

# Practical: 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)

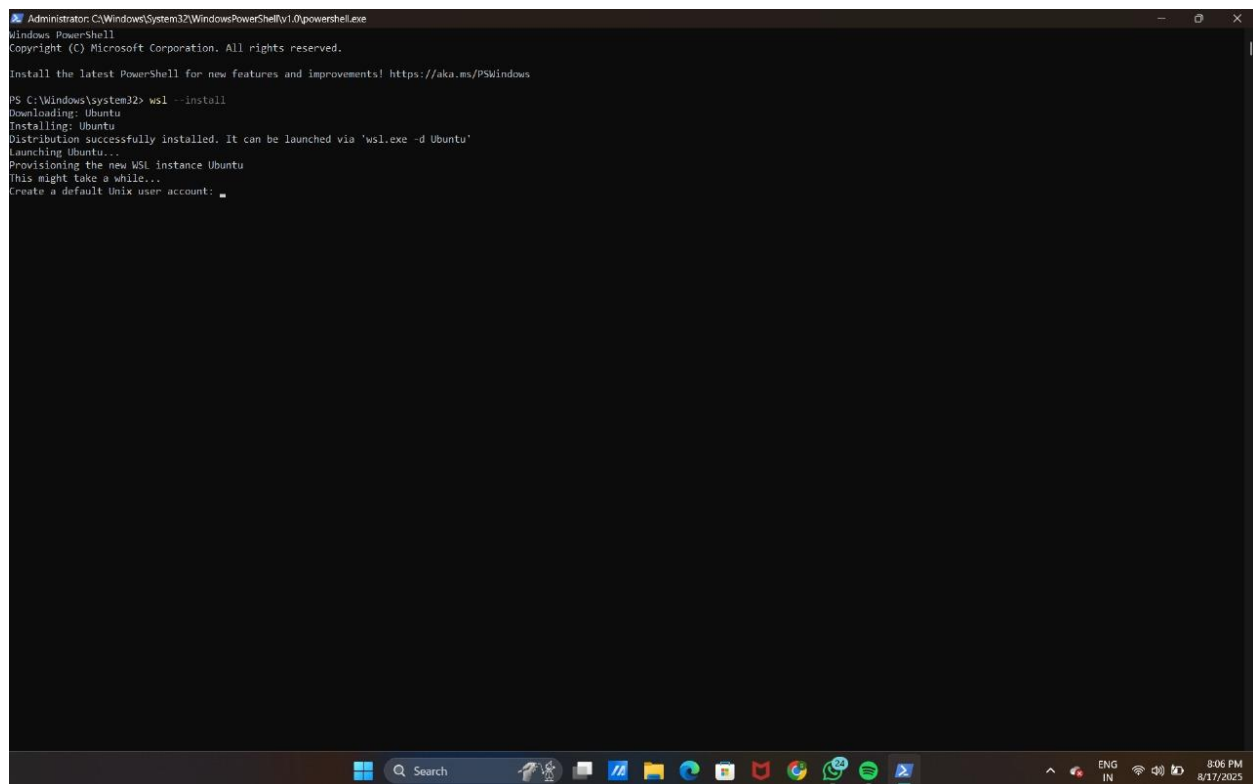
4. Reload bashrc:

```
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



```
Administrator: C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Windows\system32> wsl --install
Downloading: Ubuntu
Installing: Ubuntu
Distribution successfully installed. It can be launched via 'wsl.exe -d Ubuntu'
Launching Ubuntu...
Provisioning the new WSL instance Ubuntu
This might take a while...
Create a default Unix user account: 
```

```
hamiksha21@LAPTOP-8N59BHLT:~$  
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-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 [1866 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 [394 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 [17.8 kB]  
Get:12 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [1872 kB]  
Get:13 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [366 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 [18.0 kB]  
Get:16 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [6288 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 [388 B]  
Get:19 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [18.0 kB]  
Get:20 http://archive.ubuntu.com/ubuntu noble/universe amd64 Components [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]  
Get:25 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]  
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]  
Get:29 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [1728 kB]  
Get:30 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1120 kB]  
Get:31 http://archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [287 kB]  
Get:32 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [377 kB]  
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 [567 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 [946 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 [9182 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 [1304 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:~$
```

```
Processing triggers for libc-bin (2.39-0ubuntu8.9) ...
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:~$
```

