

1. Install Java

2. Download Apache Tomcat*

1. Visit the official Tomcat website: <https://tomcat.apache.org/>
2. Click on *Tomcat 10* (or your required version).
3. Under the *Core* section, download:
 - ✓*64-bit Windows zip* (Recommended for easy setup)

3. Extract and Set Up Tomcat*

1. Extract the downloaded .zip file to a preferred location, e.g., C:\Tomcat.
2. Your Tomcat directory structure should look like this:

```
C:\Tomcat
├── bin
├── conf
├── lib
├── logs
├── temp
├── webapps
├── work
└── LICENSE
```

4. Set Environment Variables*

1. Open *Command Prompt as Administrator*.
2. Set JAVA_HOME:
cmd
setx JAVA_HOME "C:\Program Files\Java\jdk-21"

3. Add Java to PATH:
cmd
setx PATH "%JAVA_HOME%\bin;%PATH%"

4. *Restart your system* to apply changes.

5. Verify:
cmd
echo %JAVA_HOME%
java -version

5. Start Tomcat Server

1. Open *Command Prompt* and go to the Tomcat bin folder:

```
cmd
cd C:\Tomcat\bin
```

2. Run Tomcat:

```
cmd
startup.bat
```

3. If startup.bat closes immediately,
try:

```
cmd
catalina.bat run
```

6. Access Tomcat in Browser*

- Open a browser and visit:

<http://localhost:8080>

- If the *Tomcat welcome page* appears, the setup is successful! ✓

7. (Optional) Change Default Port*

If another service is using port 8080:

1. Open C:\Tomcat\conf\server.xml.

2. Find:

```
xml
<Connector port="8080" protocol="HTTP/1.1" />
```

3. Change 8080 to another port like 9090.

4. Restart Tomcat and access it at <http://localhost:9090>.

Troubleshooting

If Tomcat doesn't start:

- ✓ Check C:\Tomcat\logs\catalina.out for errors.
- ✓ Ensure JAVA_HOME is set correctly.
- ✓ Run netstat -ano | findstr :8080 to check if port 8080 is in use.

Done! 🎉

Now, you can deploy web applications in C:\Tomcat\webapps\. Let me know if you need any help! 🙋

❖ Go to

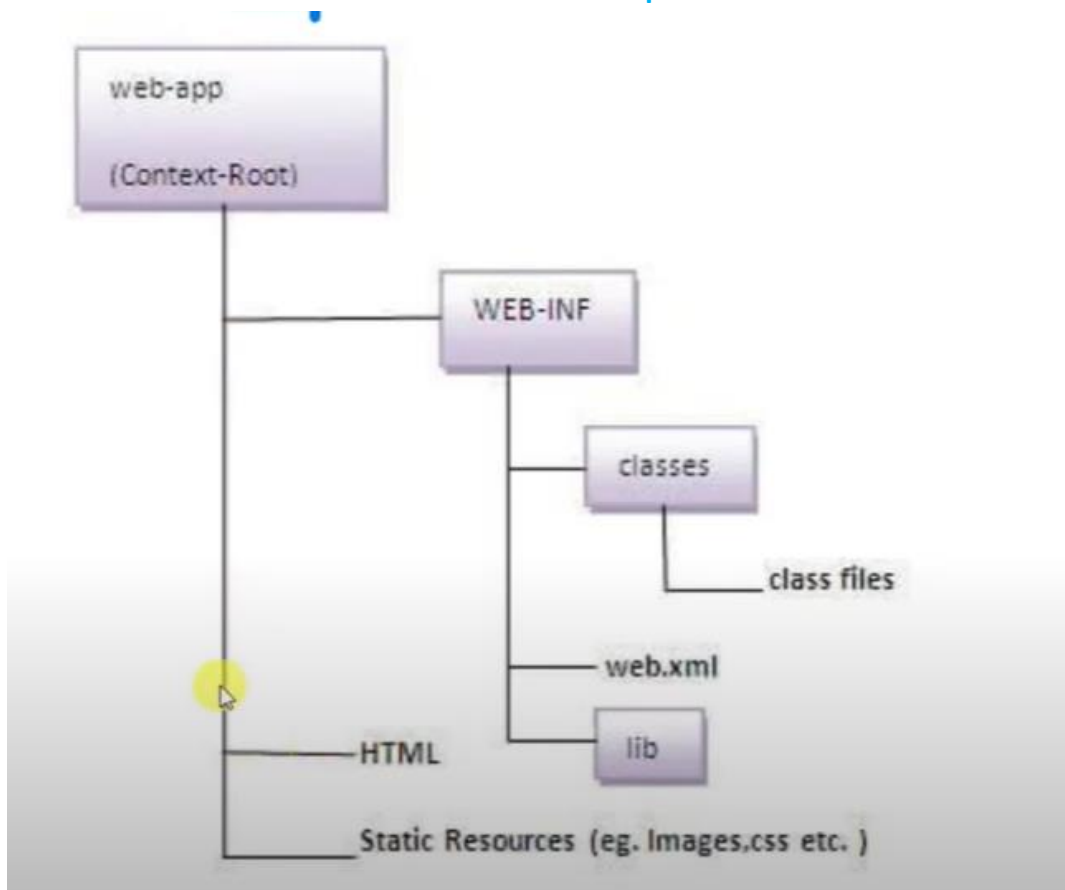
C:\apache-tomcat-9.0.102\conf\tomcat-users

Edit the file(tomcat-users)

```
tomcat-users - Notepad
File Edit Format View Help
<!--
  <role rolename="tomcat"/>
  <role rolename="role1"/>
  <user username="tomcat" password="<must-be-changed>" roles="tomcat"/>
  <user username="both" password="<must-be-changed>" roles="tomcat,role1"/>
  <user username="role1" password="<must-be-changed>" roles="role1"/>
-->
  <role rolename="manager-gui"/>
  <role rolename="admin"/>
  <user username="admin" password="admin" roles="admin,manager-gui"/>
</tomcat-users>
```

Save it

Create the folder with those files as show In the pic



Dump the folder in the

C:\apache-tomcat-9.0.102\webapps

(I had create the folder name as servlet)

{C:\apache-tomcat-9.0.102\webapps\servlet\WEB-INF\classes}

Now its time to execute

1. Open *Command Prompt* and go to the Tomcat bin folder:

cmd

cd C:\apache-tomcat-9.0.102\bin

2. Run Tomcat:

cmd

startup.bat

```
C:\apache-tomcat-9.0.102\bin>startup.bat
Using CATALINA_BASE:   "C:\apache-tomcat-9.0.102"
Using CATALINA_HOME:   "C:\apache-tomcat-9.0.102"
Using CATALINA_TMPDIR: "C:\apache-tomcat-9.0.102\temp"
Using JRE_HOME:        "C:\Program Files\Java\jdk-23.0.2"
Using CLASSPATH:       "C:\apache-tomcat-9.0.102\bin\bootstrap.jar;C:\apache-tomcat-9.0.102\bin\tomcat-juli.jar"
Using CATALINA_OPTS:   ""
C:\apache-tomcat-9.0.102\bin>

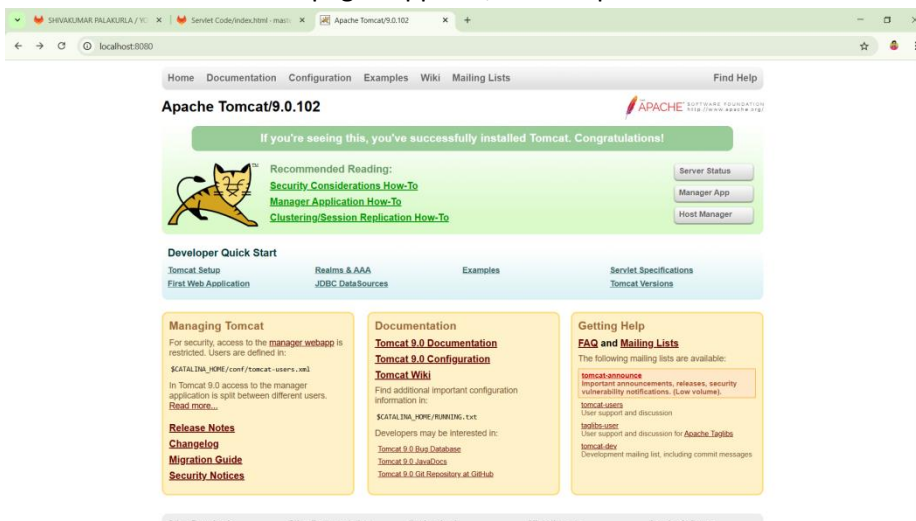
Tomcat
rectory [C:\apache-tomcat-9.0.102\webapps\servlet]
11-Mar-2025 10:18:26.145 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application
n directory [C:\apache-tomcat-9.0.102\webapps\servlet] has finished in [54] ms
11-Mar-2025 10:18:26.161 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["http-nio-8080"]
11-Mar-2025 10:18:26.210 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in [2736] milliseconds
```

Access Tomcat in Browser*

- Open a browser and visit:

http://localhost:8080

- If the *Tomcat welcome page* appears, the setup is successful! ✓



Click on [Manager app](#) (optional)

[Enter the user name and password](#) (optional)

Next execute the javafile

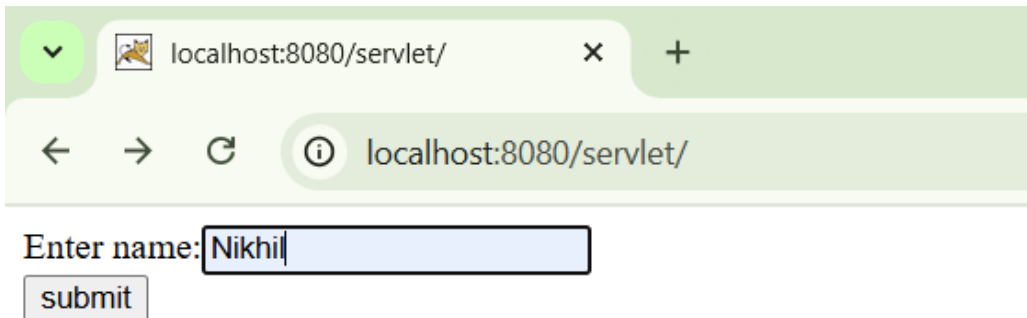
Execute this command

```
javac -cp "C:\apache-tomcat-9.0.102\lib\servlet-api.jar" TestServlet.java
```

```
C:\apache-tomcat-9.0.102\webapps\servlet\WEB-INF\classes>javac -cp "C:\apache-tomcat-9.0.102\lib\servlet-api.jar" TestServlet.java
```

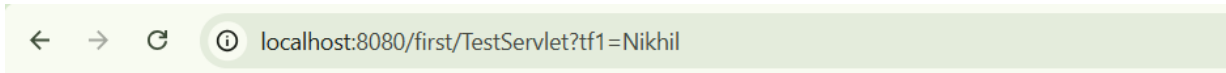
Execute this command in browser

<http://localhost:8080/servlet/>



localhost:8080/servlet/

Enter name:



localhost:8080/first/TestServlet?tf1=Nikhil

Welcome Nikhil

-----> (Or) we can execute in other way <-----

By Deploying the file using the warfile

Steps to create war file.

```

C:\Windows\System32\cmd.exe
(c) Microsoft Corporation. All rights reserved.

C:\apache-tomcat-9.0.102\webapps\servlet\WEB-INF\classes>javac -cp "C:\apache-tomcat-9.0.102\lib\servlet-api.jar" TestServlet.java

C:\apache-tomcat-9.0.102\webapps\servlet\WEB-INF\classes>cd ..

C:\apache-tomcat-9.0.102\webapps\servlet\WEB-INF>cd..

C:\apache-tomcat-9.0.102\webapps\servlet>jar cvf first.war .
added manifest
adding: WEB-INF/(in = 0) (out= 0)(stored 0%)
adding: WEB-INF/classes/(in = 0) (out= 0)(stored 0%)
adding: WEB-INF/classes/TestServlet.class(in = 1248) (out= 653)(deflated 47%)
adding: WEB-INF/classes/TestServlet.java(in = 389) (out= 235)(deflated 39%)
adding: WEB-INF/web.xml(in = 237) (out= 97)(deflated 59%)
adding: index.html(in = 140) (out= 109)(deflated 22%)

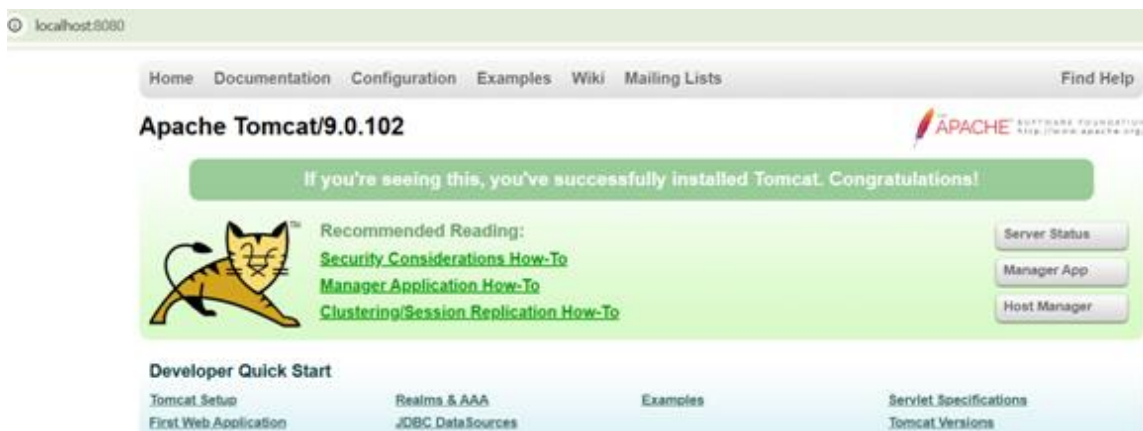
C:\apache-tomcat-9.0.102\webapps\servlet>_

```

War file will be generated.....in your file location {first.war}

C:\apache-tomcat-9.0.102\webapps\servlet\{first.war}

Back to the browser



Click on [Manager app](#)

Enter the user name and password

Next Select the generated war file

/docs	None specified	Tomcat Documentation	true	0	Start Expire
/examples	None specified	Servlet and JSP Examples	true	0	Start Expire
/first	None specified		true	0	Start Expire
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Expire
/manager	None specified	Tomcat Manager Application	true	1	Start S Expire
/servlet	None specified		true	0	Start Expire

Deploy

Deploy directory or WAR file located on server

Context Path:

Version (for parallel deployment):

XML Configuration file path:

WAR or Directory path:

Deploy

WAR file to deploy

Select WAR file to upload No file chosen

Deploy

C:\apache-tomcat-9.0.102\webapps\servlet\{first.war} click on deploy

/first	None specified		true	0	Start Stop Reloa Expire sessions wit Start Stop Reloa
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Now click on the /first It will execute

localhost:8080/first/

Enter name:

localhost:8080/first/TestServlet?tf1=Nikhil

Welcome Nikhil