Practical:01

Aim: Installation of Java on Unix/Linux Machine (Without VirtualBox)

This guide uses WSL (Windows Subsystem for Linux) to simulate a Linux environment directly on Windows.

Step 1: Enable WSL

1. Open PowerShell as Administrator

2. Run the following command:

wsl --install

3. Restart your computer when prompted.

4. After restart, choose Ubuntu or install it from the Microsoft Store.

Step 2: Open Ubuntu (WSL)- Search for 'Ubuntu' in Start Menu and open it.- It will initialize and ask for a username and password.

Step 3: Update the Package List

Run the following command:

sudo apt update

Step 4: Install Java (OpenJDK 8 or 11)- For Java 8:

sudo apt install openjdk-8-jdk -y- For Java 11:

sudo apt install openjdk-11-jdk -y

Step 5: Verify Java Installation

Run:

java -version Expected

output:

openjdk version "1.8.0_xxx" ...

Step 6: Set JAVA_HOME Environment Variable (Optional)

1. Open .bashrc file:

nano ~/.bashrc

2. Add the following lines at the end:

export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64

export PATH=$JAVA_HOME/bin:$PATH

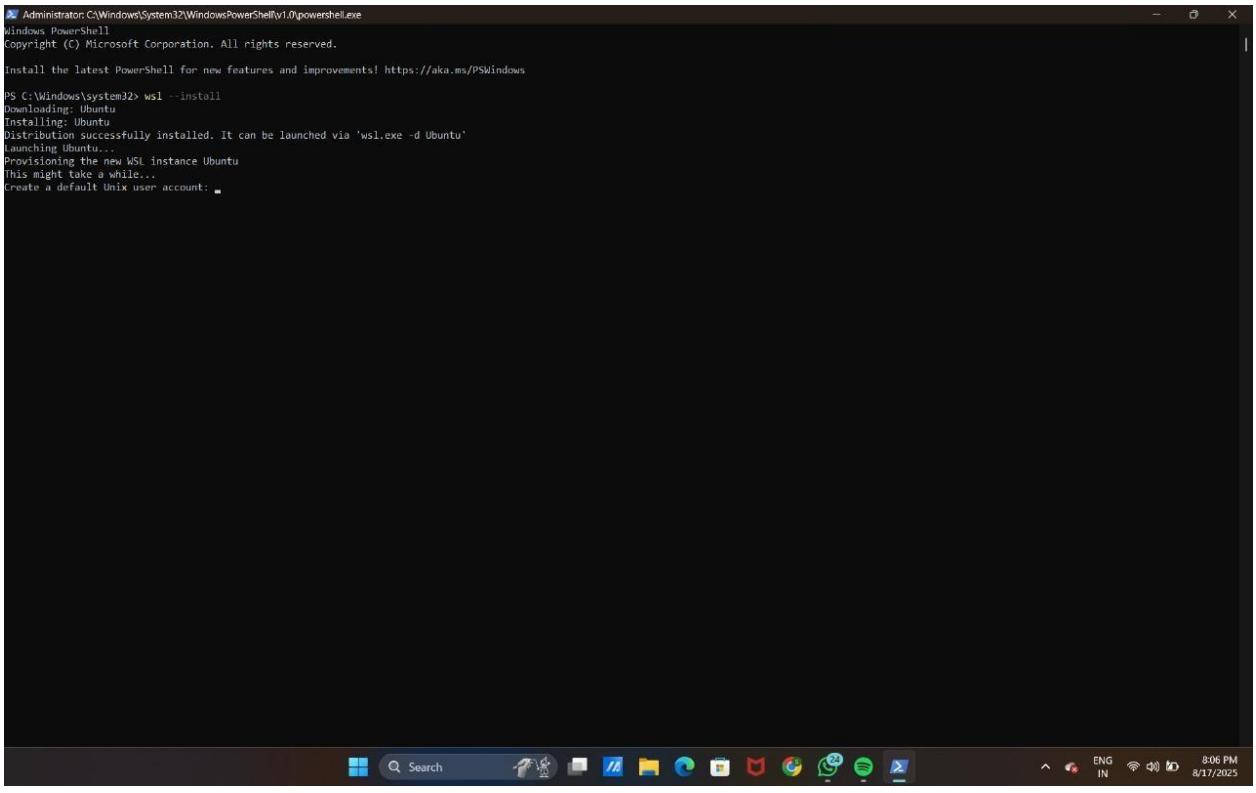
3. Save and exit (Ctrl+X, then Y, then Enter)

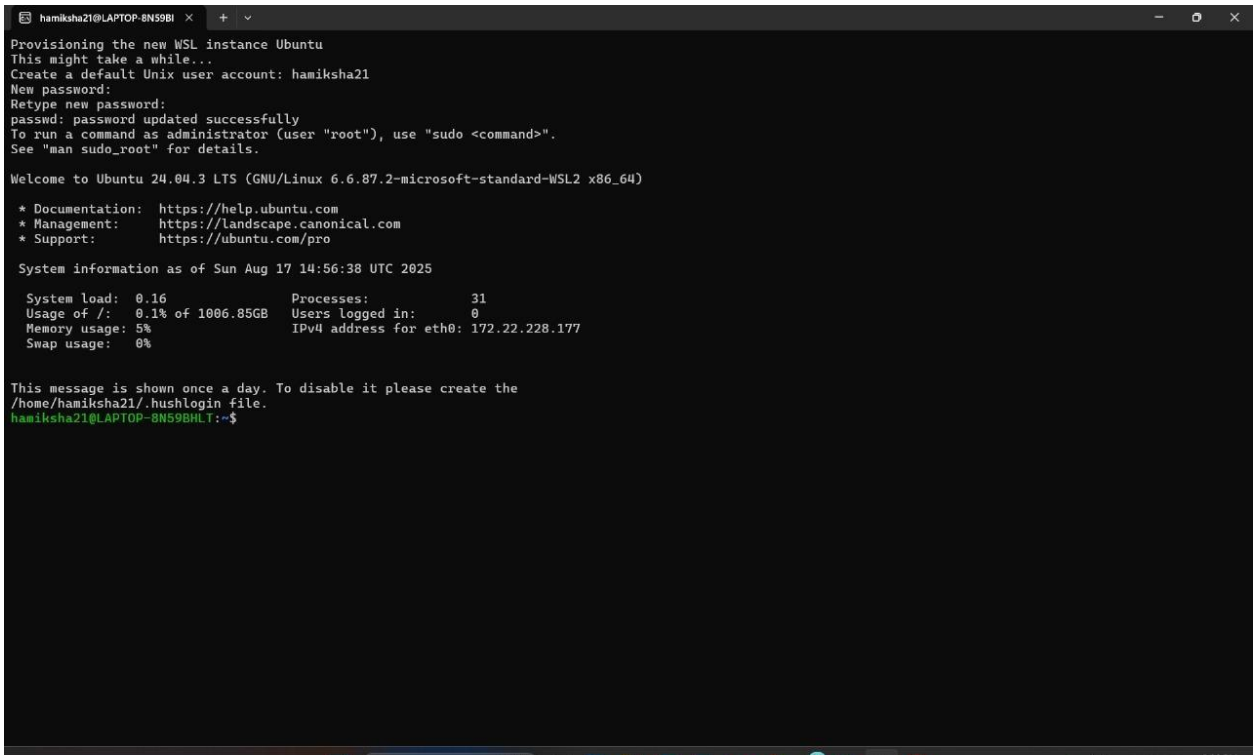
4. Reload bashrc: source ~/.bashrc

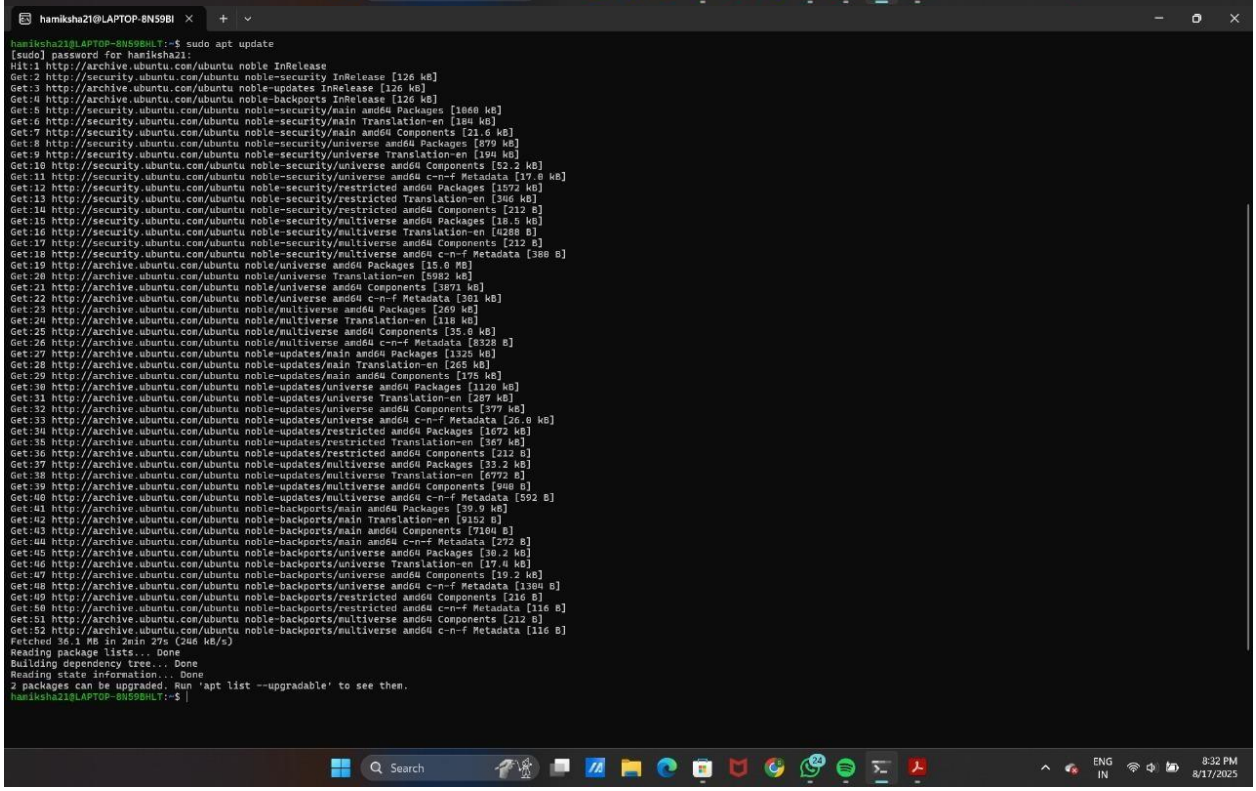
5. Verify JAVA_HOME is set:

echo $JAVA_HOME

You now have Java installed on a Linux system simulated within Windows without using VirtualBox




hamiksha21@LAPTOP-8N59BI
Provisioning the new WSL instance Ubuntu
This might take a while...
Create a default Unix user account: hamiksha21
New password:
Retype new password:
passwd: password updated successfully
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.6.87.2-microsoft-standard-WSL2 x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
System information as of Sun Aug 17 14:56:38 UTC 2025
System load: 0.16 Processes: 31
Usage of /: 0.1% of 1006.85GB Users logged in: 0
Memory usage: 5% IPv4 address for eth0: 172.22.228.177
Swap usage: 0%
This message is shown once a day. To disable it please create the
/home/hamiksha21/.hushlogin file.
hamiksha21@LAPTOP-8N59BHLT:~$


hamiksha21@LAPTOP-8N59BI
hamiksha21@LAPTOP-8N59BHLT:~$ sudo apt update
[sudo] password for hamiksha21:
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 Packages [1860 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [184 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [879 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [194 kB]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [17.0 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [1572 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [346 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:15 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [18.5 kB]
Get:16 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [4288 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [380 B]
Get:19 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:20 http://archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:21 http://archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:22 http://archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:23 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:24 http://archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
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Get:26 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:27 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1325 kB]
Get:28 http://archive.ubuntu.com/ubuntu noble-updates/main Translation-en [265 kB]
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Get:31 http://archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [287 kB]
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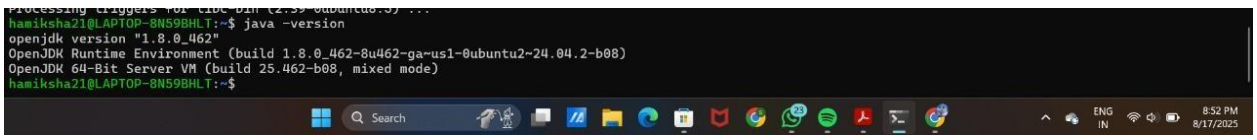
Get:33 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [26.0 kB]
Get:34 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [1672 kB]
Get:35 http://archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [367 kB]
Get:36 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:37 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [33.2 kB]
Get:38 http://archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [6772 B]
Get:39 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:40 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [592 B]
Get:41 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [39.9 kB]
Get:42 http://archive.ubuntu.com/ubuntu noble-backports/main Translation-en [9152 B]
Get:43 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7104 B]
Get:44 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [272 B]
Get:45 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [30.2 kB]
Get:46 http://archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [17.4 kB]
Get:47 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [19.2 kB]
Get:48 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1384 B]
Get:49 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:50 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:51 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:52 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Fetched 36.1 MB in 2min 27s (246 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.
hamiksha21@LAPTOP-8N59BHLT:~$


hamiksha21@LAPTOP-8N59BHLT:~$ java -version
openjdk version "1.8.0_462"
OpenJDK Runtime Environment (build 1.8.0_462-8u462-ga~us1~0ubuntu2~24.04.2-b08)
OpenJDK 64-Bit Server VM (build 25.462-b08, mixed mode)
hamiksha21@LAPTOP-8N59BHLT:~$