

Web Application	Desktop application
Highly scalable	Need installation on every machine to increase scalability
Internet is needed	Internet is not required
Runs on web server	It runs on users machine
No location barrier	Can use only at local machine
Web application is collection pages	
J2EE, springMVC, Spring Boot	J2SE -Standard Edition

Steps for creating war file manually

1. Download tomcat on your machine (version 10.x)
<https://tomcat.apache.org/download-10.cgi> - from core---- download 64 bit windows zip file
2. Somewhere on your machine create folder by name javall
3. Unzip the file into javall folder
4. Goto environment variable ,Set JAVA_HOME ----- to folder where java is installed -----
C:\Program Files\Java\jdk1.8.0_161
Or
C:\Program Files\Java\jdk-17
5. Set path to %JAVA_HOME%\bin
6. For linux
Set TOMCAT_HOME="/home/user1/Java -ll\apache-tomcat-9.0.37-windows-x64\apache-tomcat-9.0.37
- 7.
8. Go to environment variables and create a new variable by name TOMCAT_HOME and assign vale to E:\apache-tomcat-10.1.33-windows-x64\apache-tomcat-10.1.33
9. To create war file
 - a. Create a folder by name myapp inside webapps folder (webapps is inside TOMCAT_HOME folder)
 - b. Inside myapp folder
 - i. Create a index.html file

```

<html>

<head>

</head>

<body>

<h1>Hello world!</h1>

</body>

</html>

```
 - ii. Create a file formdata.html

```

<html>

```

```

<head>

</head>

<body>

<h1>This is second file</h1>

<form>


    <label for="nm">Name: </label>

    <input type="text" name="nm" id="nm">

    <label for="em">email: </label>

    <input type="text" name="em" id="em">


    <label for="addr">adress: </label>

    <input type="text" name="addr" id="addr">


</form>

</body>

</html>

```

- iii. create a folder WEB-INF ----- inside WEB-INF folder add following
 - i. Create a folder lib
 - ii. Create a folder classes
 - iii. Create file web.xml copy following contents into the file


```

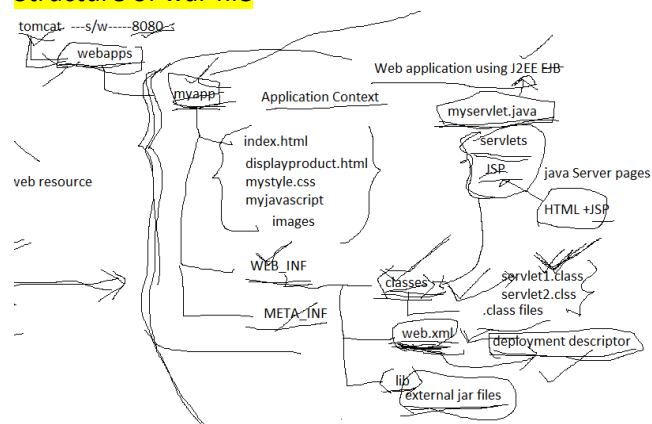
<?xml version="1.0" encoding="UTF-8"?>
<web-app
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://java.sun.com/xml/ns/javaee"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"
id="WebApp_ID" version="3.0">
  <display-name>MyHelloProject</display-name>
  <welcome-file-list>
    <welcome-file>index.html</welcome-file>
  </welcome-file-list>

</web-app>

```

- c. Open C:\mydata\Java -II\apache-tomcat-9.0.37-windows-x64\apache-tomcat-9.0.37\conf\tomcat-users.xml
Add following contents into the file
NOTE: The sample user and role entries below are wrapped in a comment and thus are ignored when reading this file. Do not forget to remove <!-- ... --> that surrounds them.
- ```
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="tomcat" roles="tomcat"/>
<user username="both" password="tomcat" roles="tomcat,role1"/>
<user username="role1" password="tomcat" roles="role1"/>
-->
<role rolename="manager-gui"/>
<user username="admin" password="" roles="manager-gui"/>
</tomcat-users>
```
- d. Open command prompt and change the directory to  
E:\apache-tomcat-10.1.33-windows-x64\apache-tomcat-10.1.33\bin  
E:\apache-tomcat-10.1.33-windows-x64\apache-tomcat-10.1.33\bin>startup.bat  
In linux use startup.sh
- e. Open browser and check whether home page of tomcat is visible
- Type url  
<http://localhost:8080/myapp/>  
This will display index.html  
Because it is added in welcome files list in web.xml file.
  - Type url  
<http://localhost:8080/myapp/formdata.html>  
it will display output of formdata.html
- f. You can click on manager app, enter username as admin, password is ""

### Structure of war file



Request and response



