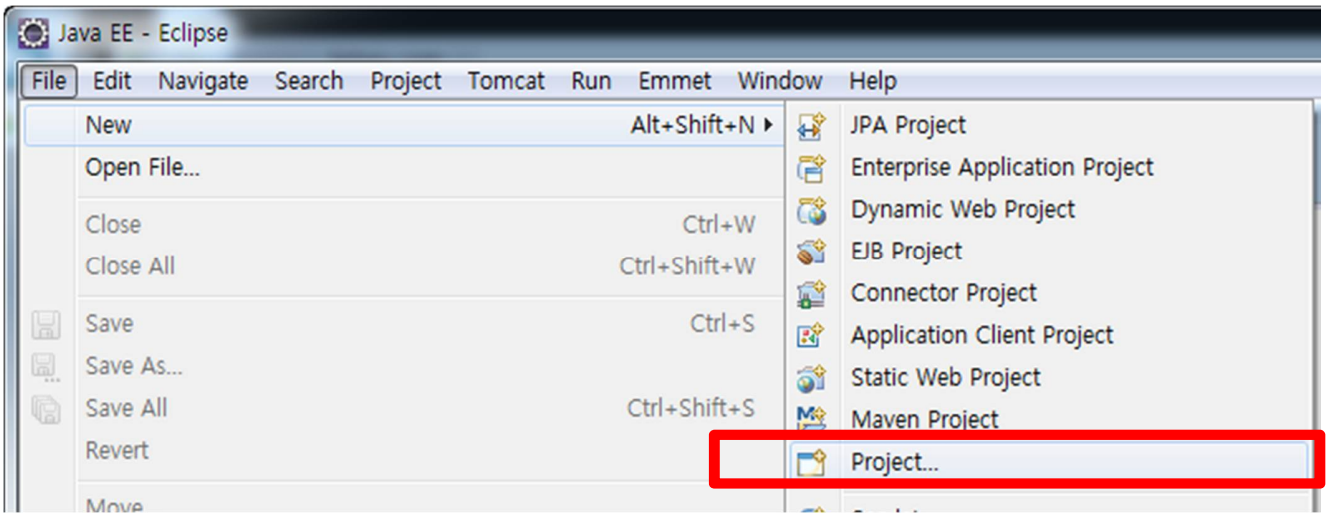
st01.이클립스로 Spring Web 프로젝트 생성

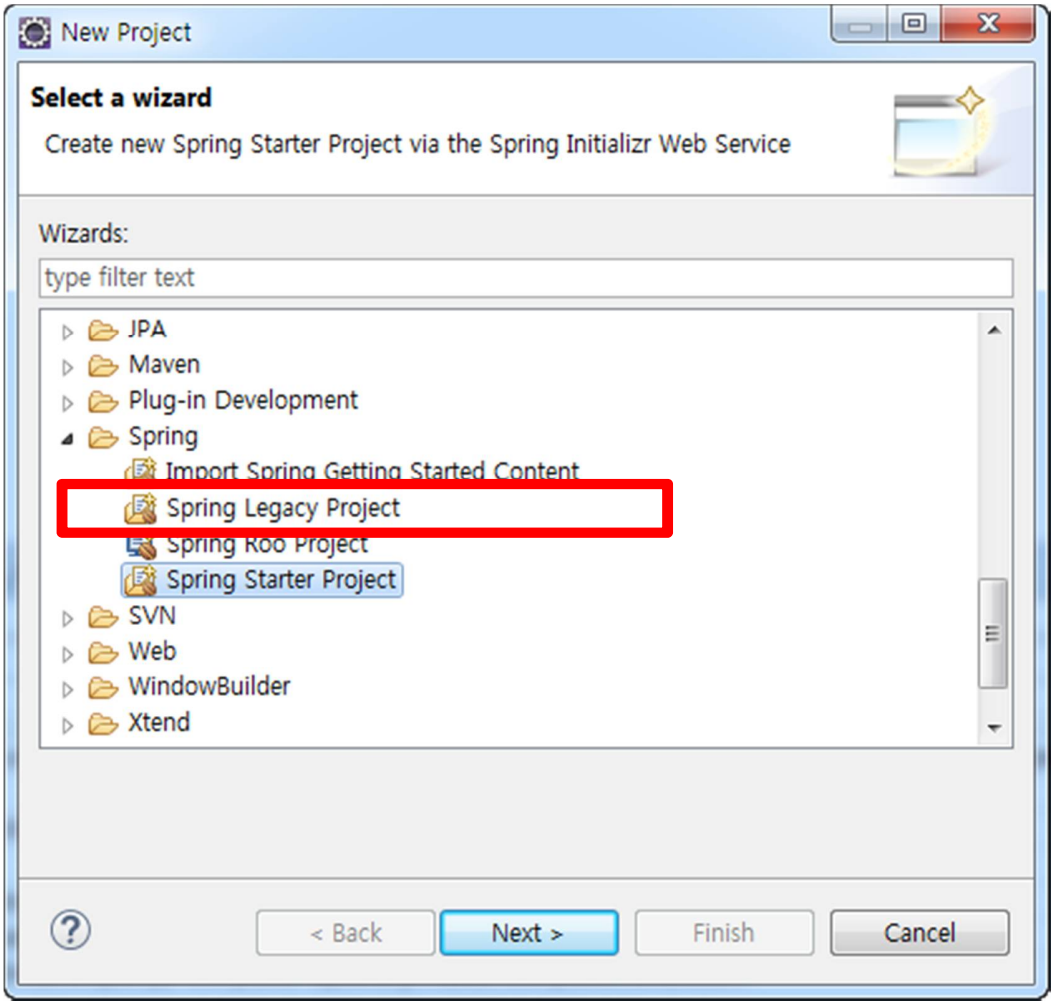
목차

1. 스프링 프로젝트 생성 & 실행

- File > New > Other 를 선택 후 아래와 같이 spring project 를 하나 생성해보자.

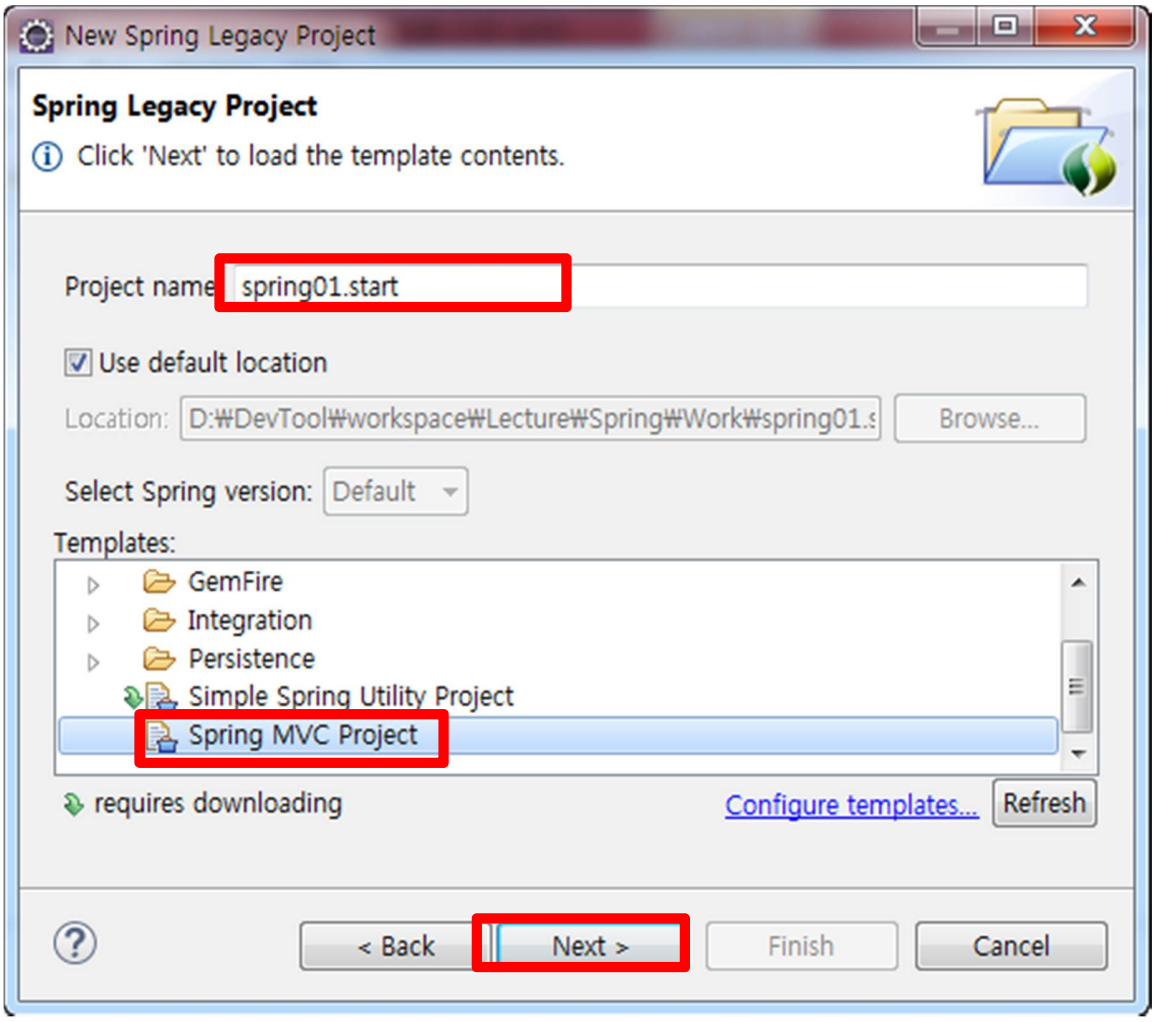


- Sping Legacy Project 를 선택

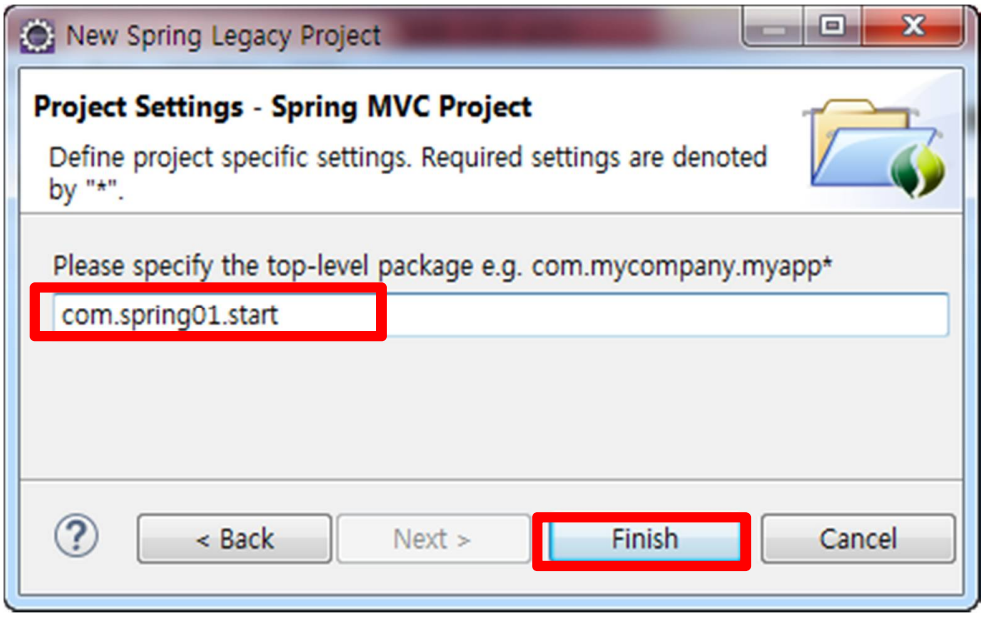


st01.이클립스로 Spring Web 프로젝트 생성

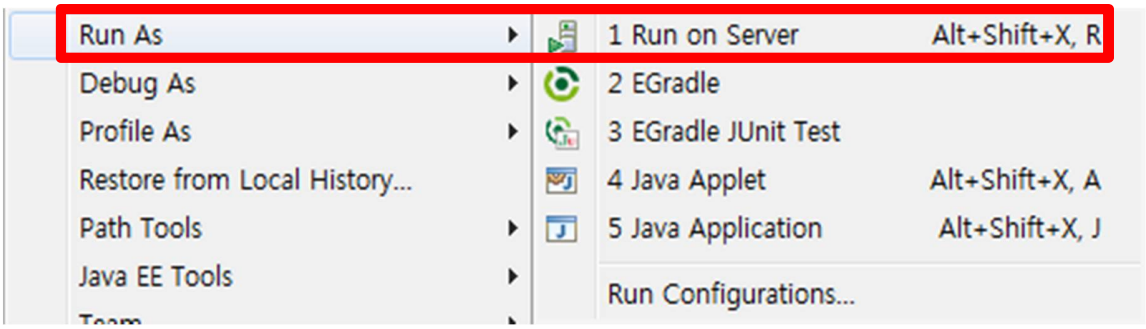
- Spring Project 를 생성 시 아래를 보면..Spring MVC Projcet 가 있다.



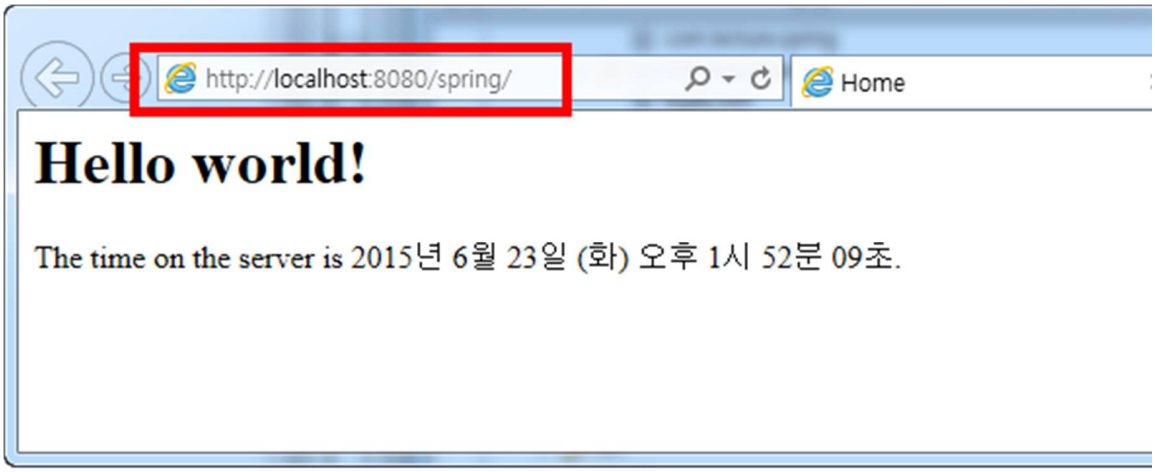
- 패키지 설정



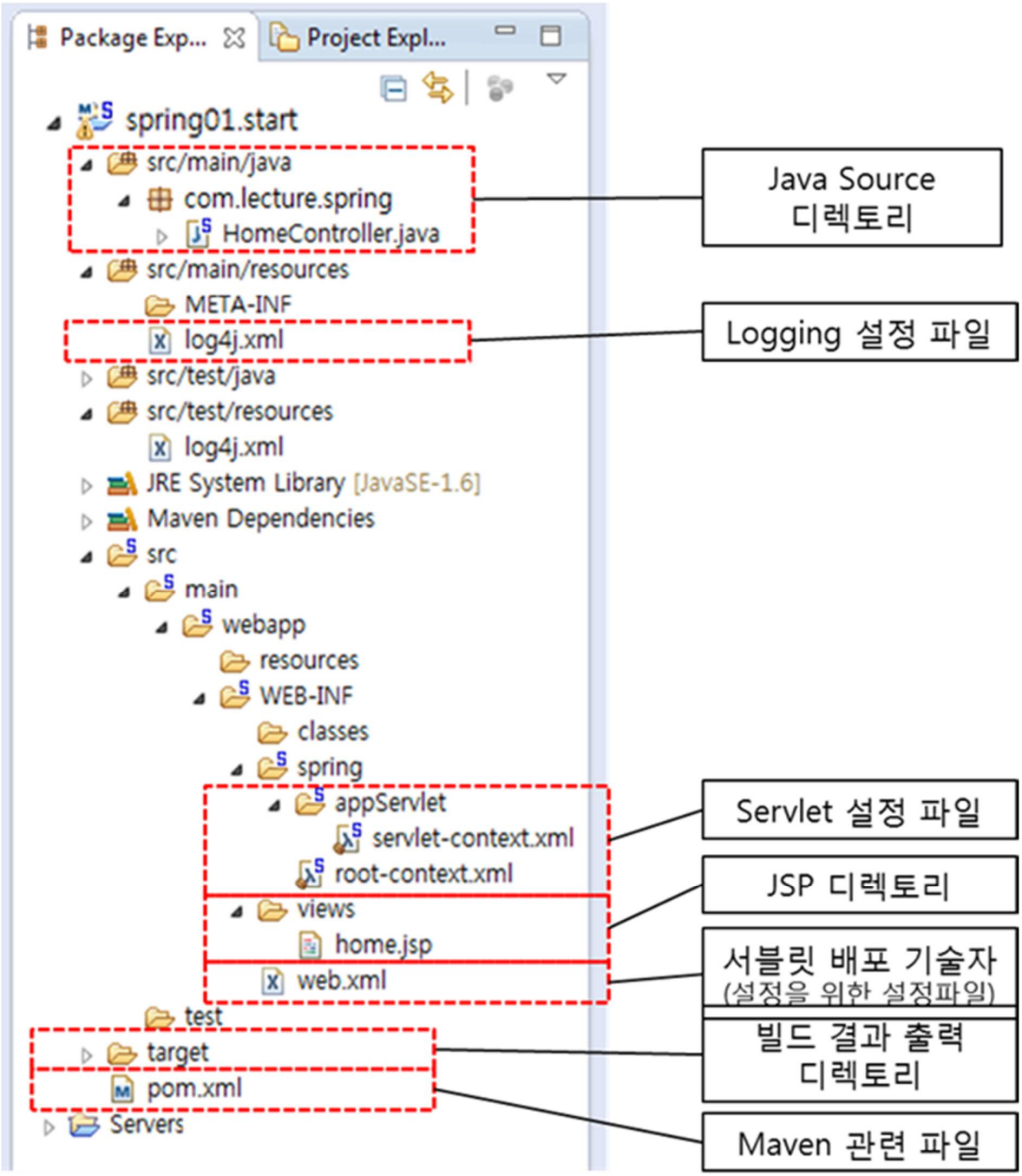
- 서버 실행


Run As
Debug As
Profile As
Restore from Local History...
Path Tools
Java EE Tools
1 Run on Server Alt+Shift+X, R
2 EGradle
3 EGradle JUnit Test
4 Java Applet Alt+Shift+X, A
5 Java Application Alt+Shift+X, J
Run Configurations...

- 실행 화면


http://localhost:8080/spring/
Home
Hello world!
The time on the server is 2015년 6월 23일 (화) 오후 1시 52분 09초.

2. 스프링 프로젝트의 디렉터리 구조



3. Tomcat 서버 설정

- {CATALINA_HOME}/conf/server.xml 수정

```
<Connector port="80" protocol="HTTP/1.1"
           connectionTimeout="20000"
           redirectPort="8443"
           URIEncoding="utf-8"  />
```

4. 스프링 설정

4.1 web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.5" xmlns="http://java.sun.com/xml/ns/javaee"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd">


    <!-- Spring Web 어플리케이션을 위한 메인 설정파일을 등록한다. -->
    <context-param>
        <param-name>contextConfigLocation</param-name>
        <param-value>/WEB-INF/spring/root-context.xml</param-value>
    </context-param>

    <!-- Spring Web 어플리케이션 컨테스트를 로딩한다. -->
    <listener>
        <listener-class>org.springframework.web.context.ContextLoaderListener</listener-class>
    </listener>

    <!-- Spring Web 어플리케이션의 맨 앞단 Controller(DispatcherServlet) 를 등록한다. -->
    <servlet>
        <servlet-name>appServlet</servlet-name>
        <servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
        <init-param>
            <param-name>contextConfigLocation</param-name>
            <param-value>/WEB-INF/spring/appServlet/servlet-context.xml</param-value>
        </init-param>
        <load-on-startup>1</load-on-startup>
    </servlet>
    <servlet-mapping>
        <servlet-name>appServlet</servlet-name>
        <url-pattern>/</url-pattern>
    </servlet-mapping>


    <!-- 문자 인코딩 처리 필터 설정 -->
    <filter>
        <filter-name>encodingFilter</filter-name>
        <filter-class>org.springframework.web.filter.CharacterEncodingFilter</filter-class>
        <init-param>
            <param-name>encoding</param-name>
            <param-value>UTF-8</param-value>
        </init-param>
        <init-param>
            <param-name>forceEncoding</param-name>
            <param-value>true</param-value>
        </init-param>
```

```
    </filter>
    <filter-mapping>
        <filter-name>encodingFilter</filter-name>
        <url-pattern>/*</url-pattern>
    </filter-mapping>


    <!--   -->
    <welcome-file-list>
        <welcome-file>index.html</welcome-file>
    </welcome-file-list>

    <!-- jsp 파일 utf-8 페이지 인코딩 설정 <%@ page pageEncoding="UTF-8" %> -->
    <jsp-config>
        <jsp-property-group>
            <url-pattern>*.jsp</url-pattern>
            <page-encoding>UTF-8</page-encoding>
        </jsp-property-group>
    </jsp-config>


    <!-- 에러 페이지 설정 -->
    <error-page>
        <error-code>403</error-code>
        <location>/WEB-INF/views/error.jsp</location>
    </error-page>

    <error-page>
        <error-code>404</error-code>
        <location>/WEB-INF/views/error.jsp</location>
    </error-page>

    <error-page>
        <error-code>500</error-code>
        <location>/WEB-INF/views/error.jsp</location>
    </error-page>

</web-app>
```

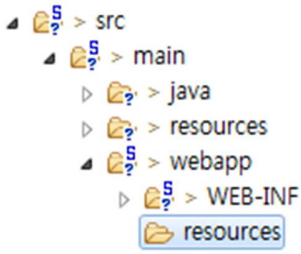
4.2 root-context.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd">
```

```
    <!-- Root Context: defines shared resources visible to all other web components -->

</beans>
```

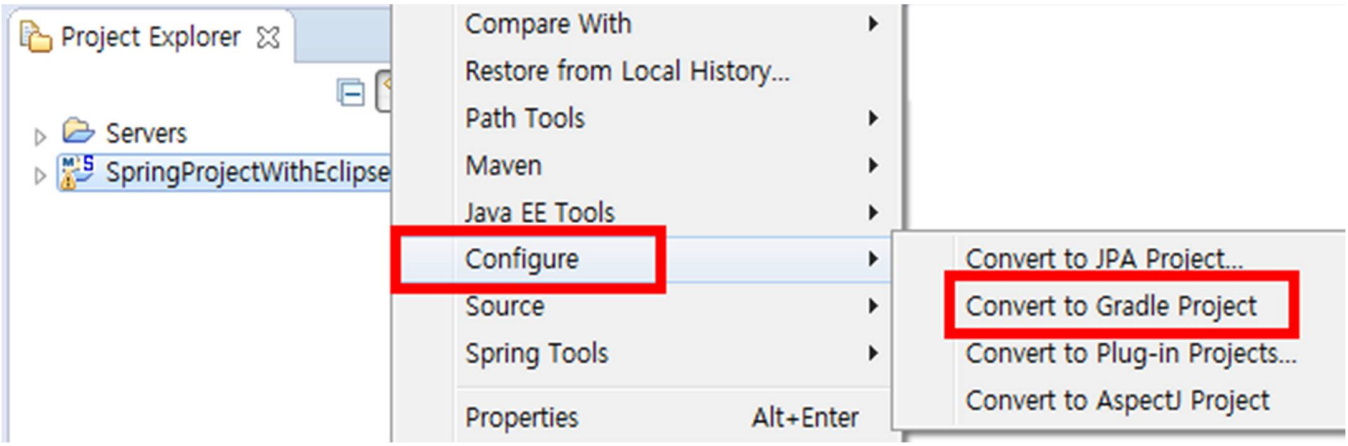
4.3 servlet-context.xml

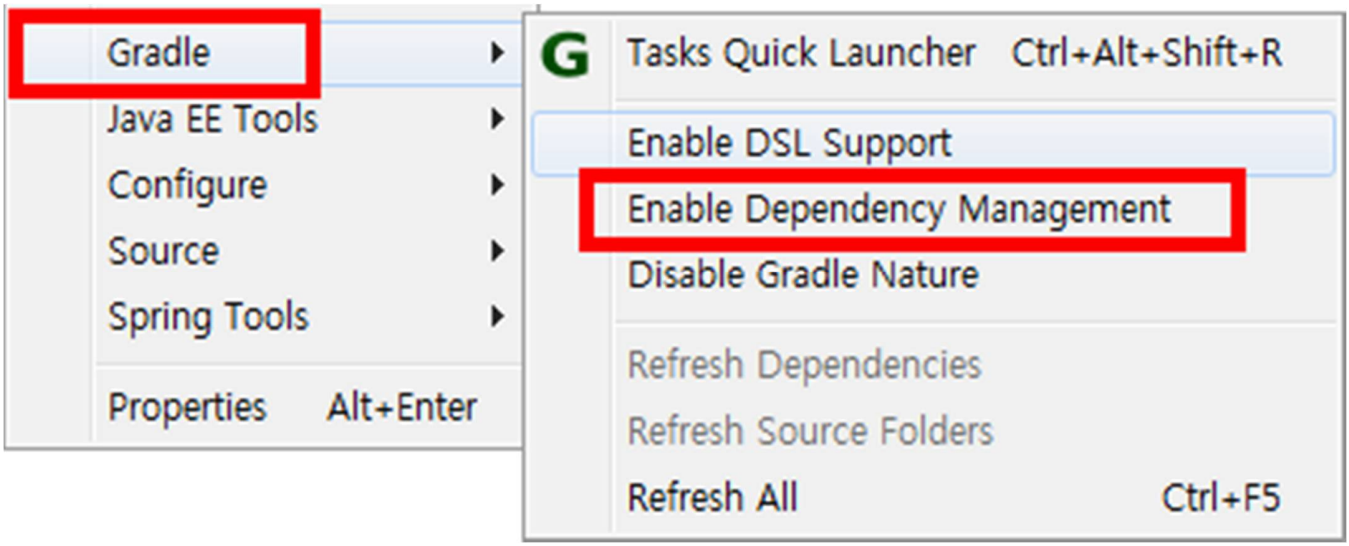
```
<?xml version="1.0" encoding="UTF-8"?>
<beans:beans xmlns="http://www.springframework.org/schema/mvc"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:beans="http://www.springframework.org/schema/beans"
    xmlns:context=http://www.springframework.org/schema/context

    xsi:schemaLocation="http://www.springframework.org/schema/mvc
        http://www.springframework.org/schema/mvc/spring-mvc.xsd
        http://www.springframework.org/schema/beans
        http://www.springframework.org/schema/beans/spring-beans.xsd
        http://www.springframework.org/schema/context
        http://www.springframework.org/schema/context/spring-context.xsd">

    <!-- 스프링의 DispatcherServet 에게 정적인 자원을 알려준다
       정적자원에는 css 파일, js 파일, 이미지등... -->
```




```
    <resources mapping="/resources/**" location="/resources/" />

    <!-- Resolves views : jsp 파일 찾는 경로 설정 -->
    <beans:bean class="org.springframework.web.servlet.view.InternalResourceViewResolver">
        <beans:property name="prefix" value="/WEB-INF/views/" />
        <beans:property name="suffix" value=".jsp" />
    </beans:bean>

    <!-- step1. 스프링의 어노테이션을 사용할 수 있도록 하는 설정 -->
    <!-- @RequestMapping , @ExceptionHandler 등과 같은 어노테이션을 사용하는 경우 설정해야 함 -->
    <annotation-driven  />
    <context:spring-configured />
    <context:annotation-config />


    <!-- step2. 어노테이션이 지정된 클래스를 컨테이너에 자동으로 동록되게 하는 설정 -->
    <!-- 복수의 패키지를 사용하고 싶은 경우 <context:component-scan> 태그를 여러개 작성  -->
    <context:component-scan base-package="com.lecture.spring" />

</beans:beans>
```

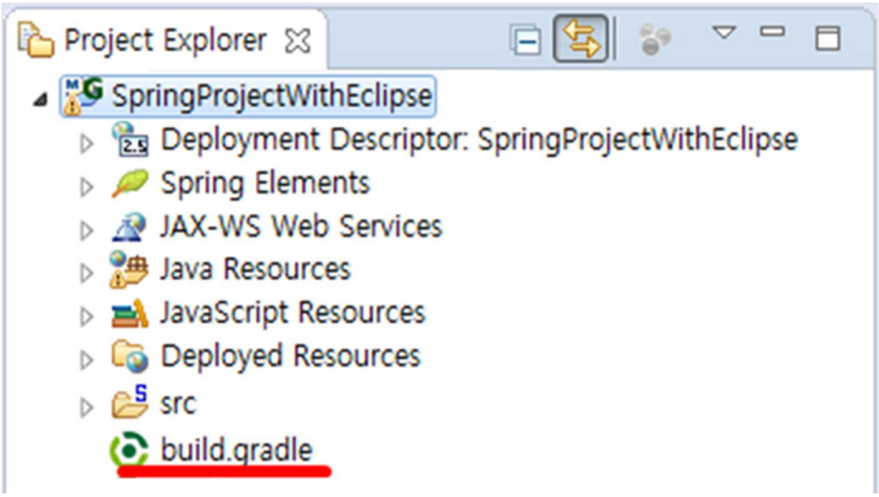
5. Converting a Maven Project to Gradle project





6. build.gradle 생성

프로젝트에 build.gradle 을 생성하고 아래의 내용을 복사하여 붙여 넣는다.




```
/*
 * Reference Site
 *
 * http://netframework.tistory.com/entry/gradle%EC%9D%84-%EC%9D%B4%EC%9A%A9%ED%95%9C-Spring-MVC-Web-Application-Spring-Data-JPA-QueryDSL
 * http://huskdoll.tistory.com/8
 * http://hangaebal.blogspot.kr/2014/06/spring-eclipse-gradle.html
 *
 * https://github.com/bmuschko/gradle-tomcat-plugin
 * https://github.com/bmuschko/gradle-cargo-plugin
 *
 * http://stackoverflow.com/questions/4384809/cause-no-such-property-sourcesets-for-class-org-gradle-api-plugins-convention
 */

// tomcat 과 cargo plugin 에 대한 repository 설정입니다.
buildscript {
    repositories {
        jcenter()
    }

    dependencies {
        classpath 'org.gradle.api.plugins:gradle-tomcat-plugin:1.0'
        classpath 'org.gradle.api.plugins:gradle-cargo-plugin:1.4'
    }
}

// Apply the java plugin to add support for Java
apply plugin: 'java'
apply plugin: 'war'
```

```
apply plugin: 'eclipse'
apply plugin: 'eclipse-wtp'  // WTP(Web Tools Platform) -> 웹 프로젝트로 인식하도록
apply plugin: 'groovy'
apply plugin: 'tomcat'
apply plugin: 'cargo'

group = 'com.lecture.spring'
version = '1.0.0'
description = 'controller example'

// JAVA Version 1.8
compileJava {
    sourceCompatibility = 1.8
    targetCompatibility = 1.8
}

compileTestJava {
    sourceCompatibility = 1.8
    targetCompatibility = 1.8
}

// 소스 인코딩 UTF-8 로 지정
[compileJava, compileTestJava]*.options*.encoding = 'UTF-8'


jar {
    manifest {
        attributes 'Implementation-Title': 'Gradle Quickstart', 'Implementation-Version': version
    }

    //exclude 'log4j.properties'
}

// 메이븐 Central 저장소 사용
repositories {
    // Use 'jcenter' for resolving your dependencies.
    // You can declare any Maven/Ivy/file repository here.
    maven { url 'http://repo.spring.io/libs-release' }
    maven { url 'http://repo.spring.io/milestone' }
    maven { url 'https://oss.sonatype.org/content/repositories/releases' }
    mavenCentral()
}

// dependency 버전 정보
ext {
    versions = [
          spring:'4.1.7.RELEASE'
        , security:'3.2.8.RELEASE'
        , junit: '4.11'
        , servletApi: '3.1.0'
```

```
        , jstl: '1.2'
        , slf4j: '1.7.9'
        , mockito: '1.9.0'
        , cglib: '2.2.2'
        , groovy: '2.2.1'
        , jackson: '2.3.1'
        , aspectj: '1.8.6'
        , springSpock: '0.7-groovy-2.0'
        , tiles: '3.0.5'
        , hibernate: '4.2.20.Final'
        , tomcatVersion: '7.0.62'
        , cargoVersion: '1.4.5'
    ]
}

eclipse {
    wtp {
        facet {
            facet name: 'jst.web', version: '2.5' // Servlet Spec Version 지정, 미 지정시 2.4
            facet name: 'jst.java', version: '1.8' // Java Version 지정
        }
    }

    classpath {
         containers.remove('org.eclipse.jdt.launching.JRE_CONTAINER')
         containers
'org.eclipse.jdt.launching.JRE_CONTAINER/org.eclipse.jdt.internal.debug.ui.launcher.StandardVMType
/JavaSE-1.8'
    }
}

configurations {
    providedRuntime
    providedCompile
}


// In this section you declare the dependencies for your production and test code
// 의존성 설정
dependencies {

    compile fileTree(dir: 'lib', include: ['*.jar'])

    // spring 관련 라이브러리 추가
    compile "org.springframework:spring-beans:$versions.spring"
    compile "org.springframework:spring-context:$versions.spring"
    compile "org.springframework:spring-context-support:$versions.spring"
    compile "org.springframework:spring-webmvc:$versions.spring"
    compile "org.springframework:spring-orm:$versions.spring"
    compile "org.springframework:spring-core:$versions.spring"
```

```
    compile "org.springframework:spring-expression:$versions.spring"
    compile "org.springframework:spring-aop:$versions.spring"
    compile "org.springframework:spring-jdbc:$versions.spring"
    compile "org.springframework:spring-tx:$versions.spring"
    compile "org.springframework:spring-websocket:$versions.spring"
    compile "org.springframework:spring-messaging:$versions.spring"
    runtime "org.springframework:spring-aspects:$versions.spring"

    compile "org.springframework.security:spring-security-core:$versions.security"
    compile "org.springframework.security:spring-security-web:$versions.security"
    compile "org.springframework.security:spring-security-config:$versions.security"

    compile "org.springframework.webflow:spring-js:2.4.1.RELEASE"
    compile "org.springframework.webflow:spring-webflow:2.4.1.RELEASE"

    compile "com.fasterxml.jackson.core:jackson-annotations:$versions.jackson"
    compile "com.fasterxml.jackson.core:jackson-databind:$versions.jackson"

    compile "org.apache.tiles:tiles-api:$versions.tiles"
    compile "org.apache.tiles:tiles-core:$versions.tiles"
    compile "org.apache.tiles:tiles-jsp:$versions.tiles"


    // Apache Commons Lang, a package of Java utility classes for the classes that are in
java.lang hierarchy,
    // or are considered to be so standard as to justify existence in java.lang.
    compile "org.apache.commons:commons-lang3:3.4"
    compile "org.apache.commons:commons-dbcp2:2.0"

    compile "commons-fileupload:commons-fileupload:1.2.1"
    compile "commons-io:commons-io:2.4"
    compile "commons-pool:commons-pool:1.6"
    compile "commons-beanutils:commons-beanutils:1.9.2"

    //
    compile "org.aspectj:aspectjrt:$versions.aspectj"
    compile "org.aspectj:aspectjweaver:$versions.aspectj"
    compile "org.aspectj:aspectjtools:$versions.aspectj"

    // JSR 330 JAR 를 포함하기 위한 라이브러리. @Inject, @Named 어노테이션 사용 가능
    compile "javax.inject:javax.inject:1"

    // JSP Standard Tag Library 사용을 위한 라이브러리.
    compile "jstl:jstl:$versions.jstl"
    compile "javax.servlet.jsp.jstl:jstl-api:$versions.jstl"
    compile "taglibs:standard:1.1.2"

    //
    compile "cglib:cglib-nodep:$versions.cglib"
```

```
    // log library
    compile "org.slf4j:slf4j-api:$versions.slf4j"
    runtime "org.slf4j:slf4j-log4j12:$versions.slf4j"
    runtime "org.slf4j:jcl-over-slf4j:$versions.slf4j"
    runtime "log4j:log4j:1.2.17"


    // log4jdbc library
    compile "com.googlecode.log4jdbc:log4jdbc:1.2"


    // mysql connector
    compile "mysql:mysql-connector-java:5.1.34"


    // mybatis library
    compile "org.mybatis:mybatis-spring:1.2.2"
    compile "org.mybatis:mybatis:3.2.8"

    // hibernate library
    compile "org.hibernate:hibernate-core:$versions.hibernate"
    compile "org.hibernate:hibernate-entitymanager:$versions.hibernate"
    compile "org.hibernate.javax.persistence:hibernate-jpa-2.0-api:1.0.1.Final"

    // @ResponseBody 를 이용해 json 데이터를 반환하기 위한 라이브러리
    compile "org.codehaus.jackson:jackson-mapper-asl:1.9.13"

    //
    testCompile "junit:junit:$versions.junit"
    testCompile "org.springframework:spring-test:$versions.spring"
    testCompile "org.mockito:mockito-core:$versions.mockito"


    // tomcat plugin 설정입니다.
    tomcat "org.apache.tomcat.embed:tomcat-embed-core:$versions.tomcatVersion"
    tomcat "org.apache.tomcat.embed:tomcat-embed-logging-juli:$versions.tomcatVersion"
    tomcat("org.apache.tomcat.embed:tomcat-embed-jasper:$versions.tomcatVersion") {
        exclude group: "org.eclipse.jdt.core.compiler", module: "ecj"
    }

    providedCompile "javax.servlet:javax.servlet-api:$versions.servletApi"
    providedCompile "javax.servlet.jsp:javax.servlet.jsp-api:2.3.1"
    providedCompile "org.apache.tomcat:tomcat-servlet-api:$versions.tomcatVersion"


    // cargo 에 대한 설정입니다.
    cargo "org.codehaus.cargo:cargo-core-uberjar:$versions.cargoVersion"
    cargo "org.codehaus.cargo:cargo-ant:$versions.cargoVersion"
}
```

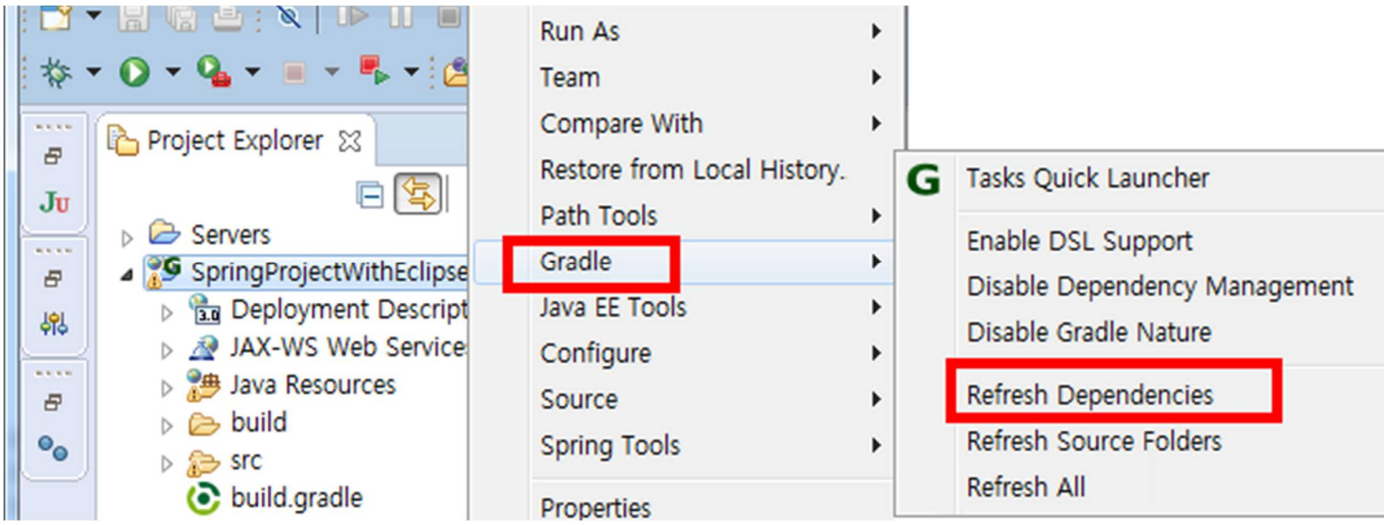
```
sourceSets {
    main {
        java.srcDirs      = ['src/main/java'     ]
        resources.srcDirs = ['src/main/resources']
    }
}


// TEST 설정
test {
    jvmArgs = ['-ea', '-Xmx256m']
    logging.captureStandardOutput(LogLevel.INFO)
    // testReport = false

    systemProperties 'property': 'value'

    testLogging {
        events 'started', 'passed'
    }
}


task copyTask(type: Copy) {

    /*
    copy {
          println 'Copy from ${libsDir} into  D:\\Documents\\JAVA\\tomcat\\x64\\lib'

          from    '${libsDir}'
          into    'D:\\Documents\\JAVA\\tomcat\\x64\\lib'
          include '*.jar'
      }
    */
}

war {
    baseName = "ROOT"
    version  =  "${new Date().format('yyyyMMdd')}"

      /*
          from 'src/rootContent' // adds a file-set to the root of the archive
          webInf { from 'src/additionalWebInf' } // adds a file-set to the WEB-INF dir.
          classpath fileTree('additionalLibs') // adds a file-set to the WEB-INF/lib dir.
          classpath configurations.moreLibs // adds a configuration to the WEB-INF/lib dir.
          webXml = file('src/web.xml') // copies a file to WEB-INF/web.xml
      */
}

task deployToTomcat(dependsOn: 'war') << {
```

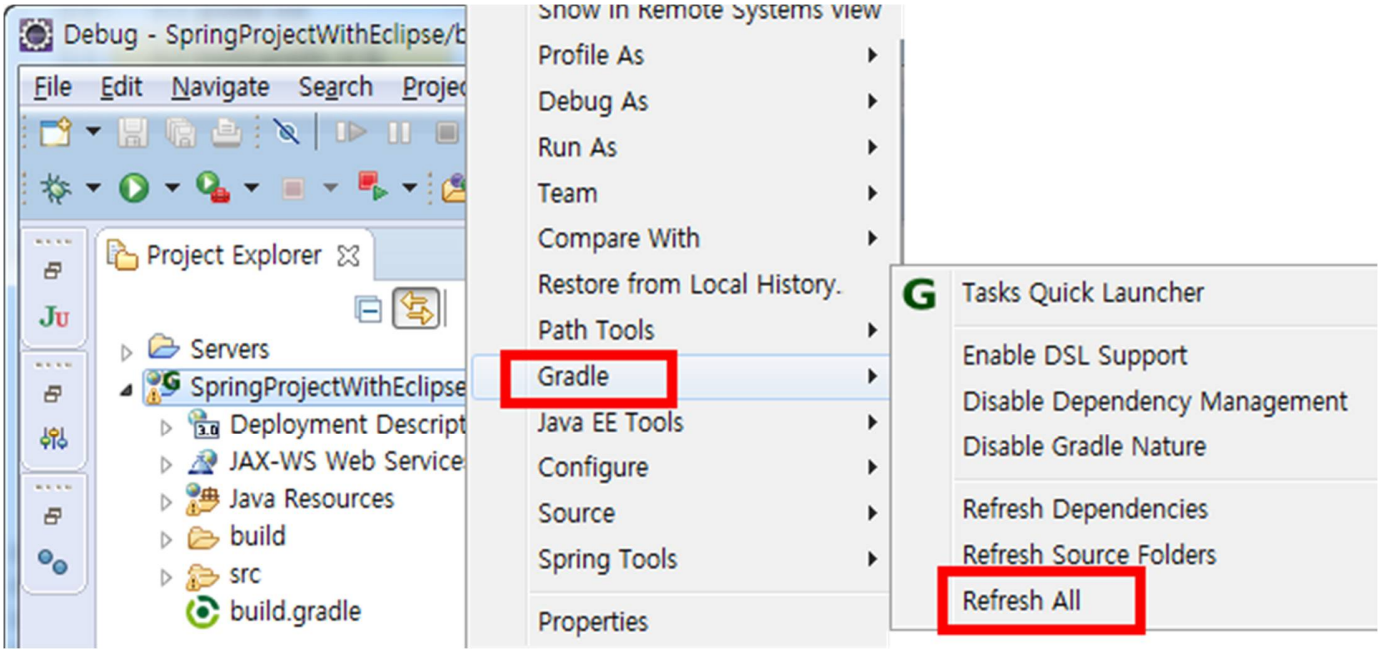
```
    copy {

        from war.archivePath
        into "/Users/jinsoohan/software/apache-tomcat/webapps"
    }
}

tomcatStop() {
    stopPort = 8005
    stopKey = 'stopKey'
}

// tomcatRun을 실행시키기 위해서 war에 대한 dependency를 주입합니다.
tomcatRun {
    httpPort = 8100
    httpsPort = 8093

    stopPort = 8005
    stopKey = 'stopKey'

    enableSSL = true
    URIEncoding = 'utf-8'
    contextPath = ''
    configFile = file('src/main/resources/META-INF/context.xml') // 기본값 src/main/webapp/META-
INF/context.xml

    dependsOn war
}


tomcatRunWar {
    dependsOn war
}


// cargo를 이용한 배포를 위해서 war에 대한 dependency를 주입합니다.
cargoRedeployRemote {
    dependsOn war
}


cargoDeployRemote {
    dependsOn war
}

cargo {
    containerId = 'tomcat7x'
    port = 8080

    deployable {
```

```
        context = '${project.name}'
    }

    // remoteDeploy 되는 target 의 tomcat 정보
    remote {
        hostname = '192.168.13.209'
        username = 'ykyoon'
        password = 'qwer12#$'
    }
}
```

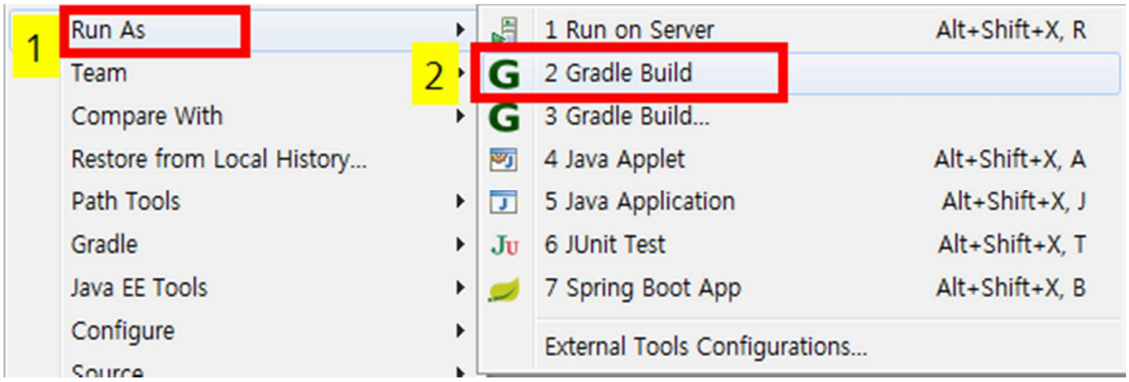
7. Gradle >> Refresh All

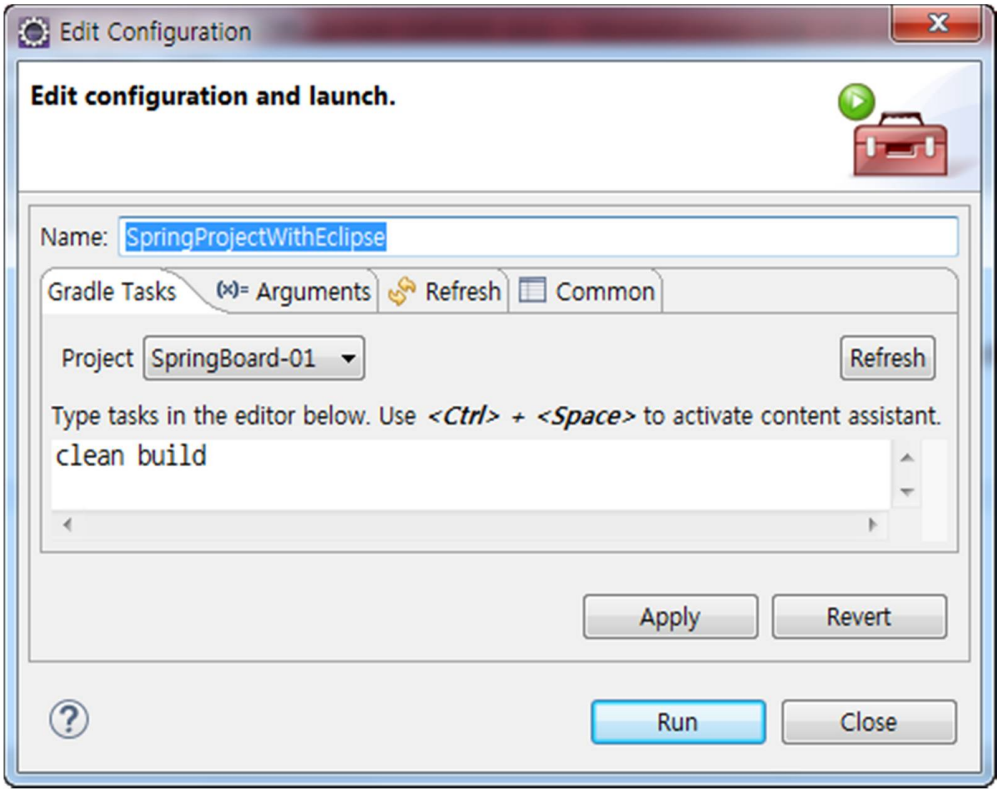
build.gradle 이 수정되면 반드시 "Refresh Dependencies" 와 "Refresh All" 과정을 순서대로 해야 한다.





8. 프로젝트 실행

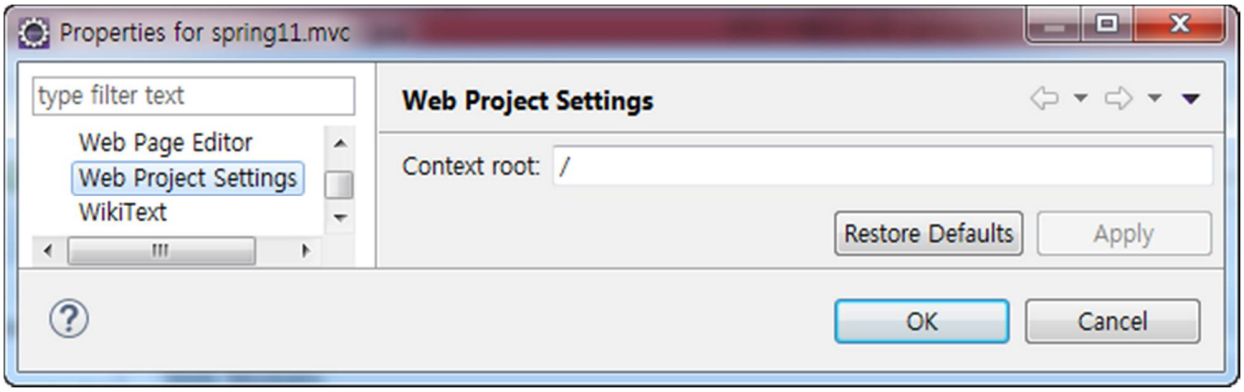

1
Run As
Team
Compare With
Restore from Local History...
Path Tools
Gradle
Java EE Tools
Configure
Source
2
1 Run on Server Alt+Shift+X, R
2 Gradle Build
3 Gradle Build...
4 Java Applet Alt+Shift+X, A
5 Java Application Alt+Shift+X, J
6 JUnit Test Alt+Shift+X, T
7 Spring Boot App Alt+Shift+X, B
External Tools Configurations...

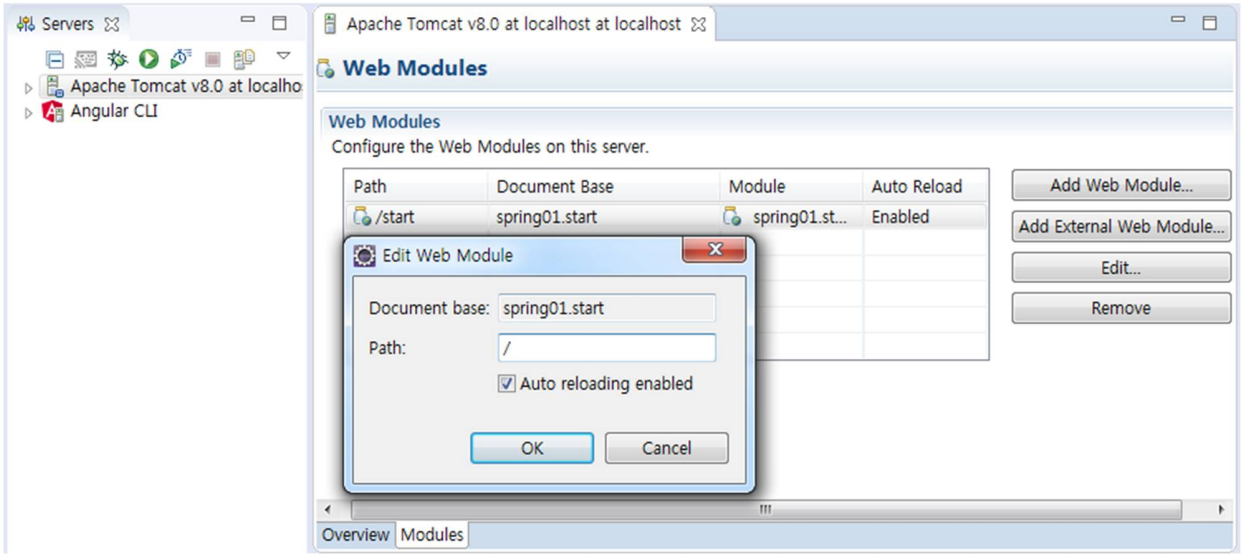

Edit Configuration
Edit configuration and launch.
Name: SpringProjectWithEclipse
Gradle Tasks
Arguments
Refresh
Common
Project SpringBoard-01
Refresh
Type tasks in the editor below. Use <Ctrl> + <Space> to activate content assistant.
clean build
Apply
Revert
Run
Close

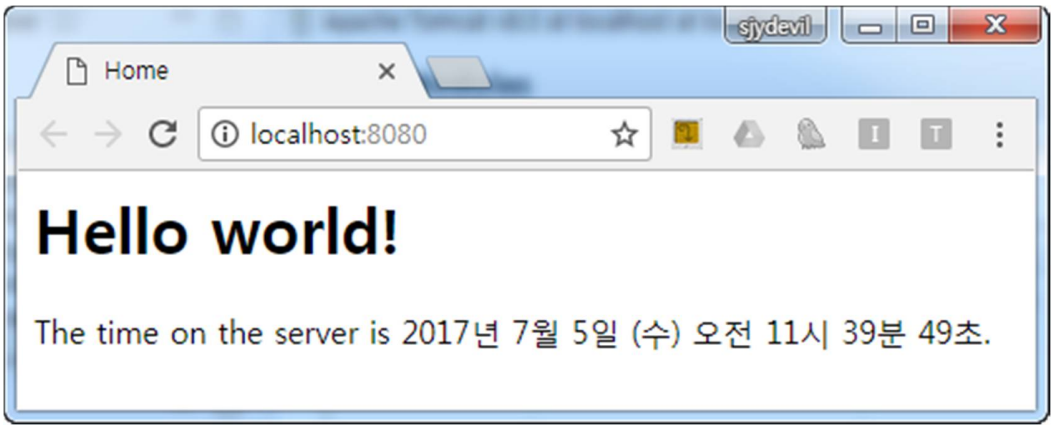
9. Context root 수정

이클립스에서 프로젝트 선택 후 오른쪽 마우스 클릭하여 "Properties" 메뉴를 선택한다.

"Properties" 창에서 "Web Project Settings" 메뉴를 클릭하여 "Context root"를 아래와 같이 바꾼다.







10. Reference

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