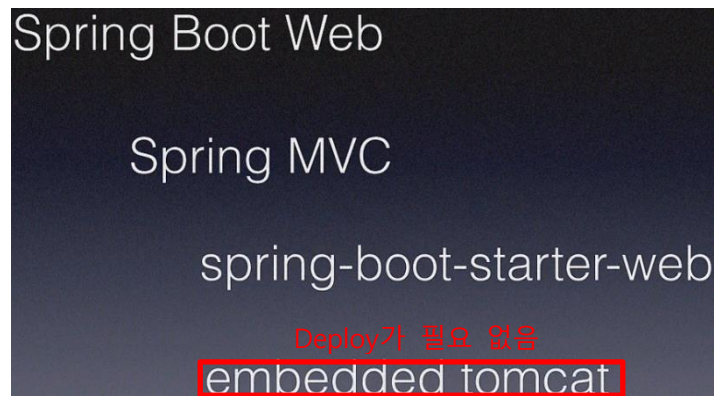
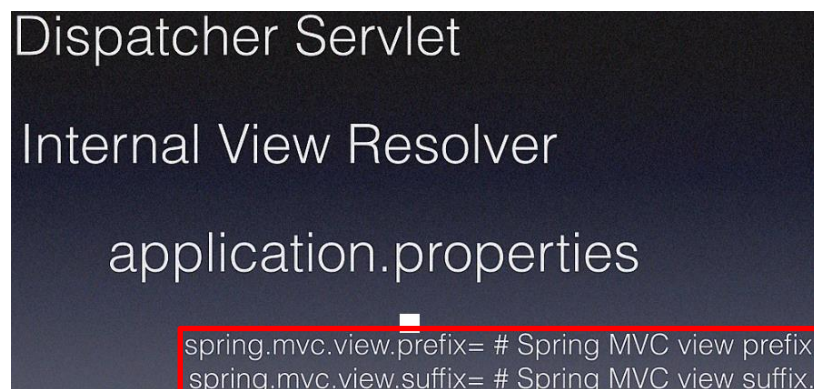


1. 소개



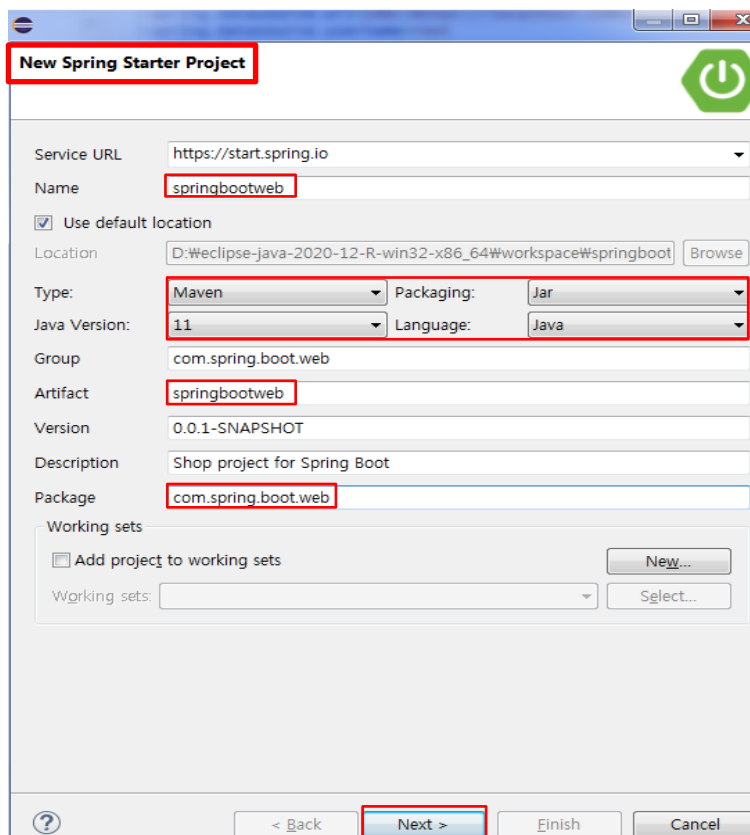
- Dispatcher Servlet, Internal View Resolver 설정이 필요 없음
- Spring starter web dependency를 사용해 시작하면, 스프링은 모든 웹의 모든 설정을 자동화 해줌
- 뷰 리졸버를 커스텀하게 설정하고 싶다면, 단순하게 application.properties를 사용할 수 있음



프로퍼티 참조 사이트: <https://docs.spring.io/spring-boot/docs/current/reference/html/application-properties.html>

2. 스프링 MVC 프로젝트 만들기

가. 프로젝트 만들기



The 'New Spring Starter Project' dialog in Eclipse IDE. The title bar is highlighted with a red box. The 'Name' field contains 'springbootweb' and is highlighted. The 'Type' is 'Maven', 'Packaging' is 'Jar', 'Java Version' is '11', and 'Language' is 'Java'; these four fields are grouped and highlighted with a red box. The 'Artifact' field also contains 'springbootweb' and is highlighted. The 'Package' field contains 'com.spring.boot.web' and is highlighted. The 'Next >' button at the bottom is highlighted with a red box.

New Spring Starter Project

Service URL:

Name:

☒ Use default location

Location:

Type: Packaging:

Java Version: Language:

Group:

Artifact:

Version:

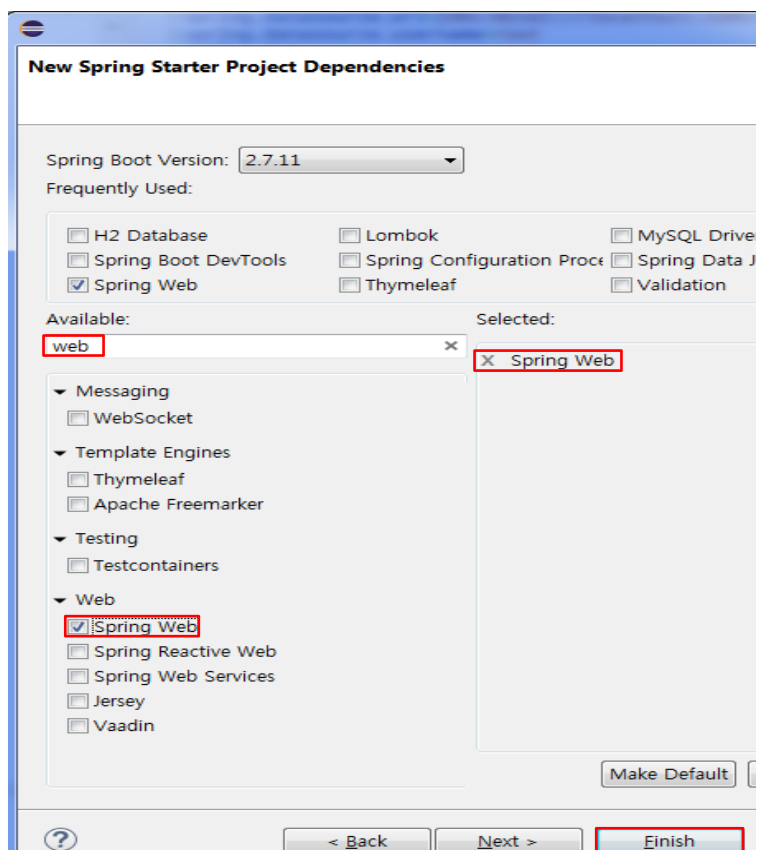
Description:

Package:

Working sets

☐ Add project to working sets

Working sets:



The 'New Spring Starter Project Dependencies' dialog. The 'Spring Boot Version' is '2.7.11'. Under 'Frequently Used', 'Spring Web' is checked. In the 'Available' list, 'web' is selected in the search box, and 'Spring Web' is checked. In the 'Selected' list, 'Spring Web' is shown. The 'Finish' button at the bottom is highlighted with a red box.

New Spring Starter Project Dependencies

Spring Boot Version:

Frequently Used:

<input type="checkbox"/> H2 Database	<input type="checkbox"/> Lombok	<input type="checkbox"/> MySQL Drive
<input type="checkbox"/> Spring Boot DevTools	<input type="checkbox"/> Spring Configuration Proc	<input type="checkbox"/> Spring Data J
<input checked="" type="checkbox"/> Spring Web	<input type="checkbox"/> Thymeleaf	<input type="checkbox"/> Validation

Available: Selected:

Available dependencies:

- Messaging
 - ☐ WebSocket
- Template Engines
 - ☐ Thymeleaf
 - ☐ Apache Freemarker
- Testing
 - ☐ Testcontainers
- Web
 - ☒ Spring Web
 - ☐ Spring Reactive Web
 - ☐ Spring Web Services
 - ☐ Jersey
 - ☐ Vaadin

springbootweb [boot]

- src/main/java
 - com.spring.boot.web
 - SpringbootwebApplication.java
- src/main/resources
 - static 정적 페이지
 - templates 동적 페이지: 템플릿 엔진
 - application.properties
- src/test/java
- JRE System Library [JavaSE-11]
- Maven Dependencies
- src
 - main
 - test
- target
- HELP.md
- mvnw
- mvnw.cmd
- pom.xml**

```

springbootweb/pom.xml
1 <?xml version="1.0" encoding="UTF-8"?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/maven-v4_0_0.xsd">
4   <modelVersion>4.0.0</modelVersion>
5   <parent>
6     <groupId>org.springframework.boot</groupId>
7     <artifactId>spring-boot-starter-parent</artifactId>
8     <version>2.7.11</version>
9     <relativePath/> <!-- lookup parent from repository -->
10  </parent>
11  <groupId>com.spring.boot.web</groupId>
12  <artifactId>springbootweb</artifactId>
13  <version>0.0.1-SNAPSHOT</version>
14  <name>springbootweb</name>
15  <description>Shop project for Spring Boot</description>
16  <properties>
17    <java.version>11</java.version>
18  </properties>
19  <dependencies>
20    <dependency>
21      <groupId>org.springframework.boot</groupId>
22      <artifactId>spring-boot-starter-web</artifactId>
23    </dependency>
24    <dependency>
25      <groupId>org.springframework.boot</groupId>
26      <artifactId>spring-boot-starter-test</artifactId>
27      <scope>test</scope>
28    </dependency>
29  </dependencies>
30  <build>
31    <plugins>
32      <plugin>
33        <groupId>org.springframework.boot</groupId>
34        <artifactId>spring-boot-maven-plugin</artifactId>
35      </plugin>
36    </plugins>
37  </build>
38  </project>

```

나. pom.xml 수정: 한글처리

springbootweb/pom.xml

- src/main/java
- src/main/resources
- src/test/java
- JRE System Library [JavaSE-11]
- Maven Dependencies
- src
 - main
 - test
- target
- HELP.md
- mvnw
- mvnw.cmd
- pom.xml**

```

springbootweb/pom.xml
1 <?xml version="1.0" encoding="UTF-8"?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/maven-v4_0_0.xsd">
4   <modelVersion>4.0.0</modelVersion>
5   <parent>
6     <groupId>org.springframework.boot</groupId>
7     <artifactId>spring-boot-starter-parent</artifactId>
8     <version>2.7.11</version>
9     <relativePath/> <!-- lookup parent from repository -->
10  </parent>
11  <groupId>com.spring.boot.web</groupId>
12  <artifactId>springbootweb</artifactId>
13  <version>0.0.1-SNAPSHOT</version>
14  <name>springbootweb</name>
15  <description>Shop project for Spring Boot</description>
16  <properties>
17    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
18    <project.reporting.outputEncoding>UTF-8</project.reporting.outputEncoding>
19    <java.version>11</java.version>
20  </properties>

```

3. 컨트롤러 만들기
4. 애플리케이션 실행
5. 애플리케이션 컨텍스트 패스(context path) 설정하기

```
application.properties  SpringbootwebApplication.java
1 server.port=8081
2 server.servlet.context-path=/springbootweb
```

Boot 1.X 에서는 server.context-path

Boot 2.X 이상에서는 server.servlet.context-path



```
SpringbootwebApplication [Java Application]

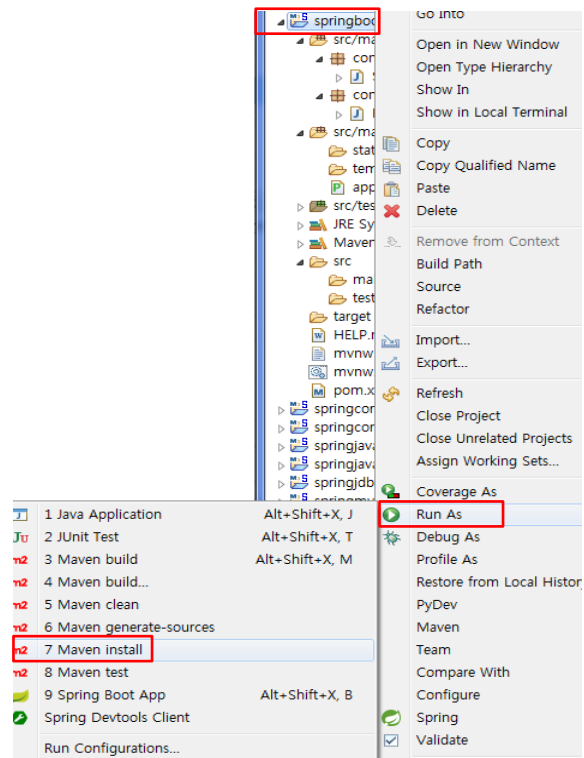
.web.SpringbootwebApplication : Starting SpringbootwebApplication using Java 11.0.16.1 on VIP-PC with PID
.web.SpringbootwebApplication : No active profile set, falling back to 1 default profile: "default"
embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8081 (http)
.catalina.core.StandardService : Starting service [Tomcat]
he.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.74]
C.[./springbootweb] : Initializing Spring embedded WebApplicationContext
rvletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1316 ms
embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8081 (http) with context path '/springbootweb'
.web.SpringbootwebApplication : Started SpringbootwebApplication in 2.286 seconds (JVM running for 2.709)
```

← → ↺ ⓘ localhost:8081/springbootweb/hello?name=김형태

hello 김형태

6. Wars 대신 Jars로

가. 배포본 만들기



```

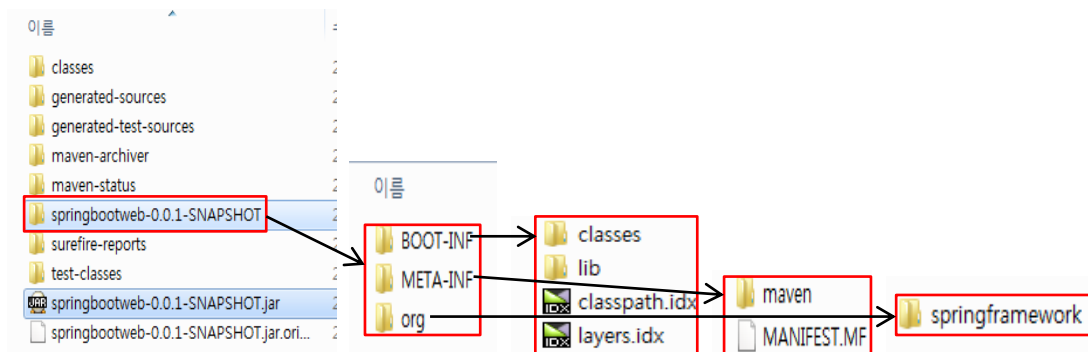
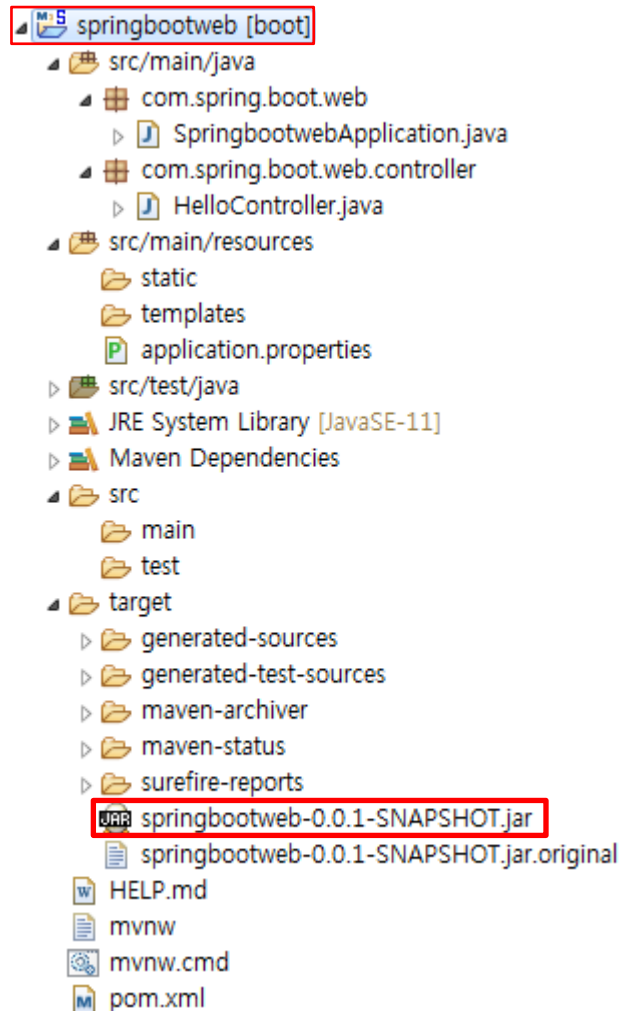
Console Progress Problems Servers
<terminated> D:\Java\jdk-11.0.16\bin\javaw.exe (2023. 4. 26. 오후 8:27:43)
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:D:/eclipse-java-2020-12-R-win32-x86_64/plugins/org.eclipse.m2e.maven.runtime.sl
SLF4J: Found binding in [file:D:/eclipse-java-2020-12-R-win32-x86_64/configuration/org.eclipse.osgi/5/0/.cp/org/s
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.slf4j.impl.SimpleLoggerFactory]
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:D:/eclipse-java-2020-12-R-win32-x86_64/plugins/org.eclipse.m2e.maven.runtime.sl
SLF4J: Found binding in [file:D:/eclipse-java-2020-12-R-win32-x86_64/configuration/org.eclipse.osgi/5/0/.cp/org/s
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.slf4j.impl.SimpleLoggerFactory]
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.spring.boot.web.springbootweb >-----
[INFO] Building springbootweb 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:resources (default-resources) @ springbootweb ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] Copying 1 resource
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.10.1:compile (default-compile) @ springbootweb ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target\classes
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:testResources (default-testResources) @ springbootweb ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\src\test
[INFO]
[INFO] --- maven-compiler-plugin:3.10.1:testCompile (default-testCompile) @ springbootweb ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.22.2:test (default-test) @ springbootweb ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.spring.boot.web.springbootwebApplicationTests
20:27:48.384 [main] DEBUG org.springframework.test.context.BootstrapUtils - Instantiating CacheAwareContextLoaderDe
20:27:48.402 [main] DEBUG org.springframework.test.context.BootstrapUtils - Instantiating BootstrapContext using c
20:27:48.436 [main] DEBUG org.springframework.test.context.BootstrapUtils - Instantiating TestContextBootstrapper
20:27:48.447 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper - Neither @Contex
20:27:48.450 [main] DEBUG org.springframework.test.context.support.AbstractContextLoader - Did not detect default
20:27:48.451 [main] DEBUG org.springframework.test.context.support.AbstractContextLoader - Did not detect default
20:27:48.451 [main] INFO org.springframework.test.context.support.AbstractContextLoader - Could not detect default
20:27:48.451 [main] INFO org.springframework.test.context.support.AnnotationConfigContextLoaderUtils - Could not d
20:27:48.504 [main] DEBUG org.springframework.test.context.support.ActiveProfilesUtils - Could not find an 'annota
20:27:48.563 [main] DEBUG org.springframework.context.annotation.ClassPathScanningCandidateComponentProvider - Ide
20:27:48.565 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper - Found @SpringBo
20:27:48.668 [main] DEBUG org.springframework.boot.test.context.SpringBootTestContextBootstrapper - @TestExecution
20:27:48.669 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper - Loaded default
20:27:48.684 [main] DEBUG org.springframework.boot.test.context.SpringBootTestContextBootstrapper - Skipping candi
20:27:48.685 [main] DEBUG org.springframework.boot.test.context.SpringBootTestContextBootstrapper - Skipping candi
20:27:48.685 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper - Using TestExecu
20:27:48.689 [main] DEBUG org.springframework.test.context.support.AbstractDirtiesContextTestExecutionListener - B

:: Spring Boot ::
(v2.7.11)

2023-04-26 20:27:49.117 INFO 5204 --- [main] c.s.b.web.springbootwebApplicationTests : Starting Sprin
2023-04-26 20:27:49.119 INFO 5204 --- [main] c.s.b.web.springbootwebApplicationTests : No active prof
2023-04-26 20:27:50.758 INFO 5204 --- [main] c.s.b.web.springbootwebApplicationTests : Started Spring
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 2.747 s - in com.spring.boot.web.springboot
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-jar-plugin:3.2.2:jar (default-jar) @ springbootweb ---
[INFO] Building jar: D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target\springbootweb-0.0.1-SNA
[INFO]
[INFO] --- spring-boot-maven-plugin:2.7.11:repackage (repackage) @ springbootweb ---
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-buildpack-plat
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-buildpack-platf
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-loader-tools/2
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-loader-tools/2
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-buildpack-platf
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-buildpack-platf
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-loader-tools/2
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-loader-tools/2
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-buildpack-platf
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-buildpack-platf
[INFO] Replacing main artifact with repackaged archive
[INFO]
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ springbootweb ---
[INFO] Installing D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target\springbootweb-0.0.1-SNAPSH
[INFO] Installing D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\pom.xml to C:\Users\VIP\m2\repos
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 8.751 s
[INFO] Finished at: 2023-04-26T20:27:53+09:00
[INFO]
[WARNING] The requested profile "pom.xml" could not be activated because it does not exist.

```

나. 배포본 실행 가능 JAR 파일 확인



다. JAR 파일 실행

```
cmd - java -jar springbootweb-0.0.1-SNAPSHOT.jar

$ cd D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target

VIP@VIP-PC D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target
$ dir
D 드라이브의 볼륨: 새 볼륨
볼륨 일련 번호: 3ACF-E30F

D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target 디렉터리

2023-04-26 오후 08:44 <DIR> .
2023-04-26 오후 08:44 <DIR> ..
2023-04-26 오후 06:43 <DIR> classes
2023-04-26 오후 08:27 <DIR> generated-sources
2023-04-26 오후 08:27 <DIR> generated-test-sources
2023-04-26 오후 08:27 <DIR> maven-archiver
2023-04-26 오후 08:27 <DIR> maven-status
2023-04-26 오후 08:27 17,685,963 springbootweb-0.0.1-SNAPSHOT.jar
2023-04-26 오후 08:27 4,004 springbootweb-0.0.1-SNAPSHOT.jar.original
2023-04-26 오후 08:27 <DIR> surefire-reports
2023-04-26 오후 06:43 <DIR> test-classes
                2개 파일            17,689,967 바이트
                9개 디렉터리 256,706,396,160 바이트 남음

VIP@VIP-PC D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target
$ java -jar springbootweb-0.0.1-SNAPSHOT.jar
```

라. 실행 로그 확인

```

  ____ _
 / ___ \| | | |
/ /   \| |_| |
\ \   /| | | |
 \___/\_|_|_|_|
:: Spring Boot :: (v2.7.11)

2023-04-26 20:49:08.391 INFO 5312 --- [main] c.s.boot.web.SpringbootwebApplication : Starting SpringbootwebApplication v0.0.1-SNAPSHOT using Java 11.0.16.1 on VIP-PC with PID 5312 (D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target\springbootweb-0.0.1-SNAPSHOT.jar started by VIP in D:\eclipse-java-2020-12-R-win32-x86_64\workspace\springbootweb\target)
2023-04-26 20:49:08.396 INFO 5312 --- [main] c.s.boot.web.SpringbootwebApplication : No active profile set, falling back to 1 default profile: "default"
2023-04-26 20:49:09.690 INFO 5312 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8081 (http)
2023-04-26 20:49:09.705 INFO 5312 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2023-04-26 20:49:09.705 INFO 5312 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.74]
2023-04-26 20:49:09.797 INFO 5312 --- [main] o.a.c.c.C.[.[[/springbootweb] : Initializing Spring embedded WebApplicationContext
2023-04-26 20:49:09.798 INFO 5312 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1324 ms
2023-04-26 20:49:10.190 INFO 5312 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8081 (http) with context path '/springbootweb'
2023-04-26 20:49:10.204 INFO 5312 --- [main] c.s.boot.web.SpringbootwebApplication : Started SpringbootwebApplication in 2.386 seconds (JVM running for 2.87)
```

마. 웹 브라우저 실행

```
← → ↻ ⓘ localhost:8081/springbootweb/hello?name=김형태

hello 김형태
```