

1:- apt install git openjdk-17-jdk maven tomcat9

Git/java/mvn --version (check karo)

Systemctl status tomcat9

Step 1: New Maven Project Create Karna (Agar Pehle Se Nahi Hai)

Agar tumhara Maven project nahi bana hai, toh yeh command run karo:

```
[ mvn archetype:generate -DgroupId=com.mycompany.app -DartifactId=mywebapp -DarchetypeArtifactId=maven-archetype-webapp -DinteractiveMode=false ]
```

Yeh ek basic Java web application create karega jisme index.jsp file hogi.

Check karo:

```
[ cd mywebapp
```

```
ls ]
```

Tumhe src/, pom.xml, aur web.xml files dikhengi.

Step 2: pom.xml Configure Karna

Edit pom.xml aur Tomcat Servlet API ka dependency add karo:

```
nano pom.xml
```

Aur <dependencies> tag ke andar yeh lines add karo:

```
<dependency>
```

```
  <groupId>javax.servlet</groupId>
```

```
  <artifactId>javax.servlet-api</artifactId>
```

```
  <version>4.0.1</version>
```

```
  <scope>provided</scope>
```

```
</dependency>
```

Aur

maven-war-plugin add karo:

<build> tag ke andar plugins ko define karo aur yeh lines add karo:

```
<build>
```

```
  <finalName>mywebapp</finalName>
```

```
<plugins>
  <plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-war-plugin</artifactId>
    <version>3.4.0</version> <!-- Latest version -->
  </plugin>
</plugins>
</build>
```

⚠ NOTE: Tumhe <build> tag me sirf finalName mila, lekin <plugins> nahi mila. Is wajah se maine <plugins> ka pura block add kiya hai.

File Save karo: CTRL + X dabao Y press karo (Yes ke liye) Enter dabao

Step 3: WAR File Build Karna:

```
[ mvn clean package ]
```

Ye command target/mywebapp.war file generate karega.

Step 4: WAR File Tomcat 9 me Deploy Karna:

```
[ sudo cp target/mywebapp.war /var/lib/tomcat9/webapps/ ]
```

Tomcat restart karo:

```
[ sudo systemctl restart tomcat9 ]
```

Step 5: Web App Browser Me Access Karna

Ab apne EC2 ka public IP use karke web app ko access karo:

```
[ http://<EC2-PUBLIC-IP>:8080/mywebapp/ ]
```

Agar index.jsp load ho jaye toh successfully deploy ho gaya!

🔧 Bonus: Tomcat Web Manager Enable Karna (Optional)

Agar tum GUI se deploy karna chahte ho toh Tomcat Web Manager enable karna hoga.

1.Tomcat Users Config Edit Karo:

[sudo nano /etc/tomcat9/tomcat-users.xml]

Aur <tomcat-users> tag ke andar yeh lines add karo:

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

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

Save (CTRL + X → Y → Enter).

2.Tomcat Restart Karo:

[sudo systemctl restart tomcat9]

3.Web Manager Access Karo:

[<http://<EC2-PUBLIC-IP>:8080/manager/html>]

Login with:

Username: admin

Password: password

🎯 **Final Checklist**

✓ Java, Maven, aur Tomcat install ho gaya

✓ Maven project create kiya aur WAR file generate ki

✓ WAR file Tomcat ke webapps/ folder me copy ki

✓ Tomcat restart karke web app browser me access kiya