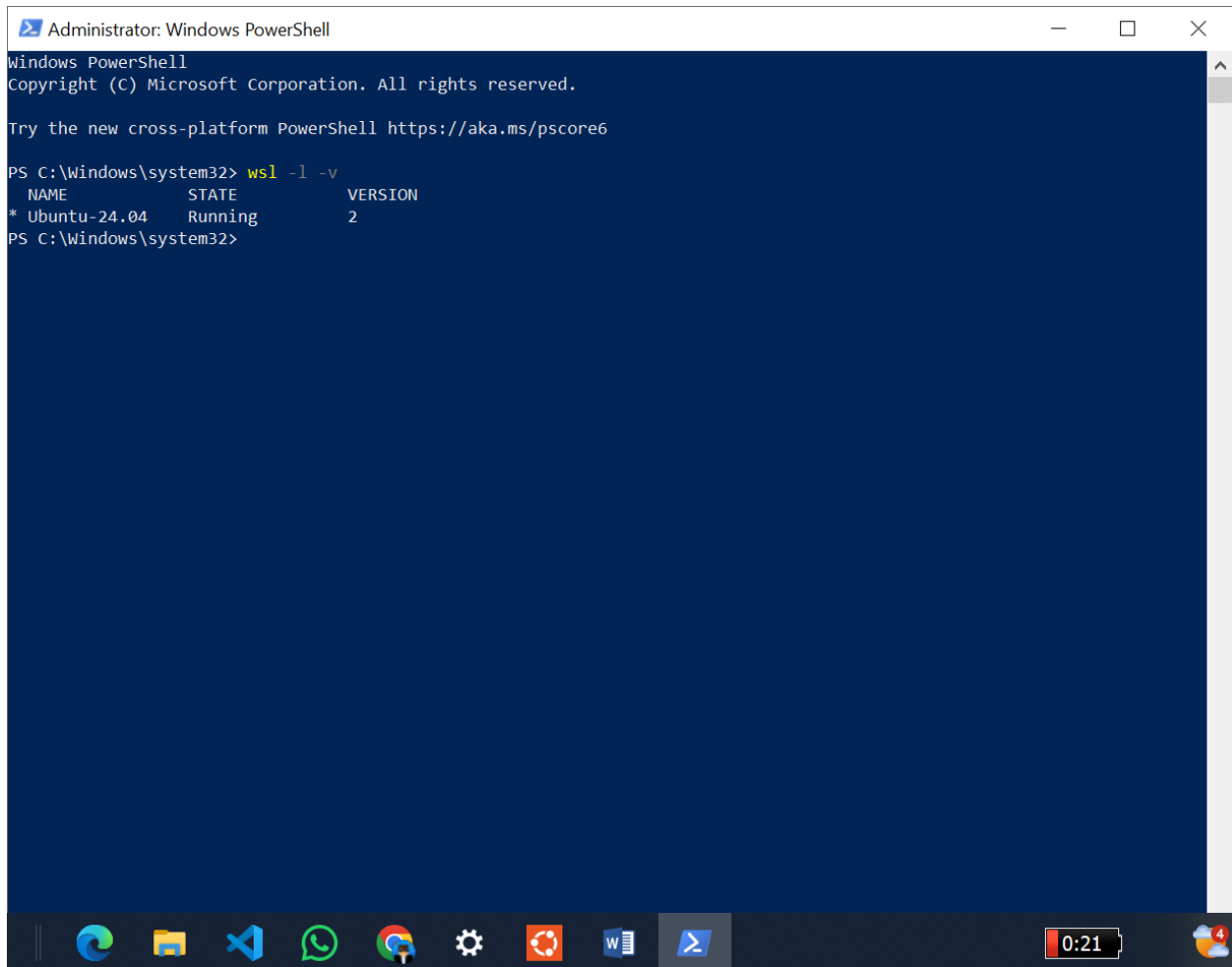


## **Lab Activities Task 01:**

**Installing WSL2 on Windows Step 1: Open PowerShell as Administrator. Step 2: Run command to enable WSL and Virtual Machine Platform: `wsl.exe --install -d Ubuntu-24.04`**

A screenshot of a Windows PowerShell window running as Administrator. The window title is "Administrator: Windows PowerShell". The text inside shows the PowerShell version (7.4.0) and copyright information. A command `wsl -l -v` has been executed, resulting in a table showing the status of installed WSL distributions. The table has three columns: NAME, STATE, and VERSION. One distribution, "Ubuntu-24.04", is listed with a state of "Running" and version "2". The Windows taskbar is visible at the bottom with various application icons and a system clock showing 0:21.

```
Administrator: Windows PowerShell
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> wsl -l -v
NAME                STATE              VERSION
* Ubuntu-24.04      Running            2
PS C:\Windows\system32>
```

## **Remarks:**

WSL2 was installed on Windows and Ubuntu 24.04 was configured successfully. The required features (WSL and Virtual Machine Platform) were enabled through PowerShell.

## **Task 02:**

**Verifying setup on Windows**

**Step 1: Open Ubuntu 24.04 in Windows terminal or Ubuntu shell directly**

**Step 2: Create new user and password**

**Step 3: Run the following commands `sudo apt update` , `sudo apt upgrade`.**

```

ayeza@Ayeza: ~
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

ayeza@Ayeza:~$ sudo apt update
[sudo] password for ayeza:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1415 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.3 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [15.3 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1485 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [377 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.1 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7056 B]
Get:18 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [19.2 kB]
Get:19 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:20 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 3979 kB in 12s (322 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
2 packages can be upgraded. Run 'apt list --upgradable' to see them.
ayeza@Ayeza:~$
```

```

ayeza@Ayeza: ~
Get:8 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [15.3 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1485 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [377 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.1 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7056 B]
Get:18 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [19.2 kB]
Get:19 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:20 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 3979 kB in 12s (322 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
2 packages can be upgraded. Run 'apt list --upgradable' to see them.
ayeza@Ayeza:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
The following upgrades have been deferred due to phasing:
  landscape-client landscape-common
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
ayeza@Ayeza:~$
```

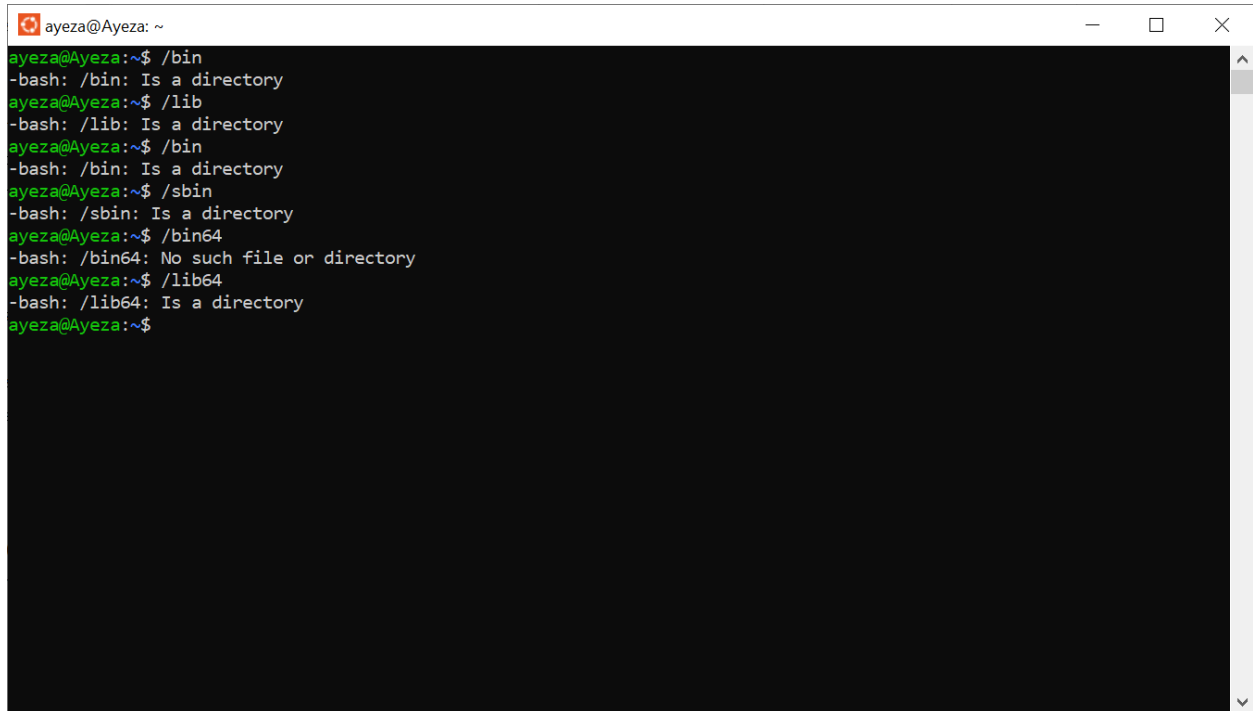
## Remarks:

The Ubuntu shell was launched, a new user was created, and the system was updated and upgraded using `apt`. This verified that the setup was working properly.

### **Task 03:**

#### **Linux filesystem and directory structure**

##### **Step 1: Explore Linux filesystem and basic linux files.**

A terminal window titled 'ayeza@Ayeza: ~' with standard window controls. The terminal shows a series of commands and their outputs. The user enters '/bin', and the prompt changes to '-bash: /bin: Is a directory'. This pattern repeats for '/lib' and '/sbin'. For '/bin64', the output is 'No such file or directory'. For '/lib64', the output is 'Is a directory'. The terminal text is as follows:

```
ayeza@Ayeza:~$ /bin
-bash: /bin: Is a directory
ayeza@Ayeza:~$ /lib
-bash: /lib: Is a directory
ayeza@Ayeza:~$ /bin
-bash: /bin: Is a directory
ayeza@Ayeza:~$ /sbin
-bash: /sbin: Is a directory
ayeza@Ayeza:~$ /bin64
-bash: /bin64: No such file or directory
ayeza@Ayeza:~$ /lib64
-bash: /lib64: Is a directory
ayeza@Ayeza:~$
```

##### **Step 2: Explore how Ubuntu (Linux) can access Windows file system under /mnt/c/.**

```
ayez@Ayeza: /mnt/c
ayez@Ayeza:~$ cd /mnt/c
ayez@Ayeza:/mnt/c$ ls
ls: cannot access 'hiberfil.sys': Permission denied
ls: cannot access 'swapfile.sys': Permission denied
$Recycle.Bin      Ints      'Program Files (x86)' 'System Volume Information' swapfile.sys
'$WinREAgent'     LABAT     ProgramData         Users
Config.Msi        MSOCache  Recovery            Windows
'Documents and Settings' PerfLogs  SQL2022             hiberfil.sys
DumpStack.log.tmp 'Program Files' SkSetup             inetpub
ayez@Ayeza:/mnt/c$
```

### Step 3: Practice creating files in Windows and accessing them in Ubuntu.

```
ayez@Ayeza: /mnt/c
ayez@Ayeza:~$ cd /mnt/c
ayez@Ayeza:/mnt/c$ ls
ls: cannot access 'hiberfil.sys': Permission denied
ls: cannot access 'swapfile.sys': Permission denied
$Recycle.Bin      Ints      'Program Files (x86)' 'System Volume Information' swapfile.sys
'$WinREAgent'     LABAT     ProgramData         Users
Config.Msi        MSOCache  Recovery            Windows
'Documents and Settings' PerfLogs  SQL2022             hiberfil.sys
DumpStack.log.tmp 'Program Files' SkSetup             inetpub
ayez@Ayeza:/mnt/c$ cd /mnt/c/Users/Ayeza/Desktop
-bash: cd: /mnt/c/Users/Ayeza/Desktop: No such file or directory
ayez@Ayeza:/mnt/c$ ls
ls: cannot access 'hiberfil.sys': Permission denied
ls: cannot access 'swapfile.sys': Permission denied
$Recycle.Bin      Ints      'Program Files (x86)' 'System Volume Information' swapfile.sys
'$WinREAgent'     LABAT     ProgramData         Users
Config.Msi        MSOCache  Recovery            Windows
'Documents and Settings' PerfLogs  SQL2022             hiberfil.sys
DumpStack.log.tmp 'Program Files' SkSetup             inetpub
ayez@Ayeza:/mnt/c$
```

### Remarks:

The Linux filesystem and directory structure were explored, along with access to Windows files under `/mnt/c/`. File creation was practiced in Windows and successfully accessed and modified in Ubuntu.