

# **WEB SERVER INSTALLATION**

## **AIM:**

To install and configure the apache tomcat web server

## **ABOUT:**

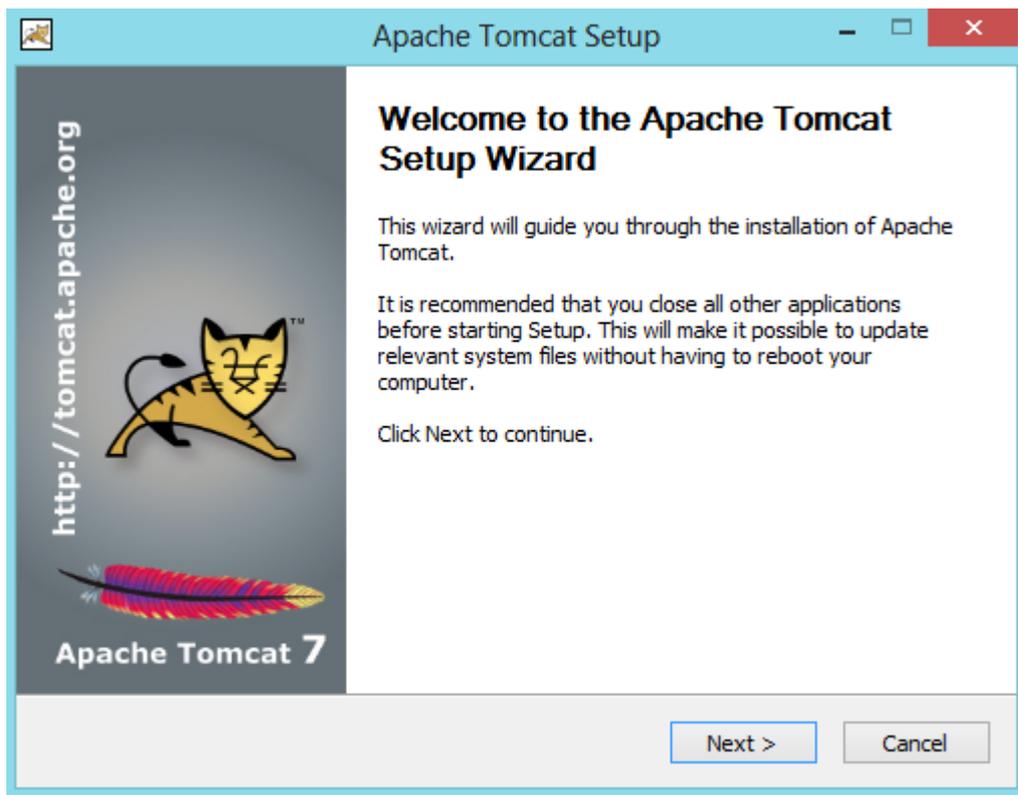
Apache Tomcat is an open source software implementation of the Java Servlet and JavaServer Pages technologies. The Java Servlet and JavaServer Pages specifications are developed under the [Java Community Process](#).

Apache Tomcat is developed in an open and participatory environment and released under the [Apache License version 2](#). Apache Tomcat is intended to be a collaboration of the best-of-breed developers from around the world.

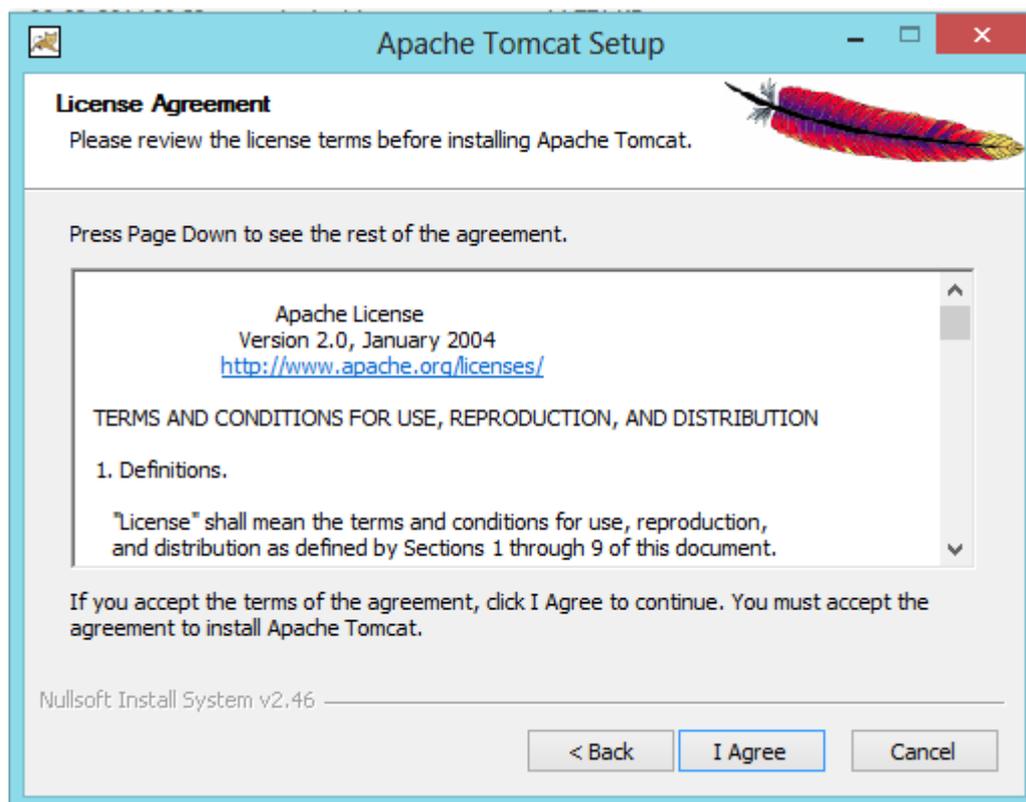
Apache Tomcat powers numerous large-scale, mission-critical web applications across a diverse range of industries and organizations.

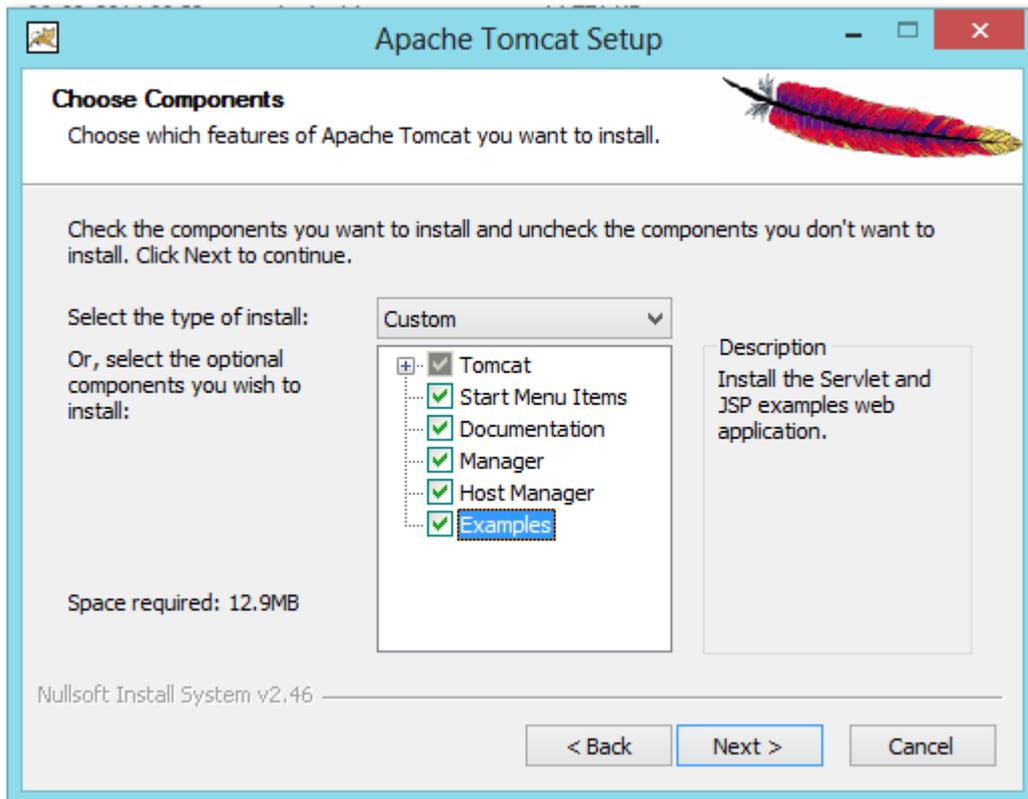
## **WINDOWS:**

1. Download the latest version of Apache tomcat from the [tomcat.apache.org](http://tomcat.apache.org) website.
2. When you click the .exe file the following setup wizard will appear on the screen.

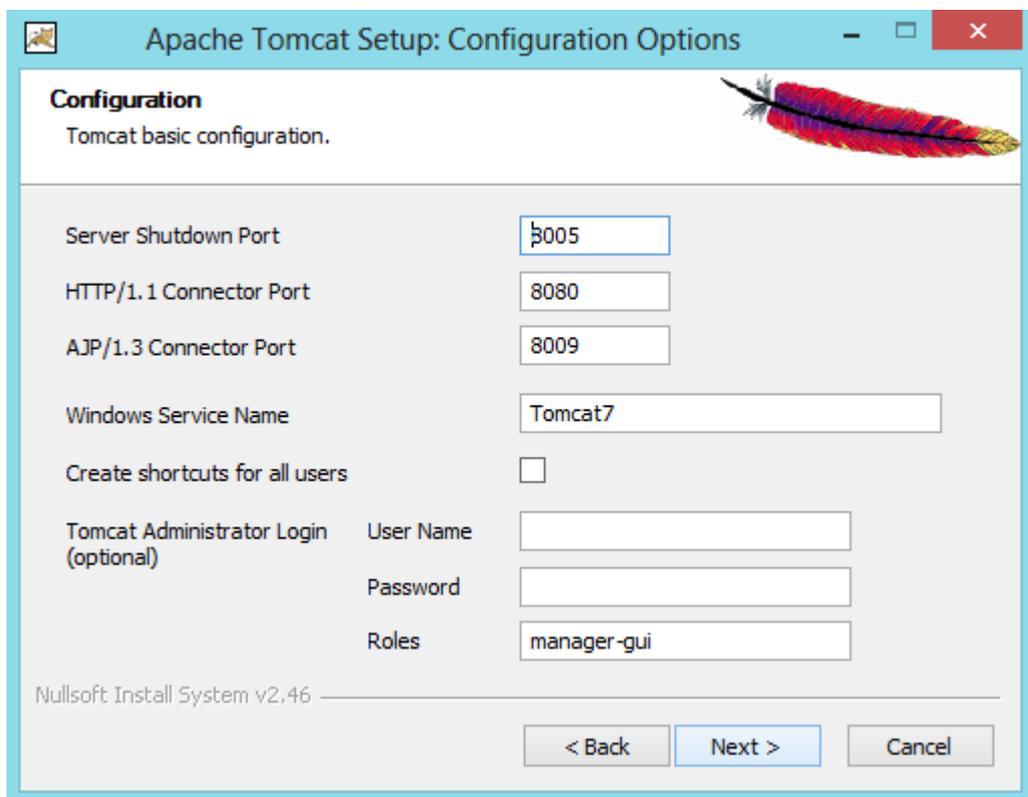


3. Accept the license conditions and select the required components in the next window.

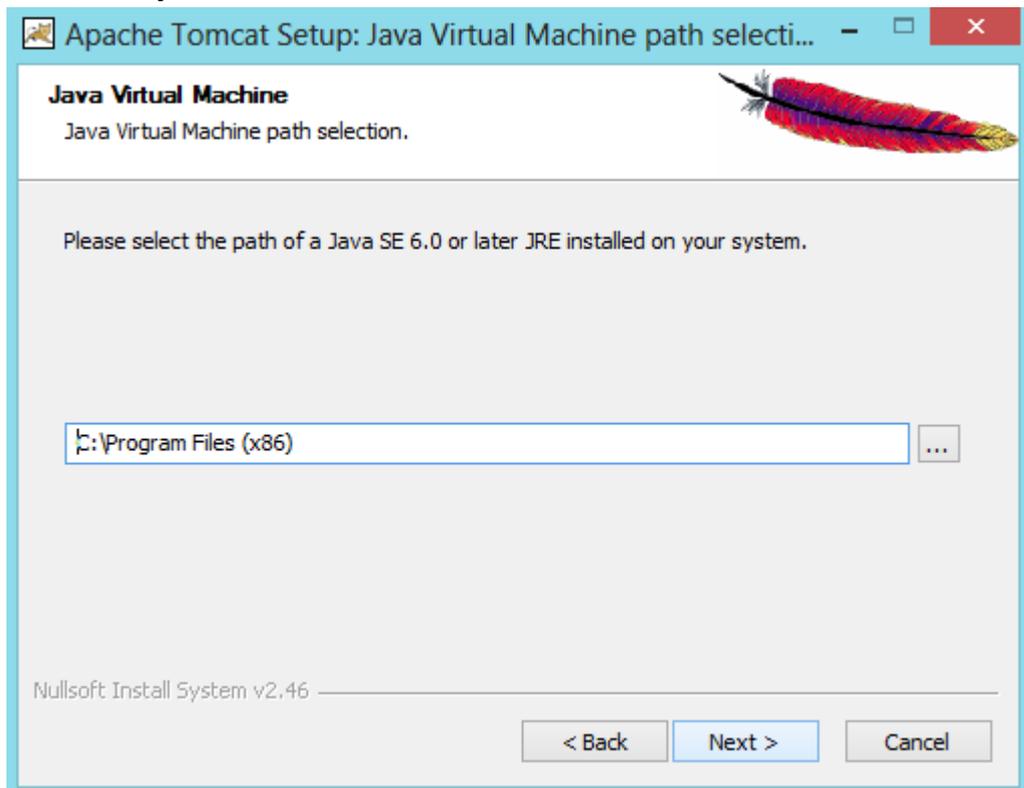




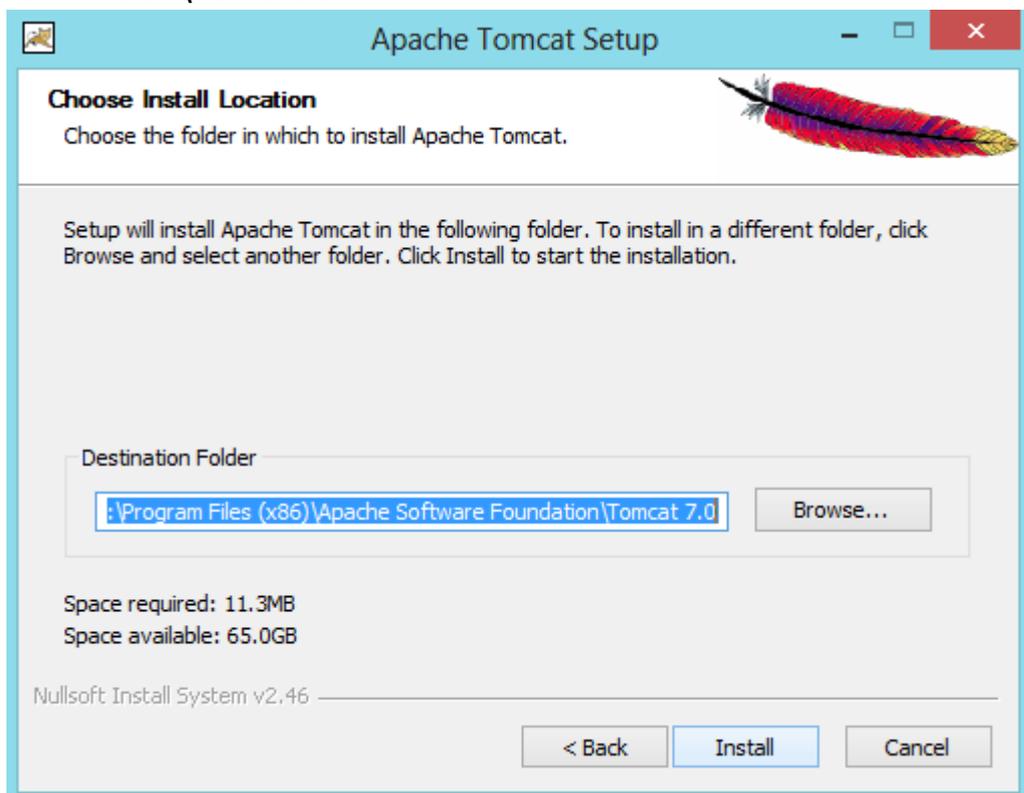
4. Accept the default port settings 8080 for connection and 8009 for shutdown and click next in the configuration options window.



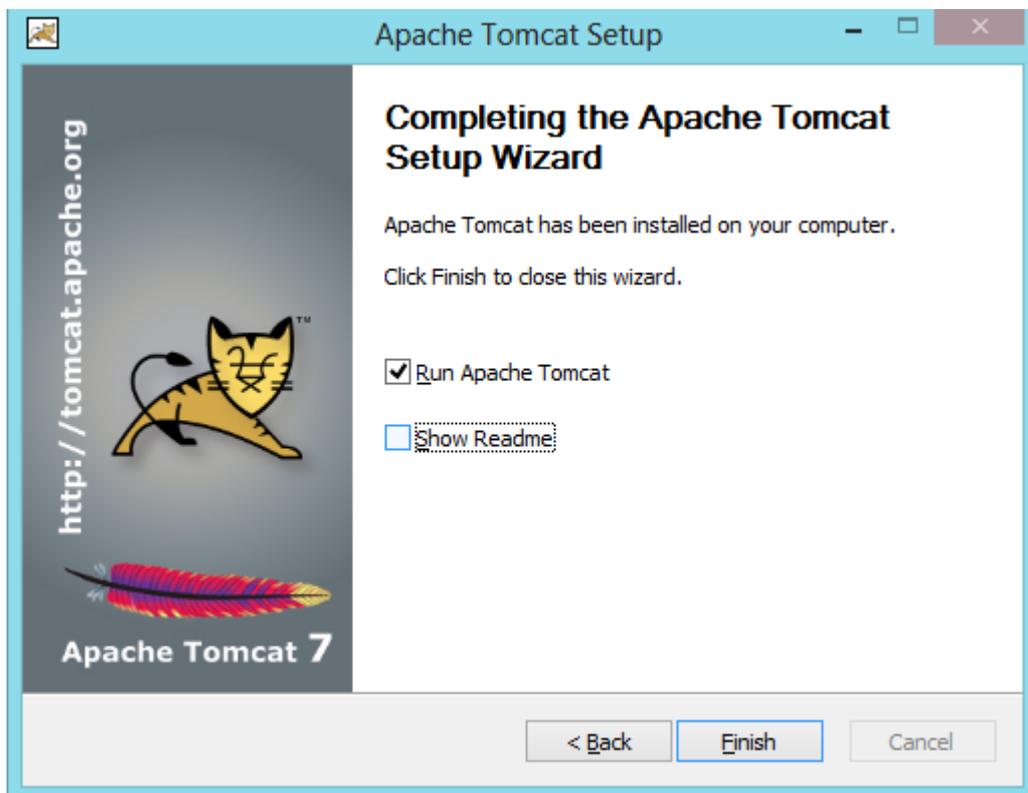
5. Make sure the Java Virtual Machine path is set to c:\program files\Java\jre and click next.



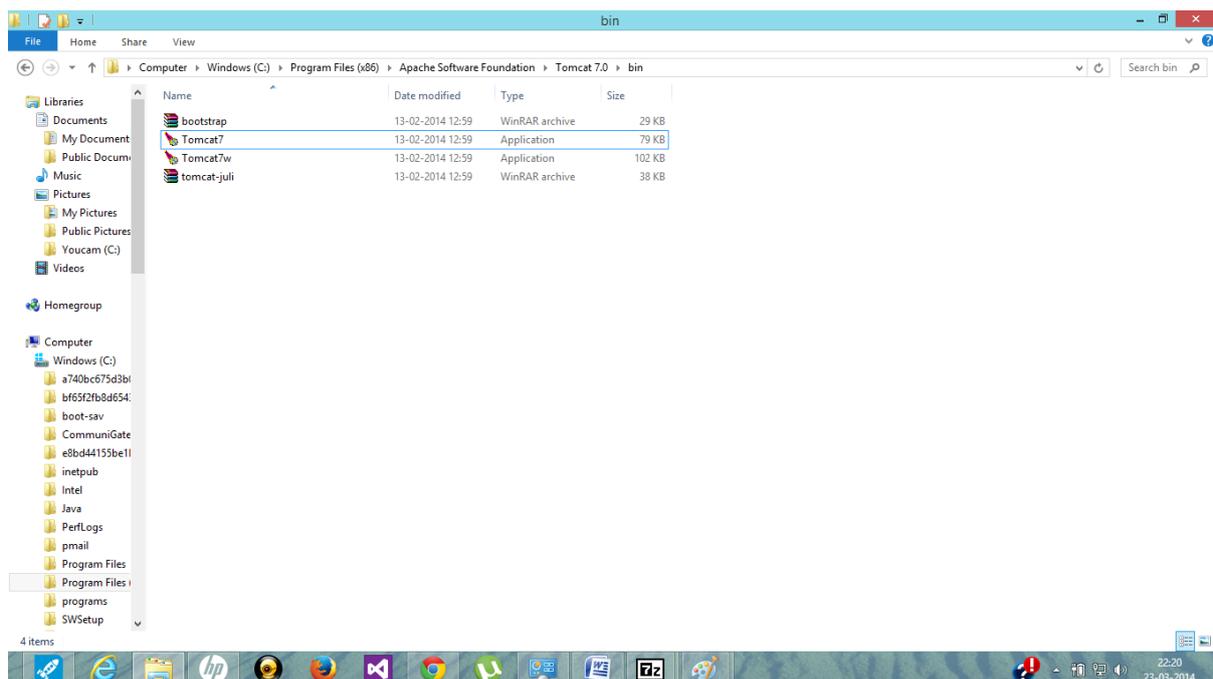
6. Choose the install location as c:\program files\Apache Software Foundation\Tomcat 6.0



7. The installation will get completed and in the next window select the Run Apache Tomcat checkbox

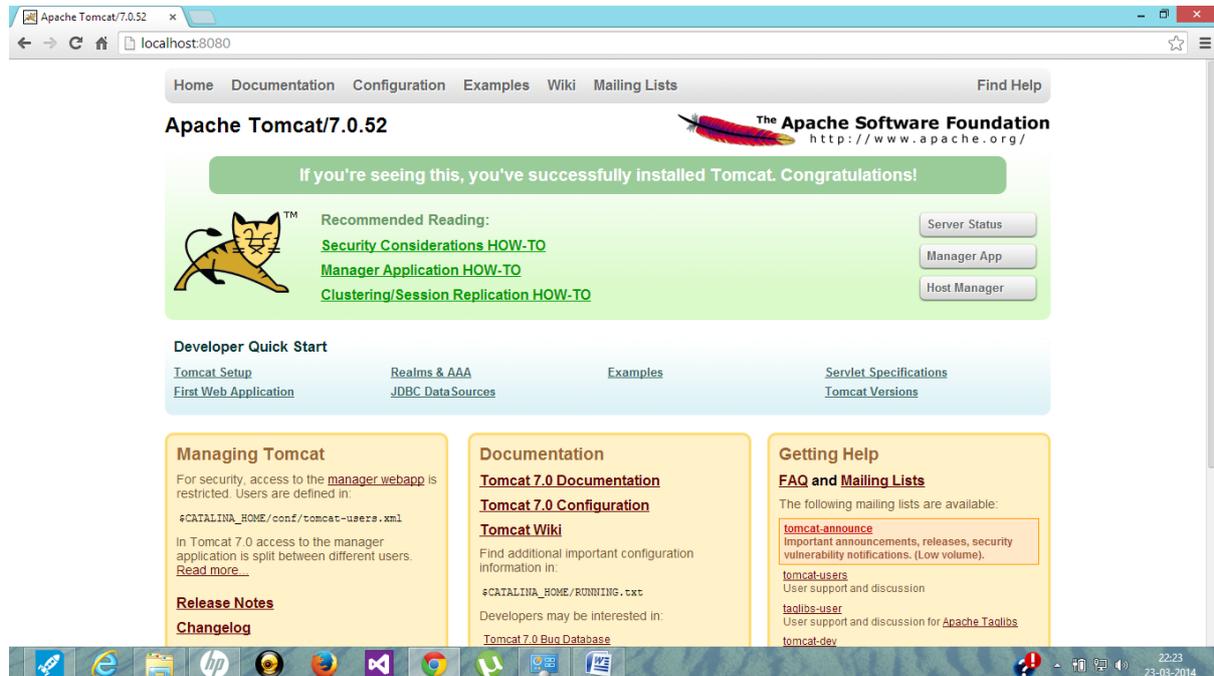


8. To run the tomcat web server, go to C:\Program Files \Apache Software Foundation\Tomcat 6.0\bin and click on the tomcat application.



A command prompt appears on the screen and the tomcat server gets started.

9. To open the home page type localhost:8080 in the address bar of your web browser.



10. In order to access the tomcat server from a client machine type '`<server-ip-address>/example-servlet-path`' in the address bar of the web browser of the client machine.

## UBUNTU

1. Open the terminal and run the command `sudo apt-get install tomcat7` to download and install the tomcat7 package.

```
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi# sudo apt-get install tomcat7
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
 thunderbird-globalmenu
Use 'apt-get autoremove' to remove them.
Suggested packages:
 tomcat7-docs tomcat7-admin libtcnative-1
The following NEW packages will be installed:
 tomcat7
0 upgraded, 1 newly installed, 0 to remove and 219 not upgraded.
Need to get 0 B/37.3 kB of archives.
After this operation, 357 kB of additional disk space will be used.
Preconfiguring packages ...
Selecting previously unselected package tomcat7.
(Reading database ... 174579 files and directories currently installed.)
Unpacking tomcat7 (from .../tomcat7_7.0.26-1ubuntu1.2_all.deb) ...
Processing triggers for ureadahead ...
Setting up tomcat7 (7.0.26-1ubuntu1.2) ...

Creating config file /etc/default/tomcat7 with new version
Adding system user `tomcat7' (UID 115) ...
Adding new user `tomcat7' (UID 115) with group `tomcat7' ...
Not creating home directory `/usr/share/tomcat7'.
* Starting Tomcat servlet engine tomcat7
```

2. Run the command  
`sudo apt-get install default-jdk`  
to install the java packages needed for tomcat 7.

```
preethi@preethi-HP-Pavilion-15-Notebook-PC: ~# sudo apt-get install default-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
 thunderbird-globalmenu
Use 'apt-get autoremove' to remove them.
The following extra packages will be installed:
 default-jre icedtea-netx icedtea-netx-common libatk-wrapper-java libatk-wrapper-java-jni libgif4 libice-dev libpthread-stubs0
 libpthread-stubs0-dev libsm-dev libx11-6 libx11-dev libx11-doc libxau-dev libxcb1-dev libxdmcp-dev libxt-dev openjdk-6-jdk openjdk-6-jre
 ttf-dejavu-extra x11proto-core-dev x11proto-input-dev x11proto-kb-dev xorg-sgml-doctools xtrans-dev
Suggested packages:
 libxcb-doc openjdk-6-demo openjdk-6-source visualvm icedtea-plugin
The following NEW packages will be installed:
 default-jdk default-jre icedtea-netx icedtea-netx-common libatk-wrapper-java libatk-wrapper-java-jni libgif4 libice-dev libpthread-stubs0
 libpthread-stubs0-dev libsm-dev libx11-dev libx11-doc libxau-dev libxcb1-dev libxdmcp-dev libxt-dev openjdk-6-jdk openjdk-6-jre
 ttf-dejavu-extra x11proto-core-dev x11proto-input-dev x11proto-kb-dev xorg-sgml-doctools xtrans-dev
The following packages will be upgraded:
 libx11-6
1 upgraded, 25 newly installed, 0 to remove and 200 not upgraded.
Need to get 21.0 MB of archives.
After this operation, 61.2 MB of additional disk space will be used.
Do you want to continue [Y/n]? Y
Get:1 http://in.archive.ubuntu.com/ubuntu/ precise-updates/main libx11-6 amd64 2:1.4.99.1-0ubuntu2.2 [763 kB]
2% [1 libx11-6 406 kB/763 kB 53%] 47.3 kB/s 7min 15s
```

3. In order to download the documentation for tomcat 7 run the command  
`sudo apt-get install tomcat7-docs`

```
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# sudo apt-get install tomcat7-docs
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
 tomcat7-docs
0 upgraded, 1 newly installed, 0 to remove and 219 not upgraded.
Need to get 619 kB of archives.
After this operation, 3,348 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu/ precise-updates/universe tomcat7-docs all 7.0.26-1ubuntu1.2 [619 kB]
Fetched 619 kB in 9s (62.9 kB/s)
Selecting previously unselected package tomcat7-docs.
(Reading database ... 174228 files and directories currently installed.)
Unpacking tomcat7-docs (from .../tomcat7-docs_7.0.26-1ubuntu1.2_all.deb) ...
Processing triggers for doc-base ...
Processing 1 added doc-base file...
Setting up tomcat7-docs (7.0.26-1ubuntu1.2) ...
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi#
```

4. To install the admin related packages run the command  
`sudo apt-get install tomcat7-admin`

```
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# sudo apt-get install tomcat7-admin
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
 tomcat7-admin
0 upgraded, 1 newly installed, 0 to remove and 219 not upgraded.
Need to get 41.3 kB of archives.
After this operation, 190 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu/ precise-updates/universe tomcat7-admin all 7.0.26-1ubuntu1.2 [41.3 kB]
Fetched 41.3 kB in 1s (31.4 kB/s)
Selecting previously unselected package tomcat7-admin.
(Reading database ... 174381 files and directories currently installed.)
Unpacking tomcat7-admin (from .../tomcat7-admin_7.0.26-1ubuntu1.2_all.deb) ...
Setting up tomcat7-admin (7.0.26-1ubuntu1.2) ...
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi#
```

5. Change the ownership of `/etc/tomcat7` directory from root user to the tomcat7, created by default during the installation.  
`sudo chgrp -R tomcat7 /etc/tomcat7`

```
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# sudo chgrp -R tomcat7 /etc/tomcat7
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# ls -l /etc/tomcat7
total 188
drwxrwxr-x 3 root tomcat7 4096 Jan  8 22:16 Catalina
-rw-r--r-- 1 root tomcat7 5586 Apr  2 2013 catalina.properties
-rw-r--r-- 1 root tomcat7 1394 Feb 26 2012 context.xml
-rw-r--r-- 1 root tomcat7 2370 Jul 13 2012 logging.properties
drwxr-xr-x 2 root tomcat7 4096 Jan  8 22:16 policy.d
-rw-r--r-- 1 root tomcat7 6500 Apr  2 2013 server.xml
-rw-r----- 1 root tomcat7 1530 Feb 26 2012 tomcat-users.xml
-rw-r--r-- 1 root tomcat7 152716 Feb 26 2012 web.xml
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# sudo chmod -R g+w /etc/tomcat7
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# ls -l /etc/tomcat7
total 188
drwxrwxr-x 3 root tomcat7 4096 Jan  8 22:16 Catalina
-rw-rw-r-- 1 root tomcat7 5586 Apr  2 2013 catalina.properties
-rw-rw-r-- 1 root tomcat7 1394 Feb 26 2012 context.xml
-rw-rw-r-- 1 root tomcat7 2370 Jul 13 2012 logging.properties
drwxrwxr-x 2 root tomcat7 4096 Jan  8 22:16 policy.d
-rw-rw-r-- 1 root tomcat7 6500 Apr  2 2013 server.xml
-rw-rw-r-- 1 root tomcat7 1530 Feb 26 2012 tomcat-users.xml
-rw-rw-r-- 1 root tomcat7 152716 Feb 26 2012 web.xml
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# sudo apt-get install tomcat7-examples
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
 tomcat7-examples
0 upgraded, 1 newly installed, 0 to remove and 219 not upgraded.
Need to get 0 B/168 kB of archives.
After this operation, 990 kB of additional disk space will be used.
Selecting previously unselected package tomcat7-examples.
(Reading database ... 174432 files and directories currently installed.)
Unpacking tomcat7-examples (from ../tomcat7-examples_7.0.26-1ubuntu1.2_all.deb) ...
Setting up tomcat7-examples (7.0.26-1ubuntu1.2) ...
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi#
```

6. To install the sample webpages download and the install the examples from tomcat 7.

sudo apt-get install tomcat7-examples

7. To create a new instance of tomcat7 download the following packages.

sudo apt-get install tomcat7-user

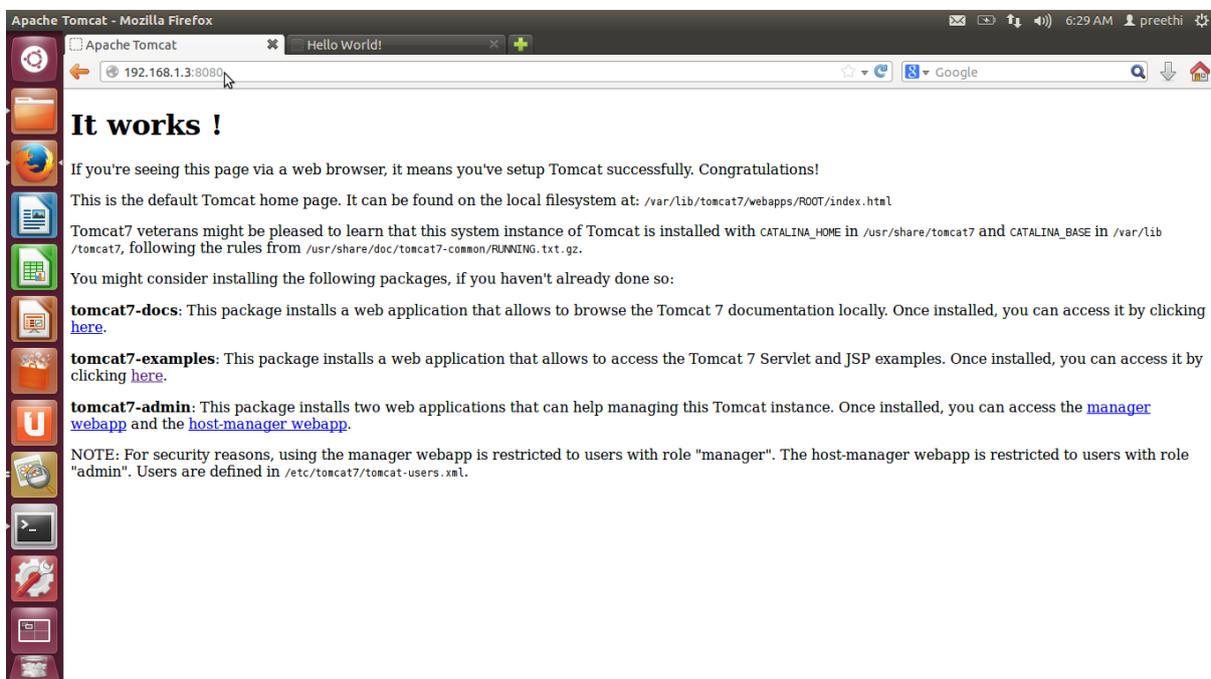
```
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi# sudo apt-get install tomcat7-user
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
 tomcat7-user
0 upgraded, 1 newly installed, 0 to remove and 219 not upgraded.
Need to get 0 B/26.2 kB of archives.
After this operation, 242 kB of additional disk space will be used.
Selecting previously unselected package tomcat7-user.
(Reading database ... 174803 files and directories currently installed.)
Unpacking tomcat7-user (from ../tomcat7-user_7.0.26-1ubuntu1.2_all.deb) ...
Processing triggers for man-db ...
Setting up tomcat7-user (7.0.26-1ubuntu1.2) ...
root@preethi-HP-Pavilion-15-Notebook-PC:/home/preethi#
```

8. To start the tomcat7 server on the system run the command `my-instance /bin/startup.sh`



```
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi# my-instance/bin/startup.sh
Using CATALINA_BASE:   /home/preethi/my-instance
Using CATALINA_HOME:   /usr/share/tomcat7
Using CATALINA_TMPDIR: /home/preethi/my-instance/temp
Using JRE_HOME:        /usr/lib/jvm/java-6-openjdk
Using CLASSPATH:       /usr/share/tomcat7/bin/bootstrap.jar:/usr/share/tomcat7/bin/tomcat-juli.jar
Tomcat started
root@preethi-HP-Pavilion-15-Notebook-PC: /home/preethi#
```

9. To check if tomcat7 is working, go to web browser and enter the URL `<ip-address>:8080`. The default webpage of tomcat titled it works! appears on the screen.



10. To access the example web pages from the client type

<server-ip-address>/examples in the address bar of the web browser of the client.

