

# Installing Java and python3 by single script file....

## Problem Statement:

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[dinu@192 ~]$ #Develop a script, which will be OS independent, enabling you to install Python3 and Java Along with Java Home, with the success criteria tests to validate the installation all via the script, if it encounters any failure then it should do the needful, you are only allowed to run the script and no other commands
```

## Script:

```
#!/bin/bash

set -e

install_python_and_java() {
    echo "Checking the operating system..."
    if [ -f /etc/os-release ]; then
        . /etc/os-release
        OS=$ID
        VERSION_ID=$VERSION_ID
        echo "OS checked. Your OS is $OS"
    else
        echo "Unsupported Linux distribution"
        exit 1
    fi

    echo "Installing Python and Java..."
    case "$OS" in
        ubuntu)
            echo "Installing Python for Ubuntu..."
            sudo apt-get update
            sudo apt-get install -y python3
            echo "Python installation finished."

            echo "Installing Java for Ubuntu..."
            sudo apt-get install -y openjdk-8-jdk
            echo "Java installation finished."
            ;;
        centos|rhel)
            echo "Installing Python for CentOS/RHEL..."
            sudo yum install -y epel-release
            sudo yum install -y python3
            echo "Python installation finished."

            echo "Installing Java for CentOS/RHEL..."
            sudo yum install -y java-1.8.0-openjdk
            echo "Java installation finished."
            ;;
        *)
            echo "Unsupported Linux distribution: $OS"
            exit 1
            ;;
    esac

    export JAVA_HOME=$(dirname $(dirname $(readlink -f $(which java))))
}
```

```

echo "export JAVA_HOME=$JAVA_HOME" >> ~/.bashrc
echo 'export PATH="$JAVA_HOME/bin:$PATH"' >> ~/.bashrc
}

validate_installations() {
    echo "Validating Python and Java installations..."
    if ! command -v python3 &> /dev/null; then
        echo "Python3 installation failed"
        exit 1
    else
        echo "Python version: $(python3 --version)"
    fi

    if ! command -v java &> /dev/null; then
        echo "Java installation failed"
        exit 1
    else
        echo "Java version: $(java -version 2>&1)"
    fi

    if [[ -z "$JAVA_HOME" ]]; then
        echo "JAVA_HOME is not set"
        exit 1
    else
        echo "JAVA_HOME is set to: $JAVA_HOME"
    fi
}

main() {
    install_python_and_java
    source ~/.bashrc
    validate_installations
}

main

```

SS:

```

sh: 0: cannot open script2.sh: No such file
purushottam@purush-vm: $ sudo nano sh script2.sh
purushottam@purush-vm: $ sudo sh script2.sh
Checking the operating system...
OS checked. Your OS is ubuntu
Installing Python and Java...
Installing Python for Ubuntu...
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:4 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Fetched 229 kB in 4s (52.9 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3 is already the newest version (3.10.6-1-22.04).
python3 set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 132 not upgraded.
Python installation finished.
Installing Java for Ubuntu...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  ca-certificates-java fonts-dejavu-extra java-common libatk-wrapper-java
  libatk-wrapper-java-jni libice-dev libpthread-stubs0-dev libsm-dev
  libx11-dev libxau-dev libxcb1-dev libxdmcp-dev libxt-dev
  openjdk-8-jdk-headless openjdk-8-jre openjdk-8-jre-headless x11proto-dev
  xorg-sgml-doctools xtrans-dev
Suggested packages:
  default-jre libice-doc libsm-doc libx11-doc libxcb-doc libxt-doc
  openjdk-8-demo openjdk-8-source vtsulm fonts-manum fonts-ipafont-gothic
  fonts-ipafont-mincho fonts-wqy-microhei fonts-wqy-zenhei
  fonts-ipafont-gothic
The following NEW packages will be installed:
  ca-certificates-java fonts-dejavu-extra java-common libatk-wrapper-java
  libatk-wrapper-java-jni libice-dev libpthread-stubs0-dev libsm-dev
  libx11-dev libxau-dev libxcb1-dev libxdmcp-dev libxt-dev openjdk-8-jdk
  openjdk-8-jdk-headless openjdk-8-jre openjdk-8-jre-headless x11proto-dev
  xorg-sgml-doctools xtrans-dev

```

