**Spring Boot Application: Running, Packaging and Deployment**

1. How to run a Spring Boot application outside the IDE:
   1. Simply open a command window or terminal
   2. cd to the project's root folder (e.g. c:\project-root>)
   3. Execute the command: c:\project-root> ***mvn spring-boot:run***
2. How to Package a Spring Boot Web application as an Executable JAR file for deployment:
   1. First, check the pom.xml file and make sure that it contains the setting: <packaging>jar</packaging>; if not then add it.
   2. To build the deployable/executable JAR, open a command window/terminal and run the cmd: ***mvn package***
   3. To run the JAR, execute the command: java -jar target/mymodule-0.0.1-SNAPSHOT.jar

(Note: This assumed to have cd-ed into the project root folder)

1. How to Package a Spring Boot Web application as an Executable WAR file for deployment to an external web container:
   1. First, a Spring Boot Web application needs to have certain special configurations to enable it to be packaged as a Web Application Archive ('war') file, for deployment to an external web container (such as Apache tomcat or a full-blown JavaEE app server like Oracle Weblogic, Redhat JBoss EAP or IBM WebSphere etc.)
   2. First, check the pom.xml file and make sure that it contains the setting: <packaging>war</packaging>; if not then add it.
   3. Add the following dependency:

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-tomcat</artifactId>

<scope>provided</scope>

</dependency>

* 1. update your application’s main class to extend SpringBootServletInitializer, as shown below:

@SpringBootApplication

**public** **class** Application **extends** SpringBootServletInitializer {

@Override

**protected** SpringApplicationBuilder configure(SpringApplicationBuilder application) {

**return** application.sources(Application.**class**);

}

**public** **static** **void** main(String[] args) {

SpringApplication.run(Application.**class**, args);

}

}

* 1. To build/package the app, on the command window/terminal, run the command, ***mvn clean package***
  2. Go to the target folder and copy out the .war file produced to the webapps sub-folder of your tomcat (or JavaEE app server) installation folder.
  3. Start your tomcat/app server and test by opening a browser and navigate to your webapp's homepage url.
  4. **Voila! The End**