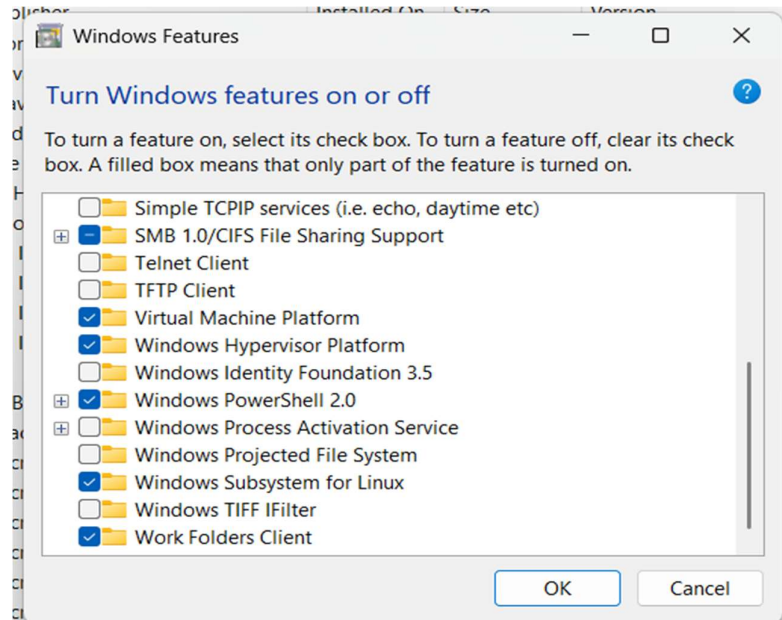


AIM: Installation of Java on Unix/Linux Machine (Without Virtual Box)

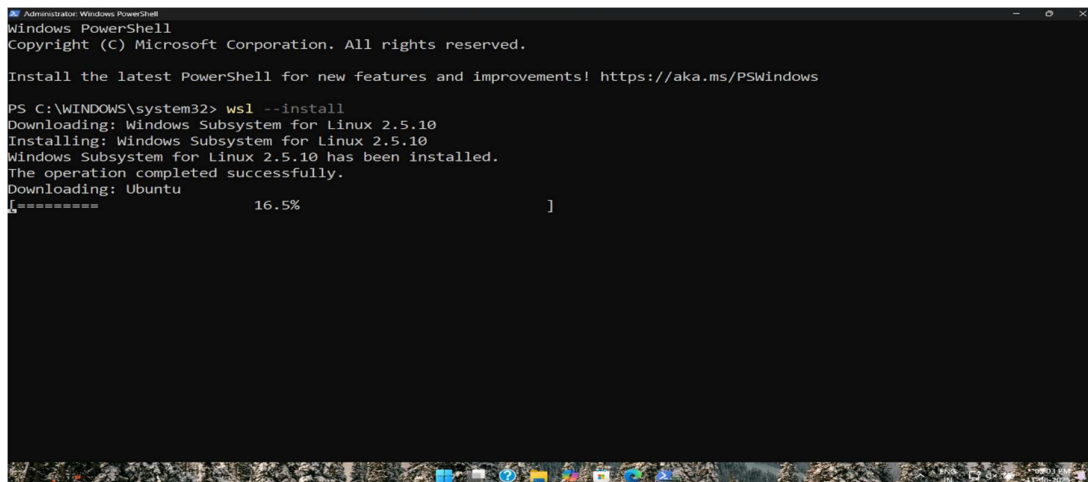
Step 1:

Enable WSL (Windows Sub System for Linux) from Control Pannel



Step 2: Power Shell (Run As Administrator)

Command: wsl --install



Step 3: Package Update

Command: sudo apt update

```
[sudo] password for taran:
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [878 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [194 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.3 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [17.0 kB]
Get:10 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:11 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [18.5 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [4288 B]
Get:13 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:14 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [388 B]
Get:15 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
38% [15 Packages 8301 kB/15.0 MB 55%] 708 kB/s 32s^
40% [15 Packages 8877 kB/15.0 MB 59%] 708 kB/s 31s^
40% [15 Packages 9184 kB/15.0 MB 61%] 708 kB/s 31s^
Get:16 http://archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
54% [15 Packages store 0 B] [16 Translation-en 5289 B/5982 kB 0%] 798 kB/s 20s^
56% [15 Packages store 0 B] [16 Translation-en 805 kB/5982 kB 13%] 798 kB/s 19s^
58% [15 Packages store 0 B] [16 Translation-en 1424 kB/5982 kB 24%] 798 kB/s 18s^
Get:17 http://archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:18 http://archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [381 kB]
Get:19 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:20 http://archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:21 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:22 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:23 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1315 kB]
Get:24 http://archive.ubuntu.com/ubuntu noble-updates/main Translation-en [264 kB]
Get:25 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [163 kB]
Get:26 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1120 kB]
86% [26 Packages 4096 B/1120 kB 0%] 1324 kB/s 3s
```

Step 4: Java Installation

Command: sudo apt install openjdk-11-jdk -y

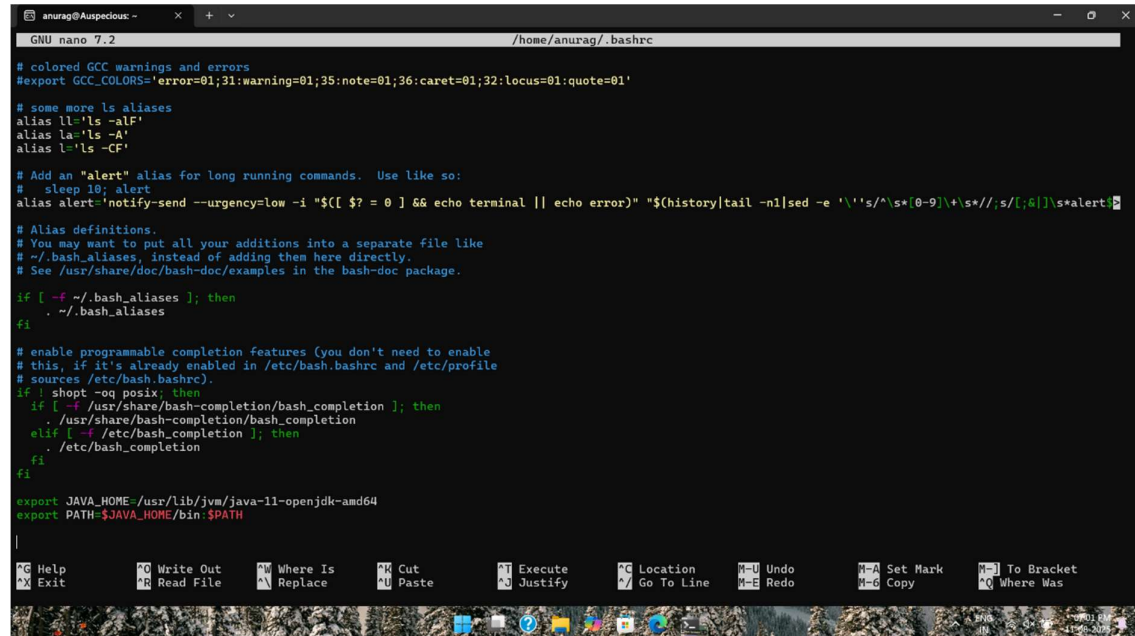
```
taran@DESKTOP-SFROC2F: ~$ sudo apt install openjdk-11-jdk -y
Adding debian:vTrus_ECC_Root_CA.pem
Adding debian:vTrus_Root_CA.pem
done.
Setting up openjdk-11-jre:amd64 (11.0.28+6-1ubuntu1-24.04.1) ...
Setting up openjdk-11-jdk-headless:amd64 (11.0.28+6-1ubuntu1-24.04.1) ...
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jar to provide /usr/bin/jar (jar) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jarsigner to provide /usr/bin/jarsigner (jarsigner) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/javac to provide /usr/bin/javac (javac) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/javadoc to provide /usr/bin/javadoc (javadoc) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/javap to provide /usr/bin/javap (javap) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jcmd to provide /usr/bin/jcmd (jcmd) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jdb to provide /usr/bin/jdb (jdb) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jdeprscan to provide /usr/bin/jdeprscan (jdeprscan) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jdeps to provide /usr/bin/jdeps (jdeps) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jfr to provide /usr/bin/jfr (jfr) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jimage to provide /usr/bin/jimage (jimage) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jinfo to provide /usr/bin/jinfo (jinfo) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jlink to provide /usr/bin/jlink (jlink) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jmap to provide /usr/bin/jmap (jmap) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jmod to provide /usr/bin/jmod (jmod) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jps to provide /usr/bin/jps (jps) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jrunscript to provide /usr/bin/jrunscript (jrunscript) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jshell to provide /usr/bin/jshell (jshell) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jstack to provide /usr/bin/jstack (jstack) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jstat to provide /usr/bin/jstat (jstat) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jstatd to provide /usr/bin/jstatd (jstatd) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/rmic to provide /usr/bin/rmic (rmic) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/serialver to provide /usr/bin/serialver (serialver) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jaotc to provide /usr/bin/jaotc (jaotc) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jhsdb to provide /usr/bin/jhsdb (jhsdb) in auto mode
Setting up openjdk-11-jdk:amd64 (11.0.28+6-1ubuntu1-24.04.1) ...
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole (jconsole) in auto mode
taran@DESKTOP-SFROC2F: ~$
```

Step 5: Verify Java Installation

Command: java -version

```
update alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jconsole to provide /usr/bin/jc
taran@DESKTOP-SFROC2F:~$ java -version
openjdk version "11.0.28" 2025-07-15
OpenJDK Runtime Environment (build 11.0.28+6-post-Ubuntu-1ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 11.0.28+6-post-Ubuntu-1ubuntu124.04.1, mixed mode, sharing)
```

Step 6: Set JAVA_HOME Environment Variable



```
anurag@Auspeious: ~
GNU nano 7.2 /home/anurag/.bashrc

# colored GCC warnings and errors
#export GCC_COLORS='error=01;31:warning=01;35:note=01;36:caret=01;32:locus=01:quote=01'

# some more ls aliases
alias ll='ls -alF'
alias la='ls -A'
alias l='ls -CF'

# Add an "alert" alias for long running commands. Use like so:
# sleep 10; alert
alias alert='notify-send --urgency=low -i "${[ $? = 0 ]} && echo terminal || echo error)" "${history|tail -n1|sed -e '\''s/^[0-9]\+\s*///;s/[;|&]\s*alert:'

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
    if [ -f /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -f /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi

export JAVA_HOME=/usr/lib/jvm/java-11-openjdk-amd64
export PATH=$JAVA_HOME/bin:$PATH

|
? Help  ? Write Out  ? Where Is  ? Cut  ? Execute  ? Location  ? Undo  ? Set Mark  ? To Bracket
? Exit  ? Read File  ? Replace  ? Paste  ? Justify  ? Go To Line  ? Redo  ? Copy  ? Where Was
```

```
taran@DESKTOP-SFROC2F:~$ nano ~/.bashrc
taran@DESKTOP-SFROC2F:~$ source ~/.bashrc
taran@DESKTOP-SFROC2F:~$ echo $JAVA_HOME
/usr/lib/jvm/java-11-openjdk-amd64
taran@DESKTOP-SFROC2F:~$ |
```