Deploying Spring Boot application on external Tomcat Server

Steps to be follow to deploy the Spring Boot application on an external tomcat.

Steps:

1. Add dependency in **pom.xml** to exclude embedded tomcat so that we can further deploy our war file on external tomcat.

```xml
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-tomcat</artifactId>
    <version>3.0.1</version>
</dependency>
```

2. Define SpringMain class by extending SpringBootServletInitializer class and override configure () method.

```java
1  package com.valtech.health.app;
2
3  import org.springframework.boot.SpringApplication;
7
8  @SpringBootApplication
9  public class HealthAppApplication extends SpringBootServletInitializer {
10
11     public static void main(String[] args) {
12         SpringApplication.run(HealthAppApplication.class, args);
13     }
14
15     @Override
16     protected SpringApplicationBuilder configure(SpringApplicationBuilder application) {
17         return application.sources(HealthAppApplication.class);
18     }
19
20 }
```

3. Mention war as packaging and build the .war file application using maven build command.

Artifact

|	
Group Id:	com.valtech.healthapp.application
Artifact Id:	* valtech-health-application
Version:	0.0.1-SNAPSHOT
Packaging:	war

Name	Date modified	Type	Size
classes	1/6/2023 6:04 PM	File folder	
generated-sources	1/6/2023 5:02 PM	File folder	
generated-test-sources	1/6/2023 5:02 PM	File folder	
HealthApp	1/6/2023 5:26 PM	File folder	
m2e-wtp	1/6/2023 6:04 PM	File folder	
maven-archiver	1/6/2023 5:26 PM	File folder	
maven-status	1/6/2023 5:02 PM	File folder	
surefire-reports	1/6/2023 6:09 PM	File folder	
test-classes	1/6/2023 6:04 PM	File folder	
HealthApp.war	1/6/2023 6:19 PM	WAR File	51,654 KB
HealthApp.war.original	1/6/2023 6:19 PM	ORIGINAL File	46,517 KB

Note: .War file is located in target folder

4. Download the tomcat 8.5 and extract it.

Name	Date modified	Type	Size
bin	1/6/2023 5:38 PM	File folder	
conf	1/4/2023 5:26 PM	File folder	
lib	9/22/2022 11:59 AM	File folder	
logs	1/6/2023 5:38 PM	File folder	
temp	9/22/2022 11:59 AM	File folder	
webapps	1/6/2023 6:18 PM	File folder	
work	1/4/2023 5:26 PM	File folder	
BUILDING	8/8/2022 7:26 AM	Text Document	21 KB
CONTRIBUTING	8/8/2022 7:26 AM	Markdown Source...	7 KB
LICENSE	8/8/2022 7:26 AM	File	57 KB
NOTICE	8/8/2022 7:26 AM	File	2 KB
README	8/8/2022 7:26 AM	Markdown Source...	4 KB
RELEASE-NOTES	8/8/2022 7:26 AM	File	8 KB
RUNNING	8/8/2022 7:26 AM	Text Document	17 KB

5. Keep the war file in webapps folder.

Name	Date modified	Type	Size
docs	9/22/2022 11:59 AM	File folder	
examples	9/22/2022 12:01 PM	File folder	
HealthApp	1/6/2023 6:10 PM	File folder	
host-manager	9/22/2022 12:01 PM	File folder	
manager	9/22/2022 12:01 PM	File folder	
ROOT	9/22/2022 12:01 PM	File folder	
HealthApp.war	1/6/2023 6:19 PM	WAR File	51,654 KB

6. Run the startup file(Windows Batch file) in bin folder.

logger	1/6/2023 6:13 PM	Text Document	33 KB
logger.log.2023-01-04.0.gz	1/6/2023 5:38 PM	GZ File	4 KB
service	8/8/2022 7:26 AM	Windows Batch File	9 KB
setclasspath	8/8/2022 7:26 AM	Windows Batch File	4 KB
setclasspath	8/8/2022 7:26 AM	Shell Script	4 KB
shutdown	8/8/2022 7:26 AM	Windows Batch File	2 KB
shutdown	8/8/2022 7:26 AM	Shell Script	2 KB
startup	8/8/2022 7:26 AM	Windows Batch File	2 KB
startup	8/8/2022 7:26 AM	Shell Script	2 KB
tcnative-1.dll	8/8/2022 7:26 AM	Application exten...	2,552 KB
tomcat8	8/8/2022 7:26 AM	Application	140 KB
tomcat8w	8/8/2022 7:26 AM	Application	124 KB

7. Configure the tomcat-users file in conf file, add the users to manage the deployment.
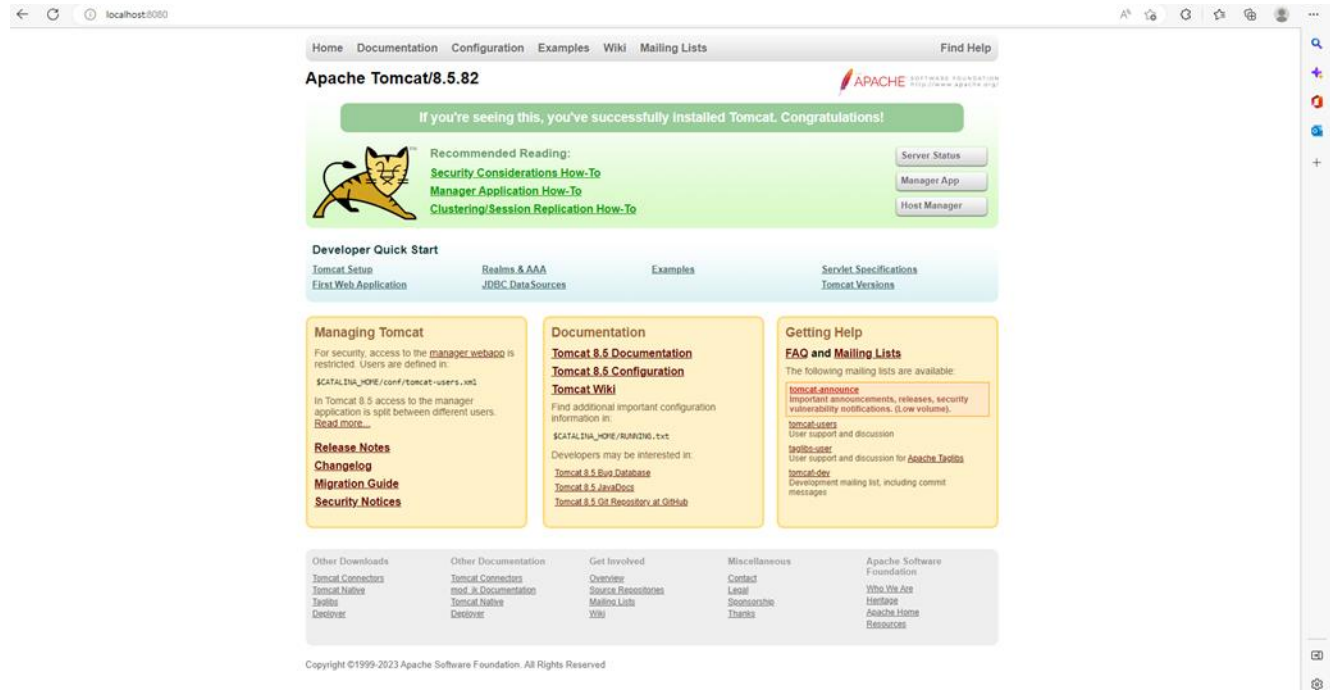
```
    The users below are wrapped in a comment and are therefore ignored. If you
    wish to configure one or more of these users for use with the manager web
    application, do not forget to remove the <!.. ..> that surrounds them. You
    will also need to set the passwords to something appropriate.
-->

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

8. You can start the tomcat server using command startup.bat

9. Open browser and type localhost:8080 to open Apache Tomcat/8.5.82 dashboard.

10. Click on manage apps and start the spring application on tomcat server.

11. Click on the application URL / HealthApp (i.e. war file name in webapps), mention application home URL http://localhost:8080/ HealthApp /home

Finally, the application is deployed on External Tomcat server.

Prerequisites to be followed to deploy in tomcat.

- Make sure you add the tomcat dependency in pom.xml.
- Then build the .war file and that will be created in target folder and You can name that war file using <finalName> HealthApp </finalName> in pom.xml inside build tag.

- The URL http://localhost:8080/ HealthApp /home here HealthApp is the name of the war file.