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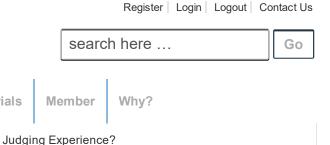
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01: Simple Spring Boot Tutorial in 8 steps

Posted on November 21, 2015 by Arulkumaran Kumaraswamipillai

Assumes that your Java, Maven, and eclipse are set up as per: Setting up Java, Maven, and eclipse

Step 1: Create a simple maven project using the maven "archetype" plugin.

```
1 mvn archetype:generate -DgroupId=com.mytutorial -
2
```

The above command creates a folder "simple-spring-boot"

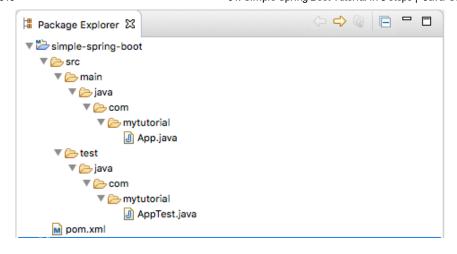


Step 2: import it into eclipse by choosing File -> Import -> Maven -> Existing Maven projects and select the folder "simple-spring-boot" you had just created with Maven.

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 - on to oping
 - -01b: ♦ 13 Spring
 - -02: ► Spring DII
 - -03: ♥♦ Spring DI
 - . .
 - -04 ♦ 17 Spring b



Check "Maven Dependencies":

```
    ▼ ■ Maven Dependencies
    □ junit-3.8.1.jar - /Users/arulk/.m2/repository/junit/junit/3.8.1
```

Step 3: Add Spring boot dependency "spring-boot-starter-actuator"

```
1
2
3
   4
       xsi:schemaLocation="http://maven.apache.org/
5
       <modelVersion>4.0.0</modelVersion>
6
       <groupId>com.mytutorial
7
       <artifactId>simple-spring-boot</artifactId>
8
       <packaging>jar</packaging>
       <version>1.0-SNAPSHOT</version>
9
10
       <name>simple-spring-boot</name>
11
       <url>http://maven.apache.org</url>
12
13
       <parent>
14
          <groupId>org.springframework.boot</group</pre>
15
          <artifactId>spring-boot-starter-parent</
16
          <version>1.3.0.RELEASE
17
       </parent>
18
19
       <dependencies>
20
          <dependency>
21
              <groupId>junit
22
              <artifactId>junit</artifactId>
23
              <scope>test</scope>
24
          </dependency>
25
26
          <dependency>
27
              <groupId>org.springframework.boot
28
              <artifactId>spring-boot-starter-actu
          </dependency>
29
30
       </dependencies>
31
32 </project>
33
34
```

16 Technical Key Areas

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Note: The "parent" tag and the "dependency" tags having spring boot references.

What if you want to extend a different company level parent project?

You can use the Spring IO BOM (Bill Of Material) config

Note: dependency "spring-boot-dependencies" and the plugin "spring-boot-maven-plugin" with "**repackage**" goal.

```
2
   xsi:schemaLocation="http://maven.apache.org/
4
       <modelVersion>4.0.0</modelVersion>
5
       <groupId>com.mytutorial
6
       <artifactId>simple-spring-boot</artifactId>
       <packaging>jar</packaging>
<version>1.0-SNAPSHOT</version>
7
8
9
       <name>simple-spring-boot</name>
10
       <url>http://maven.apache.org</url>
11
12
       <dependencyManagement>
13
           <dependencies>
14
               <dependency>
15
                    <!-- Import dependency managemen
16
                    <groupId>org.springframework.boo
17
                   <artifactId>spring-boot-dependen
18
                   <version>1.3.0.RELEASE
19
                   <type>pom</type>
20
                    <scope>import</scope>
21
               </dependency>
22
           </dependencies>
23
       </dependencyManagement>
24
25
       <dependencies>
26
           <dependency>
27
               <groupId>junit</groupId>
28
               <artifactId>junit</artifactId>
29
               <scope>test</scope>
30
           </dependency>
31
32
           <dependency>
33
               <groupId>org.springframework.boot</q</pre>
34
               <artifactId>spring-boot-starter-web<</pre>
35
           </dependency>
       </dependencies>
36
37
38
       <build>
39
           <plugins>
40
               <plugin>
41
                          Build an executable jar --
42
                   <groupId>org.apache.maven.plugin
43
                   <artifactId>maven-jar-plugin</ar</pre>
44
                   <configuration>
45
                        <archive>
```

```
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- 4 What is Wishig With th
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- Written Test JEE (1)

```
<manifest>
46
47
                                 <addClasspath>true</
48
                                 <classpathPrefix>lib
49
                                 <mainClass>com.mytut
50
                             </manifest>
51
                        </archive>
52
                    </configuration>
53
                </plugin>
54
                <plugin>
55
                    <groupId>org.springframework.boo
56
                    <artifactId>spring-boot-maven-pl
57
                    <version>1.3.0.RELEASE
58
                    <executions>
59
                        <execution>
60
                             <goals>
61
                                 <goal>repackage</goal
62
                             </aoals>
63
                        </execution>
64
                    </executions>
65
                </plugin>
           </plugins>
66
       </build>
67
68
69 </project>
70
```

How good are your?

open all | close all

- Career Making Know-

Step 4:Run the "mvn package" command.

```
1
2 c:/projects/simple-spring-boot> mvn package
3 c:/projects/simple-spring-boot> mvn eclipse:eclip
```

Check "Maven Dependencies": "spring-bootstarter-actuator" has added

May have to click "F5" within eclipse to refersh the projects.

Step 5: Modify the "App.java" as shown below

```
2
   package com.mytutorial;
3
4
   import org.springframework.boot.autoconfigure.En
5
   import org.springframework.context.annotation.Co
6
   import org.springframework.context.annotation.Co
8
   @Configuration
9
   @EnableAutoConfiguration
10 @ComponentScan
11
12 public class App
13
14
       public static void main( String∏ args )
15
           System.out.println( "Hello Spring Boot!"
16
17
18
```

Step 6: To run the jar file, you need to create a "**META-INF/MANIFEST.MF**" file. Using the maven jar plugin to generate the "MANIFEST.MF" file.

```
2
   3
       xsi:schemaLocation="http://maven.apache.org/
4
       <modelVersion>4.0.0</modelVersion>
5
       <groupId>com.mytutorial
6
       <artifactId>simple-spring-boot</artifactId>
7
       <packaging>jar</packaging>
8
       <version>1.0-SNAPSHOT</version>
9
       <name>simple-spring-boot</name>
10
       <url>http://maven.apache.org</url>
11
12
       <parent>
13
           <groupId>org.springframework.boot</group</pre>
14
           <artifactId>spring-boot-starter-parent
15
           <version>1.3.0.RELEASE</version>
16
       </parent>
17
18
       <dependencies>
19
           <dependency>
20
               <groupId>junit
21
               <artifactId>junit</artifactId>
22
               <scope>test</scope>
23
           </dependency>
24
25
           <dependency>
26
               <groupId>org.springframework.boot
27
               <artifactId>spring-boot-starter-actu
28
           </dependency>
29
       </dependencies>
30
31
       <build>
32
           <plugins>
33
               <plugin>
34
                   <!-- Build an executable JAR -->
35
                  <groupId>org.apache.maven.plugin
36
                  <artifactId>maven-jar-plugin</ar
37
                  <configuration>
```

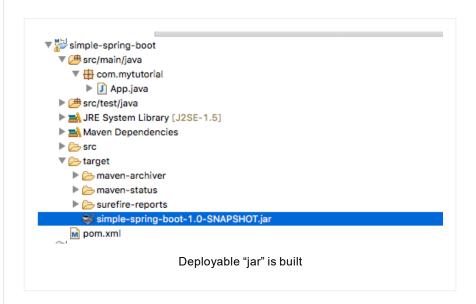
```
38
                         <archive>
39
                             <manifest>
40
                                  <addClasspath>true</
41
                                  <classpathPrefix>lib
42
                                  <mainClass>com.mytut
43
                             </manifest>
44
                         </archive>
45
                     </configuration>
46
                </plugin>
47
                <plugin>
48
                     <groupId>org.springframework.boo
49
                     <artifactId>spring-boot-maven-pl
50
                </plugin>
51
            </plugins>
52
       </build>
53
54
   </project>
55
56
57
```

Note: "<mainClass>com.mytutorial.App</mainClass>"

Step 7: Ready to build the "jar" now.

```
1
2 c:/projects/simple-spring-boot> mvn package
3
```

The "target" directory will have the jar file "simple-spring-boot-1.0-SNAPSHOT.jar"



Step 8: Deploy the very simple Spring boot application & run as shown below

right-click on the jar, and then select "properties" to get the full file path of the jar file.

"c:/projects/simple-spring-boot/target/simple-spring-boot-1.0-SNAPSHOT.jar"

```
1
2 c:/projects/simple-spring-boot>java -jar c:/proje
```

Output:

Hello Spring Boot!

Conclusion:

If you look at the packaged "simple-spring-boot-1.0-SNAPSHOT.jar" with "jar -tvf simple-spring-boot-1.0-SNAPSHOT.jar", you will get

```
### Fr. Nov. 28 22:03:04.8 ABD7 2015 NCTA-DBF/
20 Fr. Nov. 28 22:03:04.8 ABD7 2015 NCTA-DBF/MAITEST.MF

### Fr. Nov. 28 22:02:03:04.8 ABD7 2015 Com/protorials/
### Fr. Nov. 28 22:02:03.2 ABD7 2015 Com/protorials/
### Fr. Nov. 28 22:02:03.2 ABD7 2015 NCTA-DBF/MAITEST.MF

### Fr. Nov. 28 22:03:03.2 ABD7 2015 NCTA-DBF/MAITEST.MF

### Fr. Nov. 28 22:03.2 ABD7 2015 NCTA-DBF/MAITEST.MF

### Fr. Nov. 28 22:03.2 ABD7 2015 NCTA
```

Java does not provide any standard way to load nested jar files, so we use "uber" jars. An uber jar simply packages all classes, from all jars, into a single archive. The following plugin creates an uber jar.

In the next tutorial I will expand this to a simple "RESTful" web service. Simple Spring Boot Restful Web Service Tutorial

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