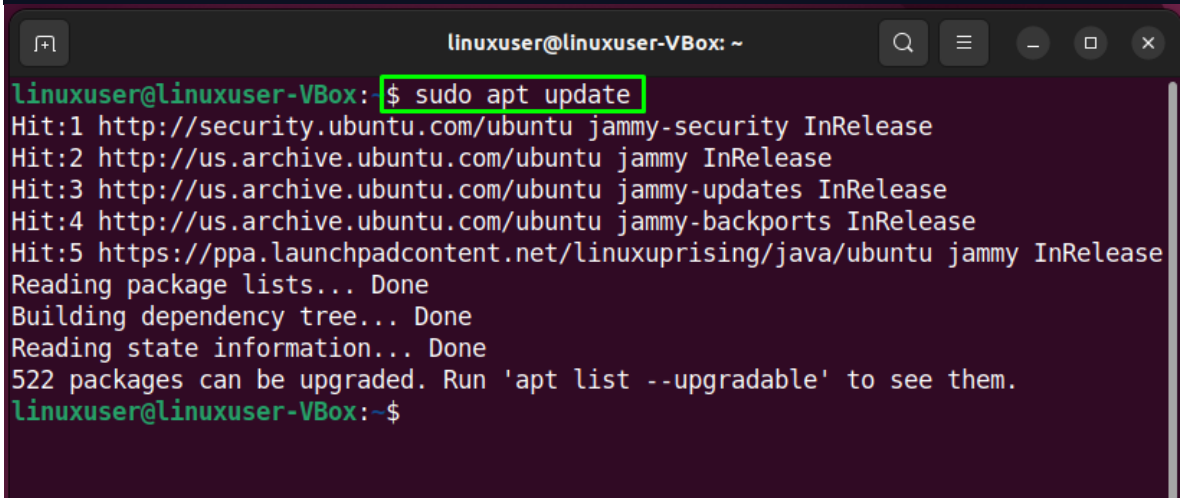
How to Install Apache Tomcat Server on Ubuntu 22.04

To install **Apache Tomcat Server** on **Ubuntu 22.04**, you must follow the below-given step-by-step instructions.

Step 1: Update system repositories

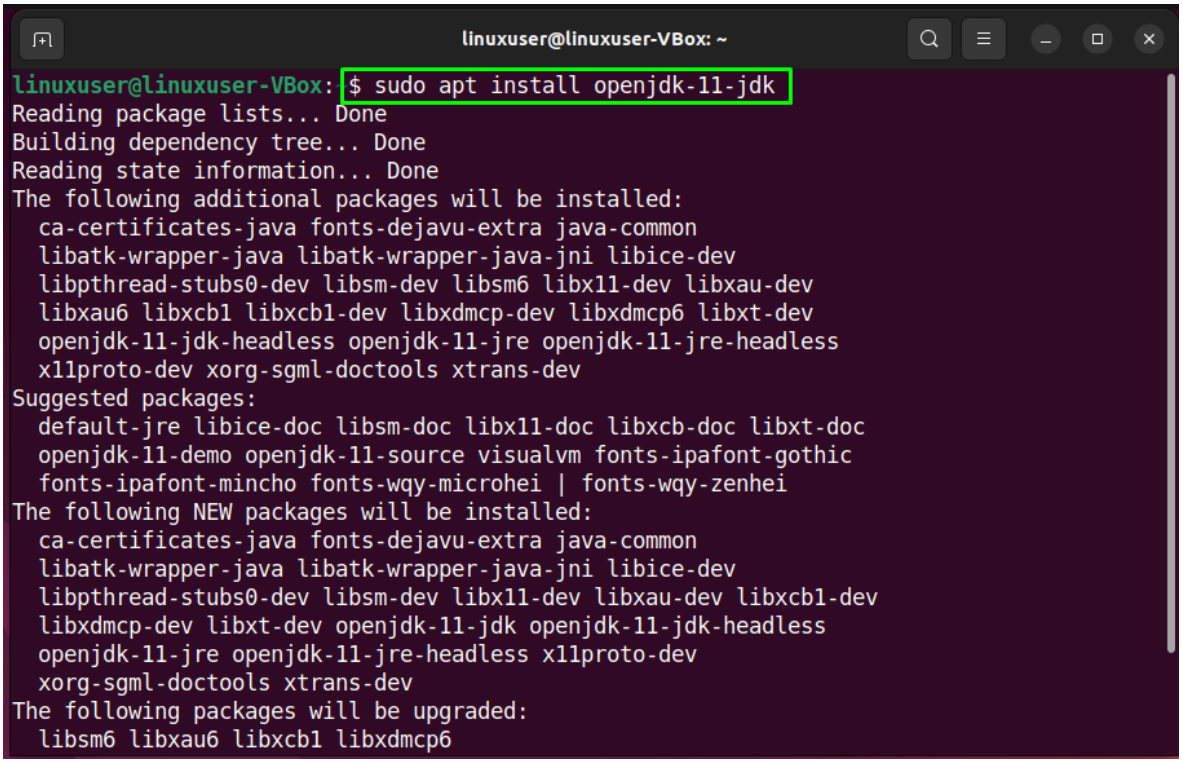
```
$ sudo apt update
```

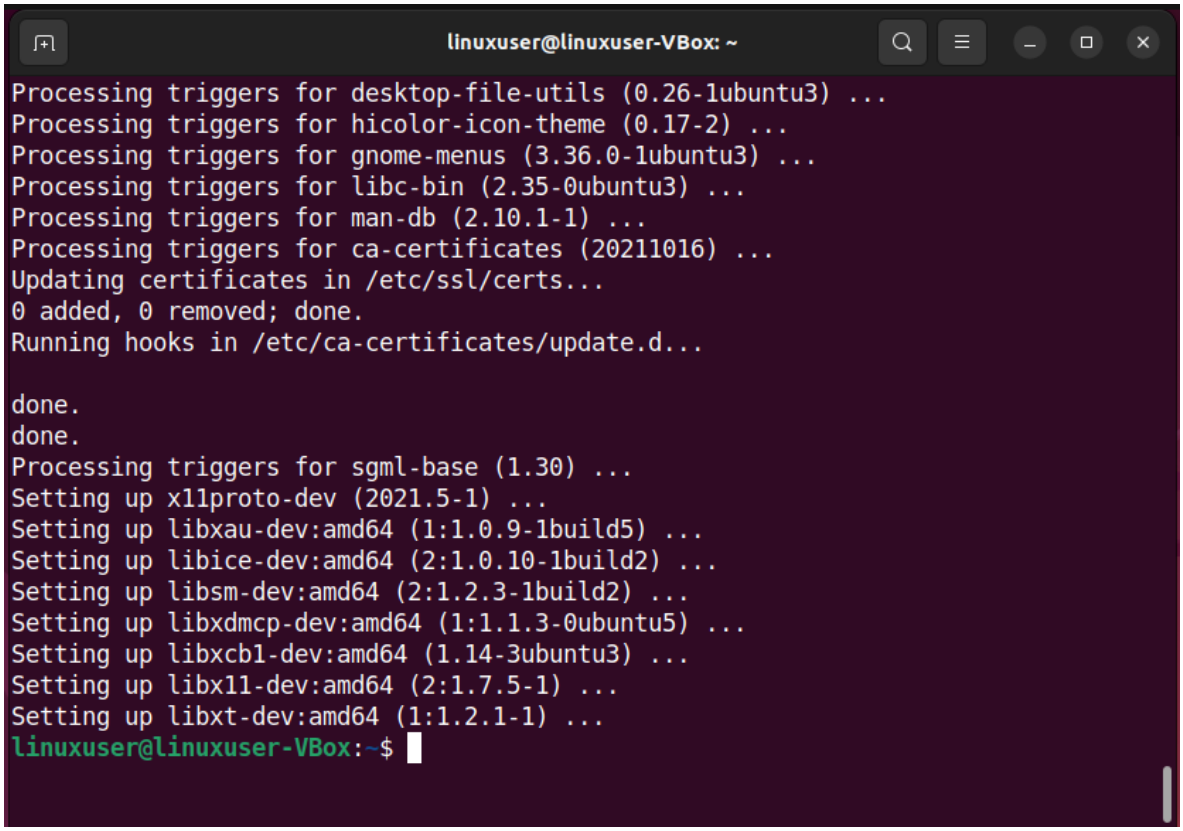


Step 2: Installation of Java

Before jumping into the installation of Apache Tomcat Server, it is essential to have "**Java**" on your system. For this purpose, execute the following command to install "**OpenJDK 11**":

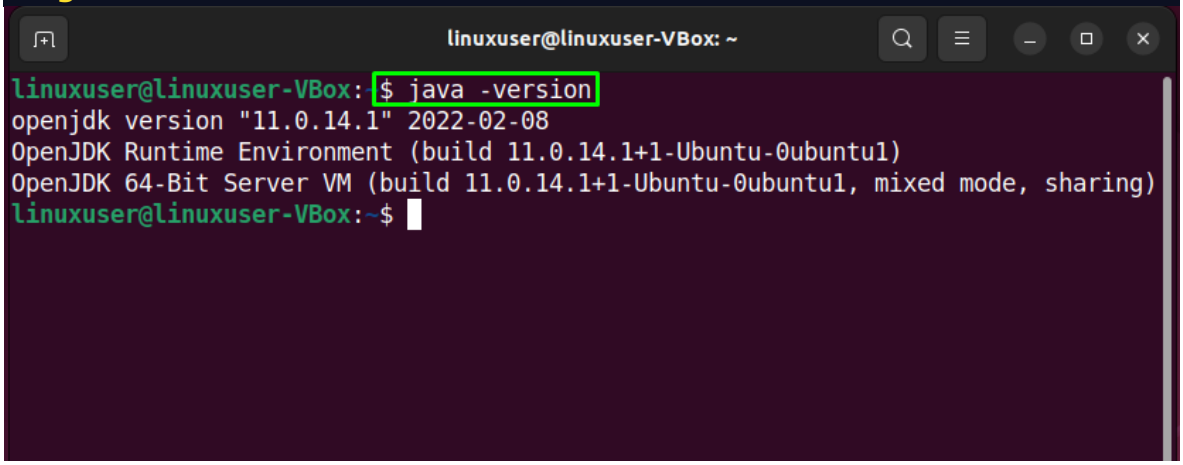
```
$ sudo apt install openjdk-11-jdk
```


linuxuser@linuxuser-VBox: ~
linuxuser@linuxuser-VBox:~$ sudo apt install openjdk-11-jdk
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 libsm6 libx11-dev libxau-dev
libxau6 libxcb1 libxcb1-dev libxdmcp-dev libxdmcp6 libxt-dev
openjdk-11-jdk-headless openjdk-11-jre openjdk-11-jre-headless
x11proto-dev xorg-sgml-doctools xtrans-dev
Suggested packages:
default-jre libice-doc libsm-doc libx11-doc libxcb-doc libxt-doc
openjdk-11-demo openjdk-11-source visualvm fonts-ipafont-gothic
fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei
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-11-jdk openjdk-11-jdk-headless
openjdk-11-jre openjdk-11-jre-headless x11proto-dev
xorg-sgml-doctools xtrans-dev
The following packages will be upgraded:
libsm6 libxau6 libxcb1 libxdmcp6


linuxuser@linuxuser-VBox: ~
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for libc-bin (2.35-0ubuntu3) ...
Processing triggers for man-db (2.10.1-1) ...
Processing triggers for ca-certificates (20211016) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
done.
Processing triggers for sgml-base (1.30) ...
Setting up x11proto-dev (2021.5-1) ...
Setting up libxau-dev:amd64 (1:1.0.9-1build5) ...
Setting up libice-dev:amd64 (2:1.0.10-1build2) ...
Setting up libsm-dev:amd64 (2:1.2.3-1build2) ...
Setting up libxdmcp-dev:amd64 (1:1.1.3-0ubuntu5) ...
Setting up libxcb1-dev:amd64 (1.14-3ubuntu3) ...
Setting up libx11-dev:amd64 (2:1.7.5-1) ...
Setting up libxt-dev:amd64 (1:1.2.1-1) ...
linuxuser@linuxuser-VBox:~$

Then, verify the version of the installed Java:

```
$ java version
```

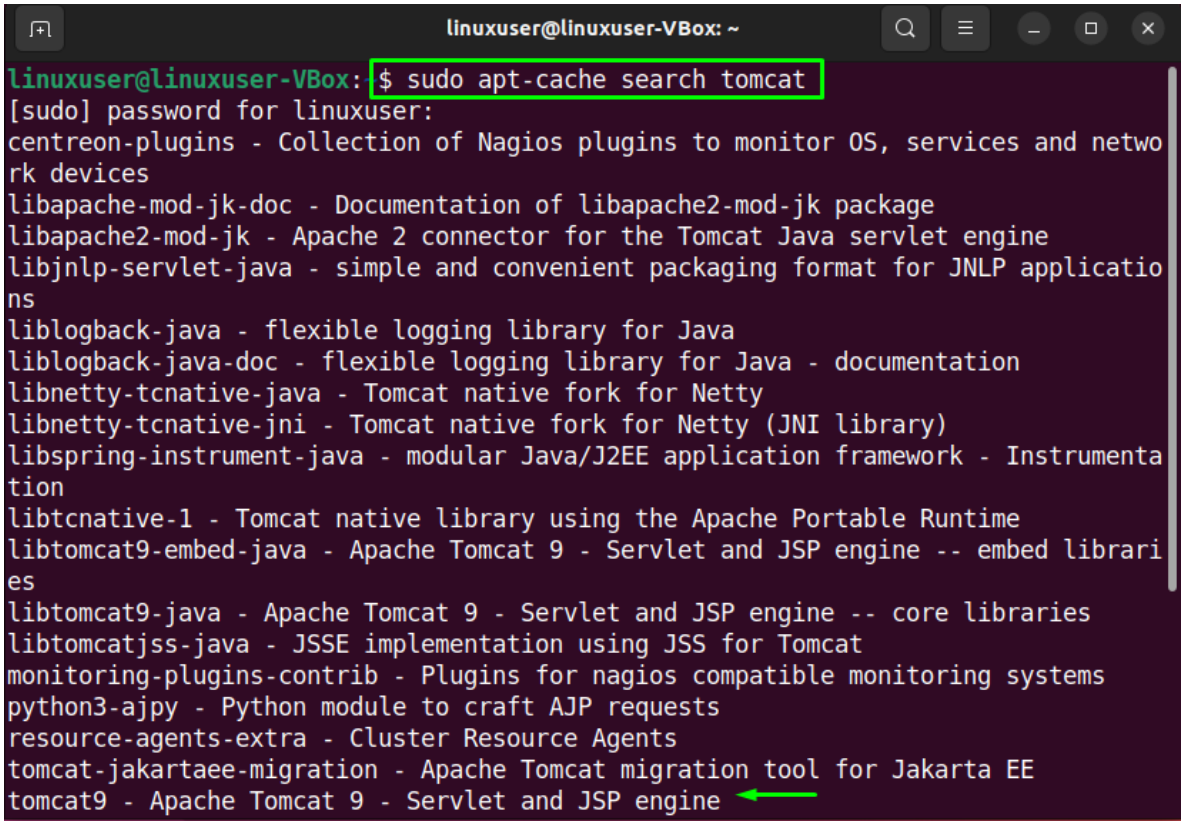


Step 3: Check the availability of Apache Tomcat package

After fulfilling the requirements, **check** the **availability** of the **Apache Tomcat package** in the repository:

```
$ sudo apt-cache search tomcat
```

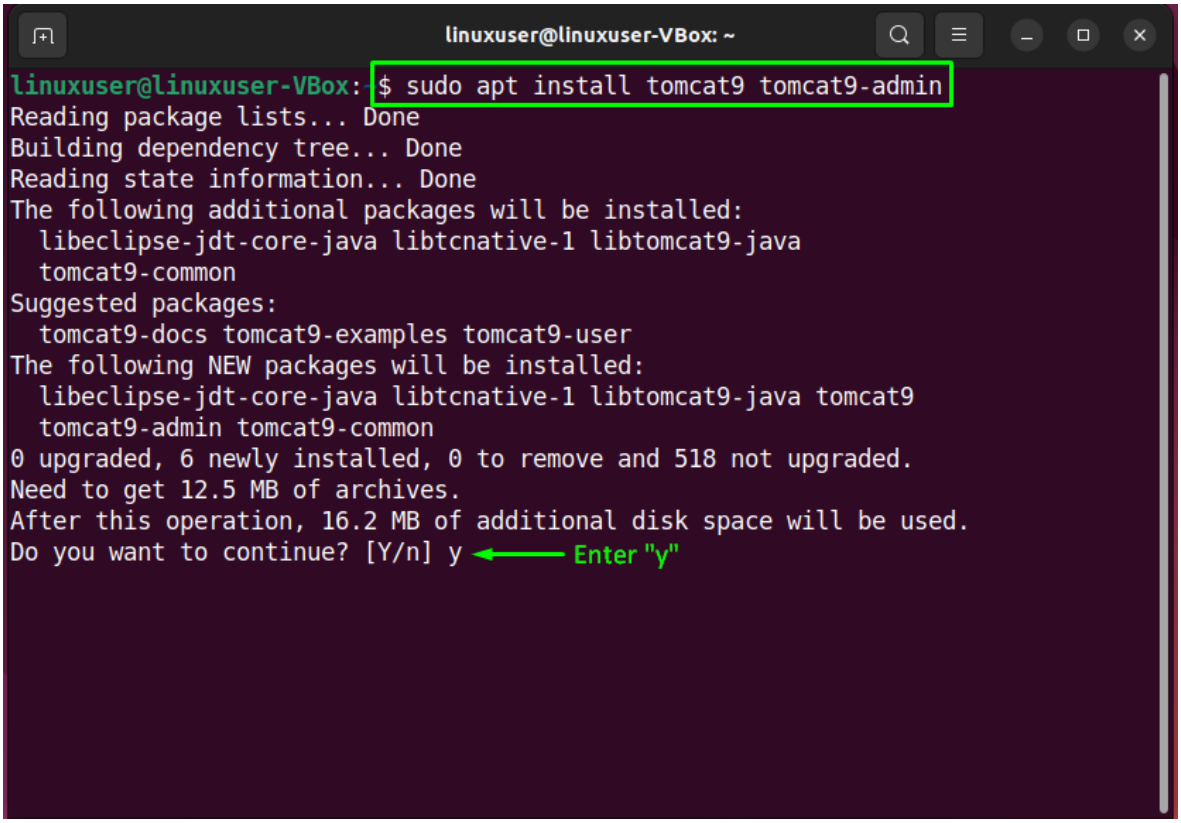
The given output signifies that the "**tomcat9**" **package** for download:



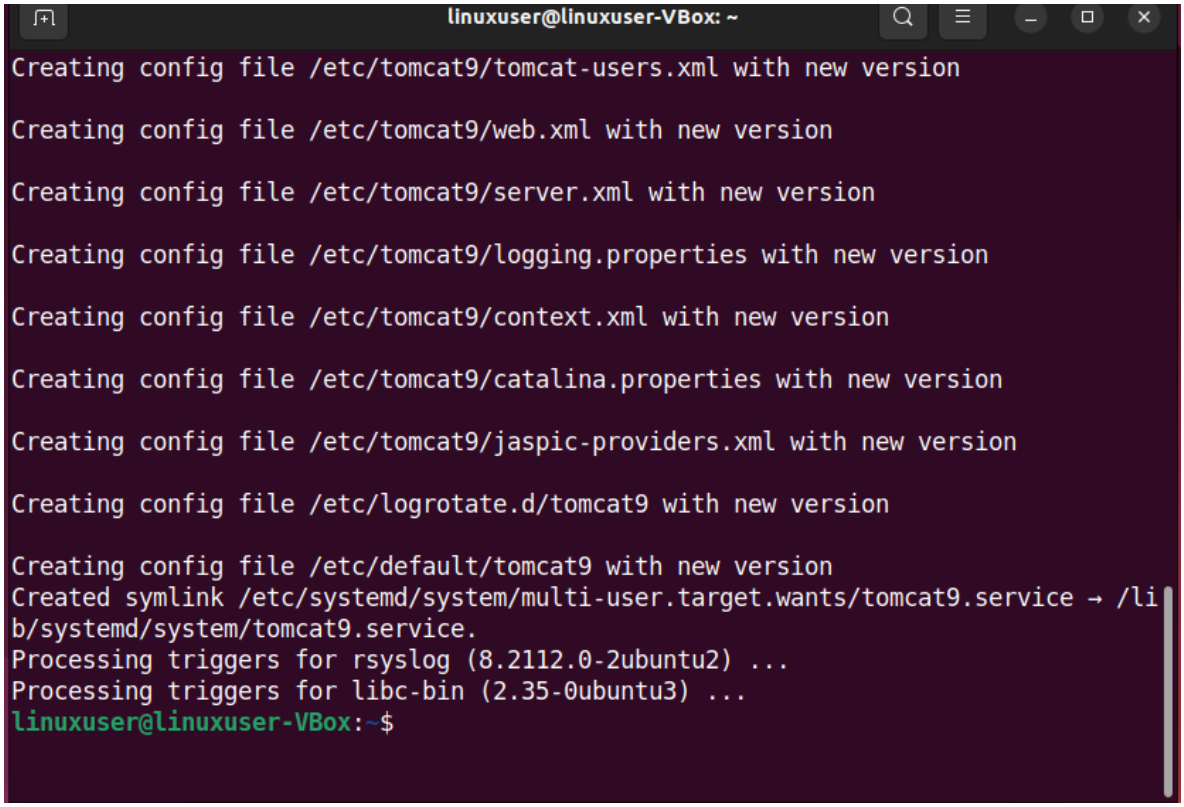
Step 4: Install Apache Tomcat Server on Ubuntu 22.04

After finding the required **Apache Tomcat** package, we will install it on **Ubuntu 22.04** with the help of the below-given command:

```
$ sudo apt install tomcat9 tomcat9-admin
```



Press “**y**” to permit the installation for a few minutes:

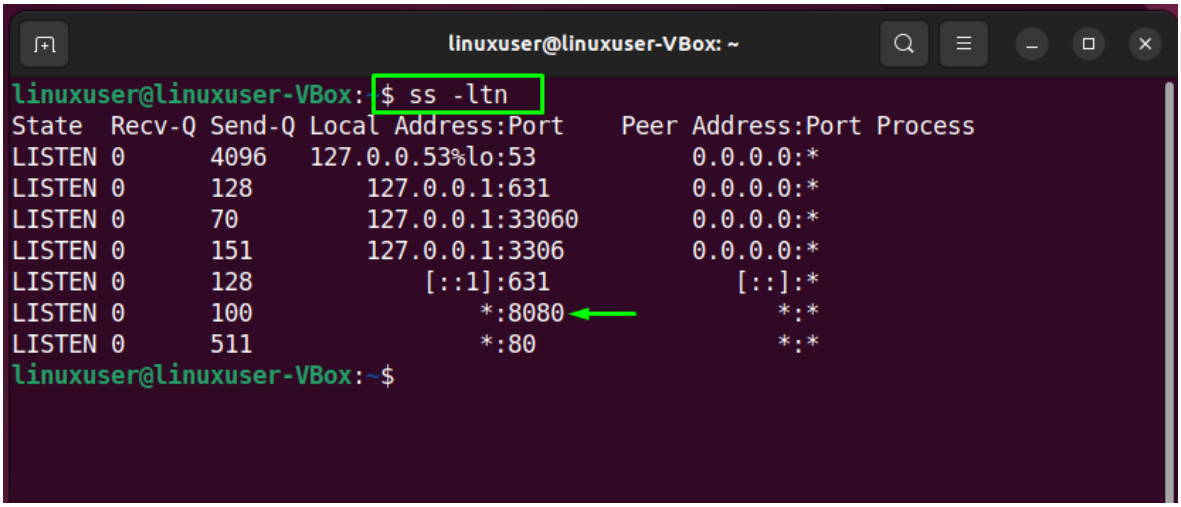


Step 5: Check ports for Apache Tomcat Server

On Ubuntu 22.04, the Apache Tomcat Server **automatically** starts **working** after completing the **installation**. To validate this operation, you can utilize the "**ss**" command for displaying the network socket related information:

```
$ ss -ltn
```

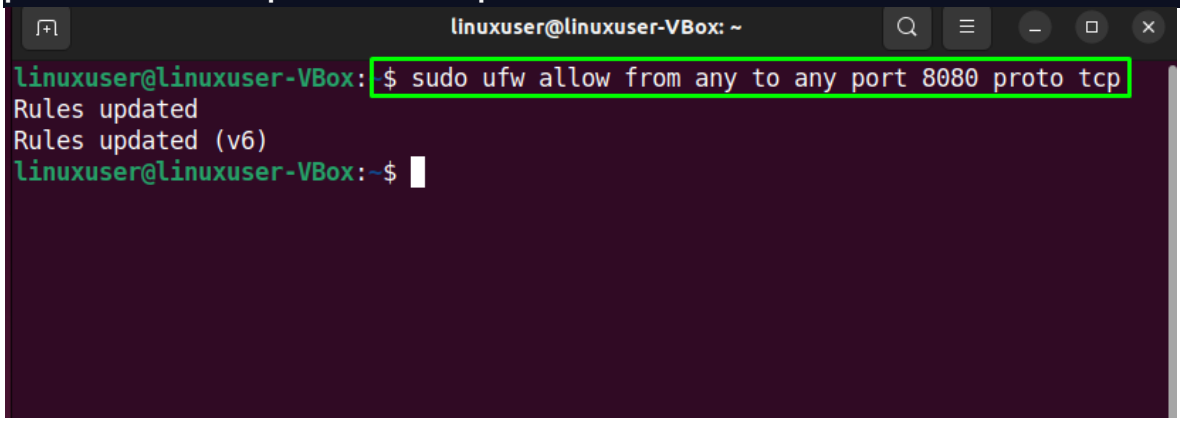
The default port for the Apache Tomcat server is "**8080**" and it can be seen in the following output that port "**8080**" is listening for all incoming connections:



Step 6: Open ports for Apache Tomcat Server

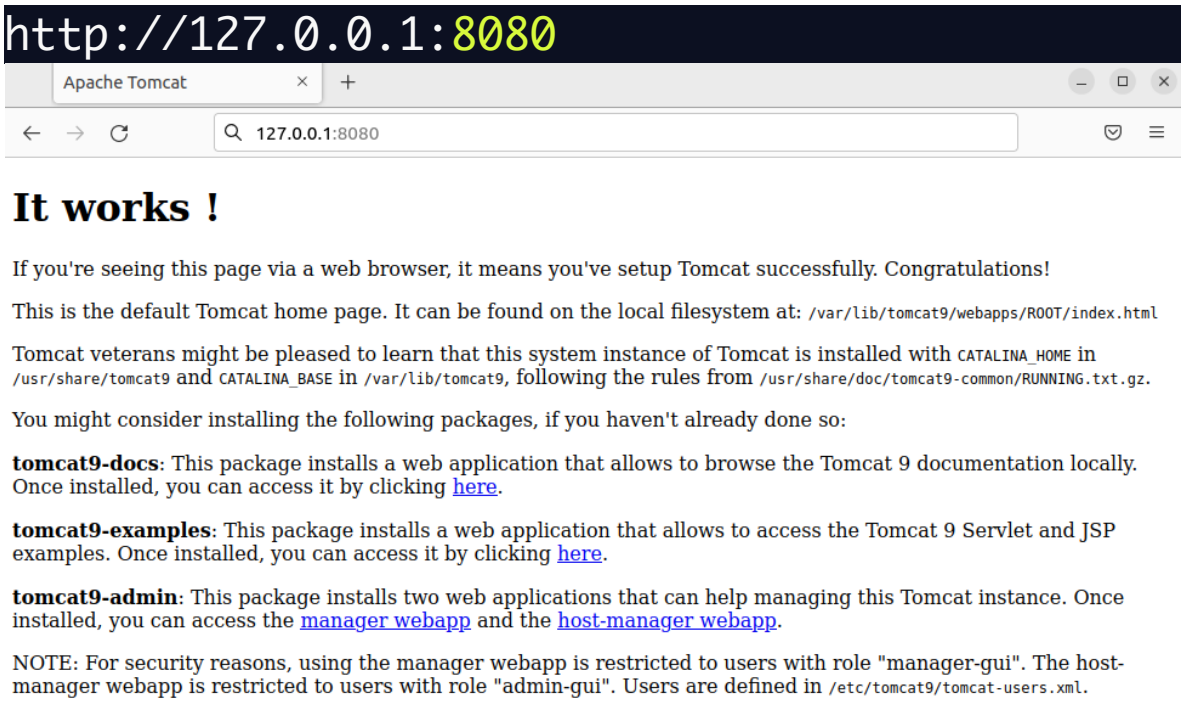
In case if the UFW firewall is activated on your system, then it may cause trouble while connecting external devices. So, to permit the incoming from any type of source to port “**8080**”, write out the following “**ufw**” command:

```
sudo ufw allow from any to any
port 8080 proto tcp
```



Step 7: Test working of Apache Tomcat Server

If you have carefully followed all of the previous given, then at this point, the Apache Tomcat Server should be running on Ubuntu 22.04. To test its working specify your system loopback address with the number of the opened port for **Apache Tomcat Server**:



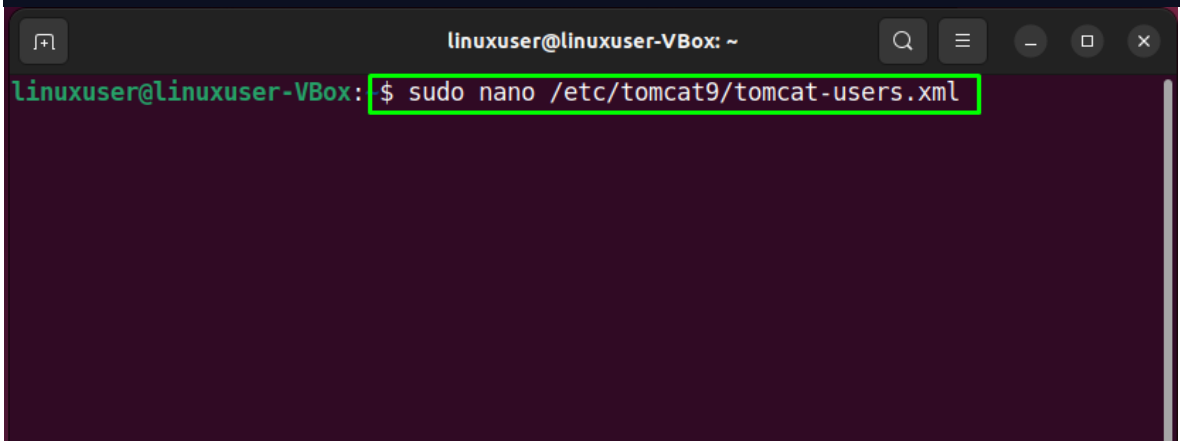
How to use Apache Tomcat Web Application Manager on Ubuntu 22.04

Before using Apache Tomcat Web application manager, it is required to set up a new Tomcat user.

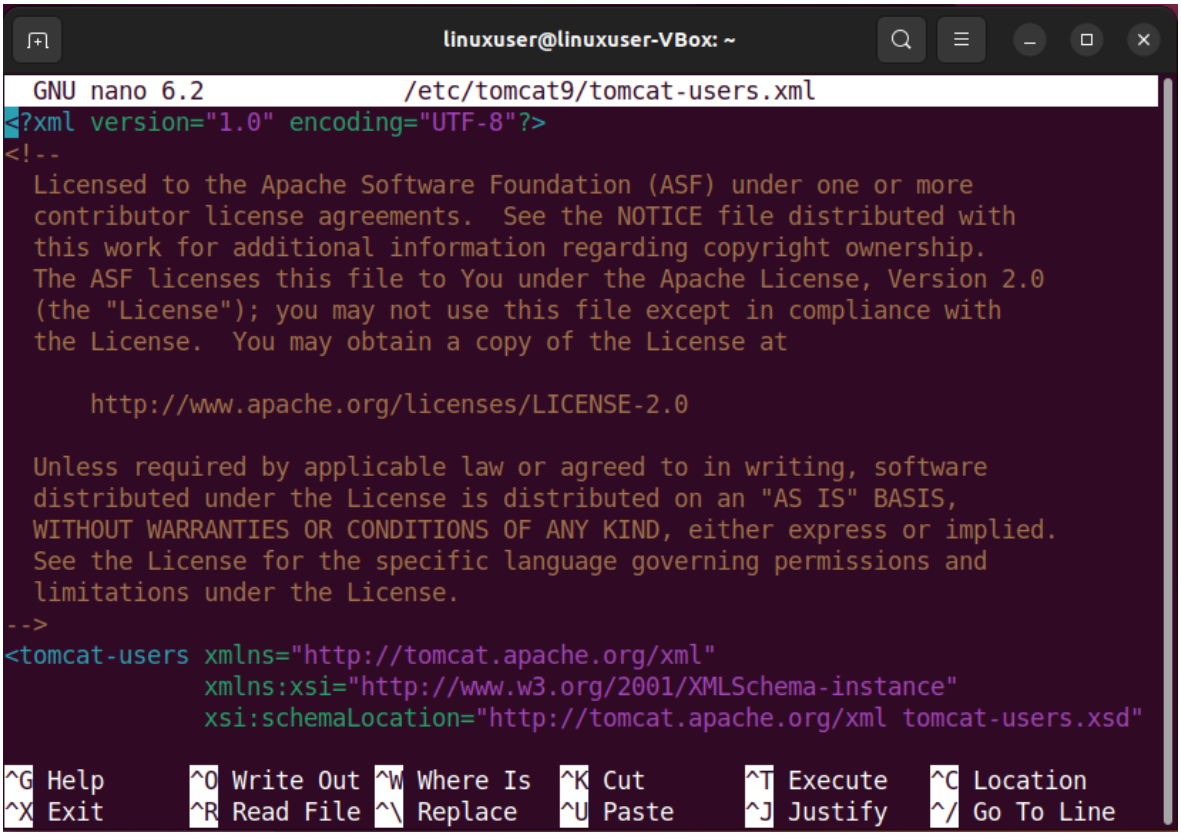
Step 1: Creating Tomcat user

Firstly, open up the “**tomcat-users.xml**” file in the “**nano**” editor:

```
$ sudo nano /etc/tomcat9/tomcat-users.xml
```



Your “**tomcat-users.xml**” file will somehow look like this:



Now, paste the following lines in the opened “**tomcat-**

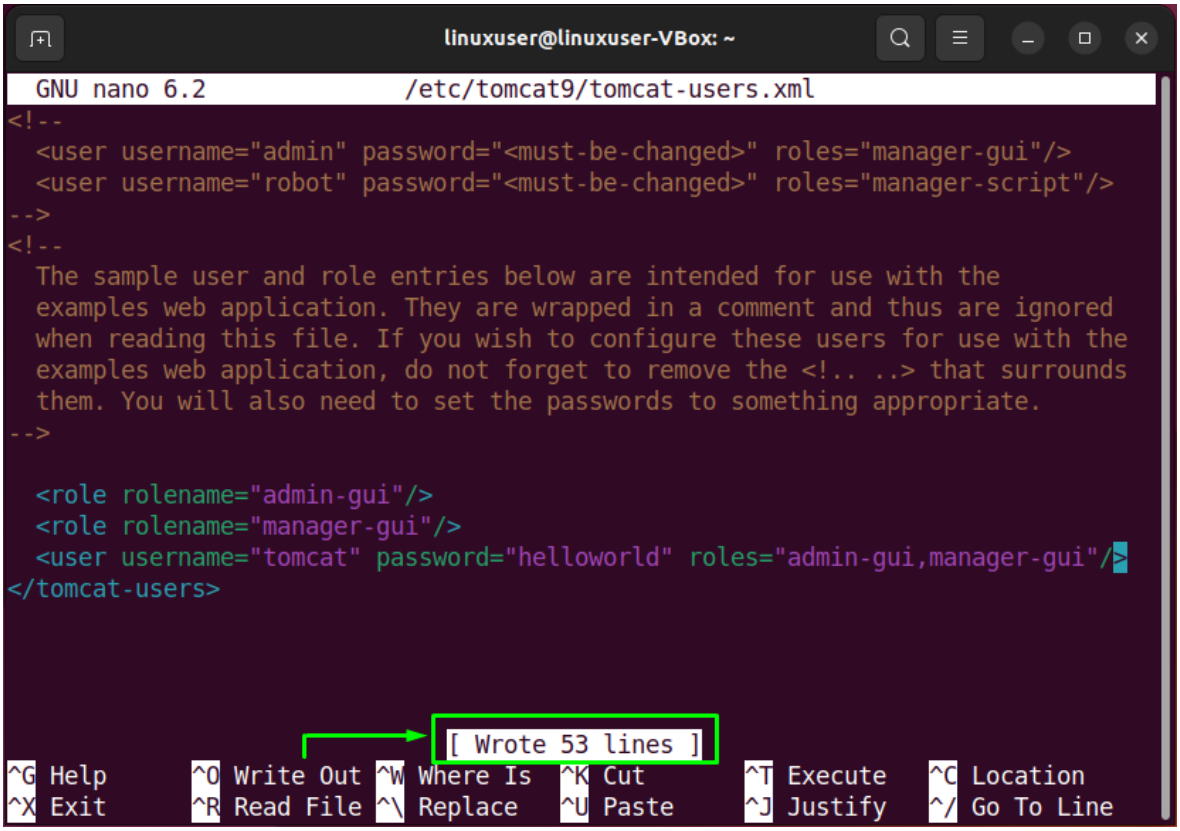
users.xml” file to create a new user named “**tomcat**” with the password “**helloworld**” having “**admin-gui**” and “**manager-gui**” roles:

```
<role rolename="admin-gui"/>
```

```
<role rolename="manager-gui"/gt;
```

```
<user username="tomcat" password="pass" roles="admin-gui,manager-gui"/>
```

Press “**Ctrl+O**” to save the added changes:

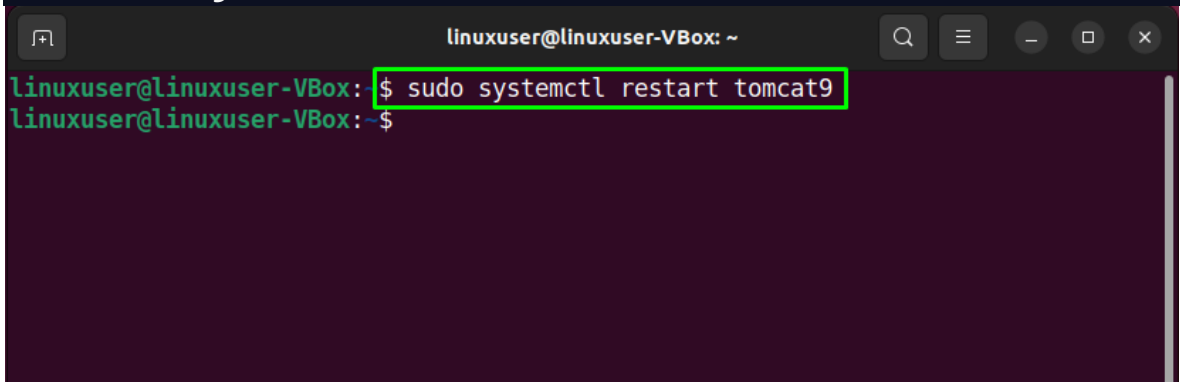


Step 2: Restart Tomcat Server

After creating a Tomcat account, restart the Apache

Tomcat Server:

```
$ sudo systemctl restart tomcat9
```

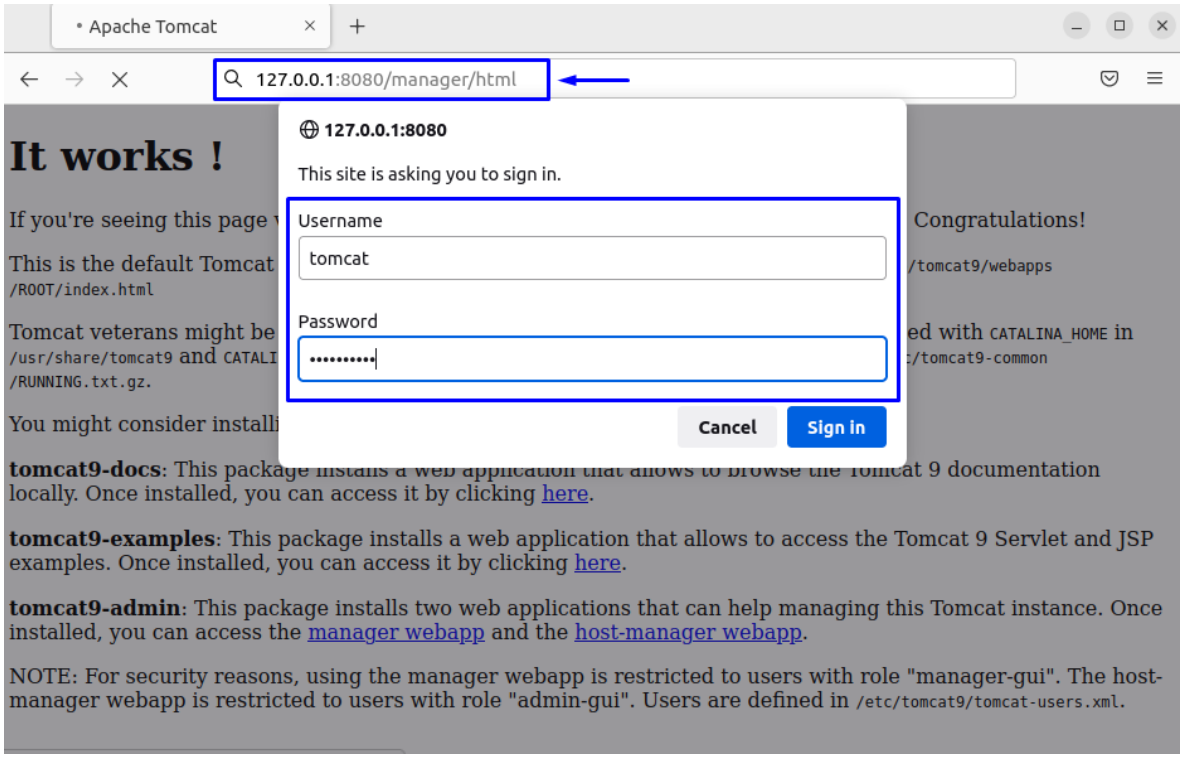


Step 3: Open Tomcat Web Application Manager

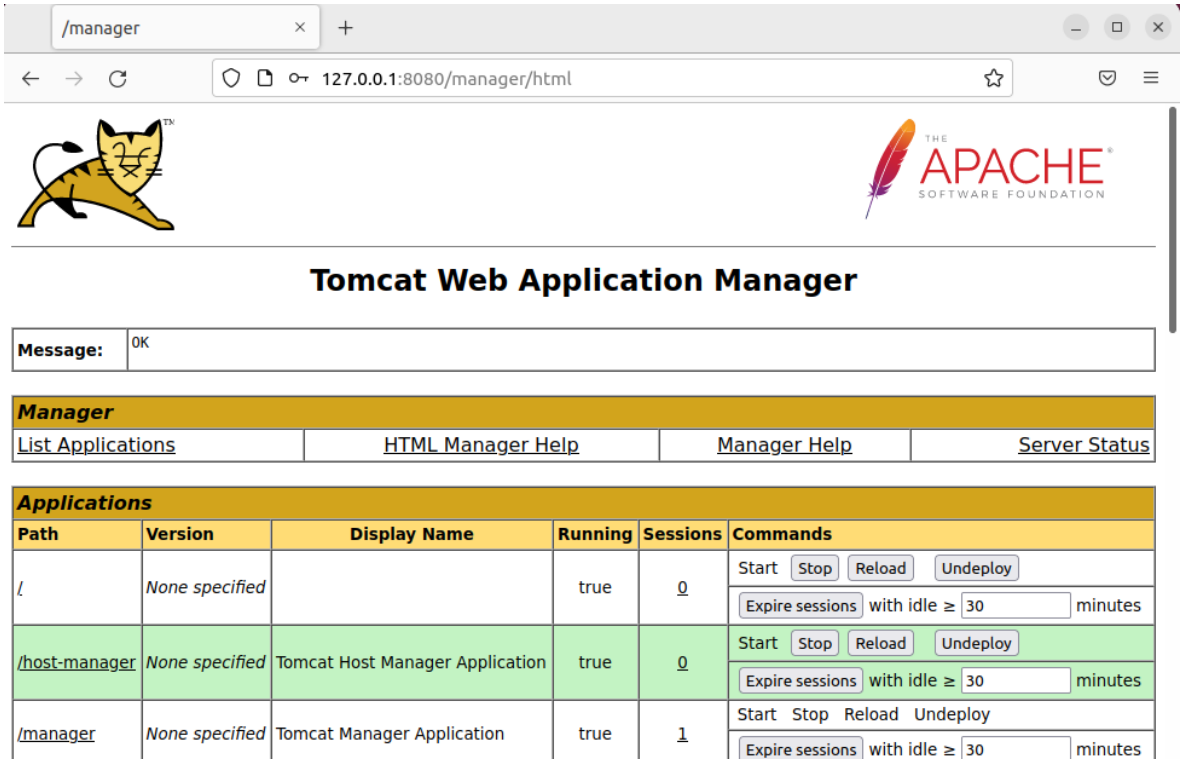
Lastly, navigate to the following link for accessing the Tomcat Web Application Manager. You will be asked to input the credentials for accessing the created user account:

```
http://127.0.0.1:8080/manager/html
```

Enter the "**username**" and "**password**" which you have specified in the "**tomcat-users.xml**" file and click "**Sign in**":



Congratulations! Now you can now access the Tomcat Web Application Manager via the tomcat user account:



We have compiled the method to install Apache Tomcat Server and use its application manager on Ubuntu 22.04.