PRACTICAL NO.-1

Aim: Installation of java on Unix/Linux machine.

DESCRIPTION: -

Java is a high-level, object-oriented programming language used to develop platform-independent applications. To run Java programs on a Unix/Linux machine, we need to install the Java Development Kit (JDK), which includes the Java Runtime Environment (JRE), compiler (javac), and other necessary tools.
This practical demonstrates how to install Java on a Unix/Linux system directly (without using VirtualBox or any virtual machine).

STEPS FOR INSTALLATION: -

Step 1: Install WSL (For Windows Users Only)
If you are using Windows, open PowerShell (Admin) and run: **wsl --install**
This will install the default Ubuntu distribution on WSL. Restart your system after installation.

Step 2: Update the System Repository
After opening Linux (directly or via WSL), update repositories: **sudo apt update**

Step 3: Install Java JDK

sudo apt install openjdk-11-jdk -y

Step 4: Verify Installation
Check whether Java installed successfully: **java -version Expected output (may vary by version):**
openjdk version "11.0.x" 2025-xx-xx
OpenJDK Runtime Environment (build 11.0.x+xx)
OpenJDK 64-Bit Server VM (build 11.0.x+xx, mixed mode)

Step 5: Configure Environment Variables nano ~/.bashrc
Opens the .bashrc file in the Nano text editor. This file contains shell configuration commands that run every time you start a terminal.
Inside .bashrc, add:
export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64
export PATH=$JAVA_HOME/bin:$PATH
JAVA_HOME defines the Java installation directory path as an environment variable. PATH adds Java's bin directory, enabling you to run Java commands from anywhere.

Step 6: Apply Changes Immediately

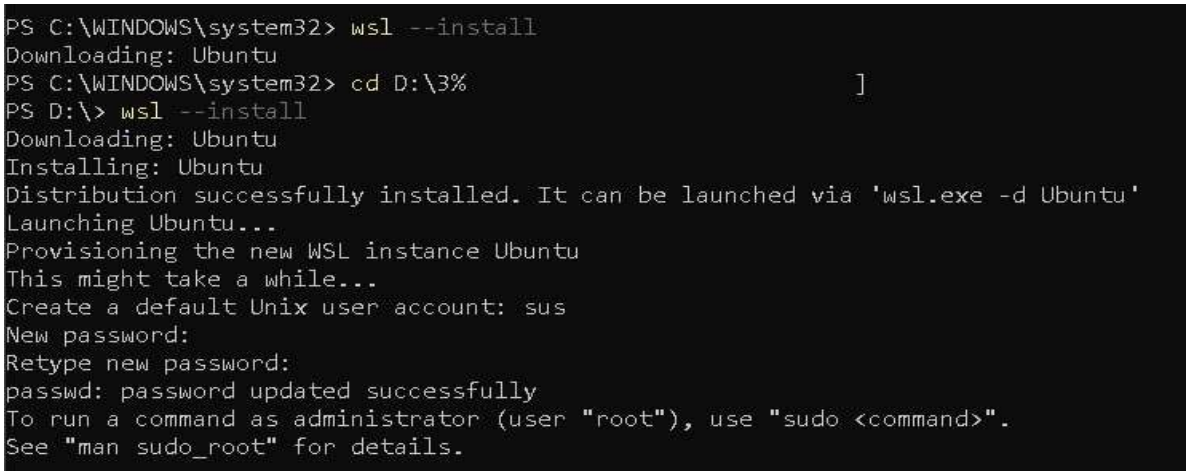
source ~/.bashrc

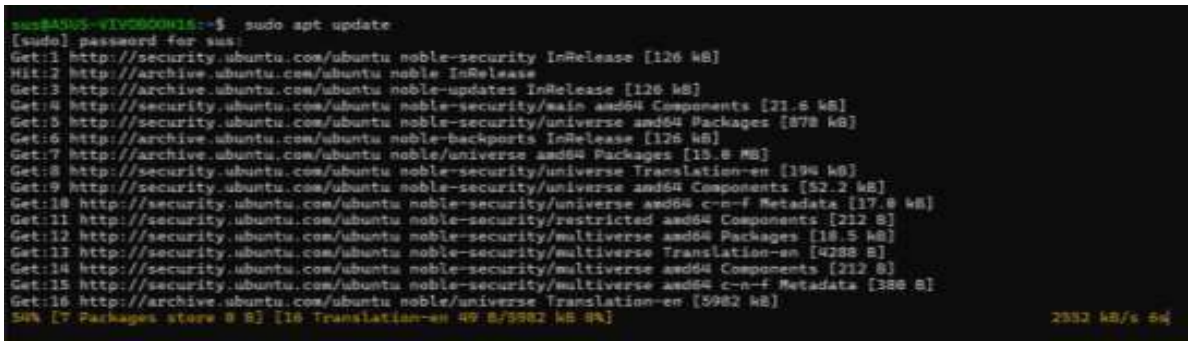
Reloads the .bashrc file so that changes to environment variables take effect immediately without restarting the terminal.

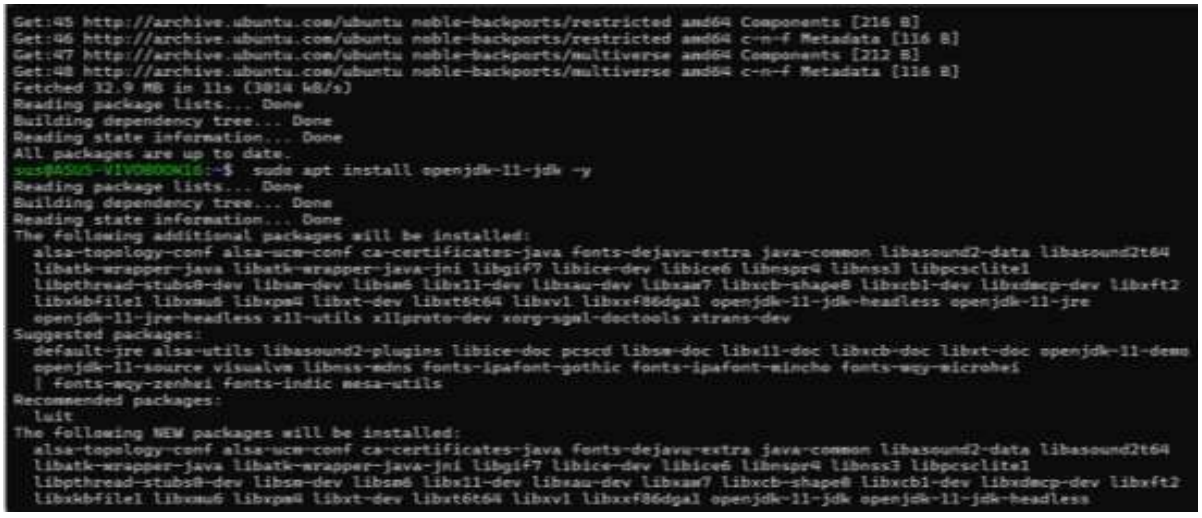
Step 7: Confirm JAVA_HOME

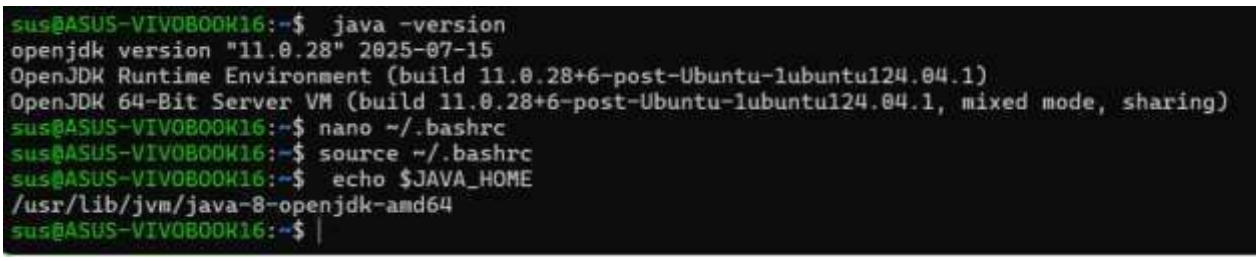
echo $JAVA_HOME

Prints the current value of the JAVA_HOME environment variable to confirm it's set correctly.









CONCLUSION: -

Java was successfully installed on a Unix/Linux system (directly or using WSL on Windows). The installation was verified by compiling and executing a sample program.