

< Spring Legacy Project로 시작시 세팅 설정하기 >

1. 개발 환경 구축

프레임워크 사용 시 폴더 경로에 한글이 있을 경우 문제가 될 수 있으므로 사용하는 폴더명에 한글이 포함되지 않도록 한다.

- 1) JDK 설치 -> 자바 시간에 설치 완료 (JDK11)
- 2) Tomcat 설치 -> 서블릿/JSP 시간에 설치 완료 (Tomcat 9)
- 3) Maven 설치

Maven이란, 자바용 프로젝트 관리 도구로 일반적인 프로젝트는 개발자가 필요한 라이브러리를 직접 찾아 다운로드 후 추가해야 했는데, Maven을 사용하면 pom.xml 문서에 사용하고자 하는 라이브러리를 등록하면 자동으로 프로젝트에 추가되도록 하여 라이브러리 관리 및 버전 관리의 편리성을 제공해준다.

- 메이븐 사이트 접속 후 Download-> Files -> Binary zip archive 파일 다운로드

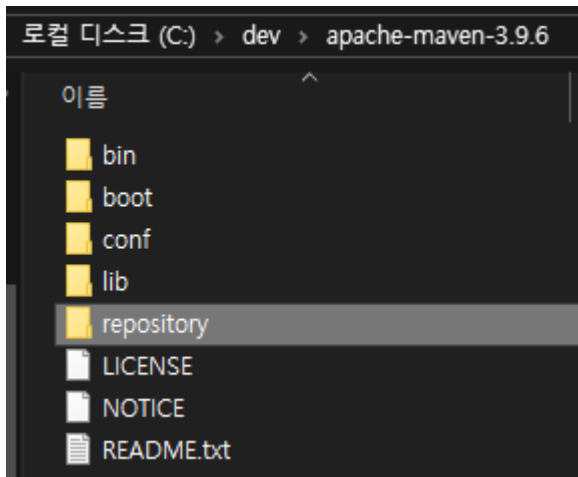
Files

Maven is distributed in several formats for your convenience. Simply pick a ready-made binary distribution archive and follow the [installation instructions](#). Use a source archive if you intend to build Maven yourself. In order to guard against corrupted downloads/installations, it is highly recommended to [verify the signature](#) of the release bundles against the public [KEYS](#) used by the Apache Maven developers.

	Link	Checksums	Signature
Binary tar.gz archive	apache-maven-3.9.6-bin.tar.gz	apache-maven-3.9.6-bin.tar.gz.sha512	apache-maven-3.9.6-bin.tar.gz.asc
Binary zip archive	apache-maven-3.9.6-bin.zip	apache-maven-3.9.6-bin.zip.sha512	apache-maven-3.9.6-bin.zip.asc
Source tar.gz archive	apache-maven-3.9.6-src.tar.gz	apache-maven-3.9.6-src.tar.gz.sha512	apache-maven-3.9.6-src.tar.gz.asc
Source zip archive	apache-maven-3.9.6-src.zip	apache-maven-3.9.6-src.zip.sha512	apache-maven-3.9.6-src.zip.asc

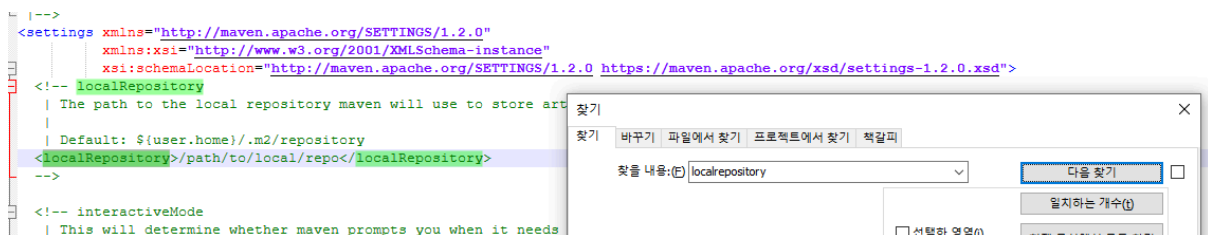
- [3.9.6 Release Notes and Release Reference Documentation](#)
- [Latest source code from source repository](#)

- 압축 해제 후 해당 폴더 내에 repository 라는 폴더 추가 (라이브러리를 저장하는 공간/저장소 역할)



- conf 폴더 내 settings.xml 파일 내용 변경

localRepository 부분을 찾아서 바로 전에 추가한 폴더 경로를 작성 후 저장



<localRepository>C:\dev\apache-maven-3.9.6\repository</localRepository>

※ 주의 ※ 경로 내에 한글이 없도록 할 것! (한글이 포함된 경우 오류 발생할 수 있음)

4) STS (Spring Tool Suite) 설치

STS란, Spring Framework를 사용하기 위한 개발 도구로 일반적으로 별도의 설치 도구를 통해 설치하여 사용 가능 하고, 이클립스 IDE 에서 제공하는 STS 플러그인을 통해 설치할 수 있다.

- STS3 직접 설치
 - 설치 주소: [Spring Tool Suite 3 · spring-attic/toolsuite-distribution Wiki · GitHub](https://spring-attic.org/toolsuite-distribution)

- Spring Tool Suite 3.9.18 설치 (자바 버전 11+)
 - * 참고 ([STS 3.9.17 Note](#))

Latest STS3 Downloads

Spring Tool Suite 3.9.18

full distribution on Eclipse 4.21

- https://download.springsource.com/release/STS/3.9.18.RELEASE/dist/e4.21/spring-tool-suite-3.9.18.RELEASE-e4.21.0-win32-x86_64.zip
- https://download.springsource.com/release/STS/3.9.18.RELEASE/dist/e4.21/spring-tool-suite-3.9.18.RELEASE-e4.21.0-macosx-cocoa-x86_64.dmg
- https://download.springsource.com/release/STS/3.9.18.RELEASE/dist/e4.21/spring-tool-suite-3.9.18.RELEASE-e4.21.0-linux-gtk-x86_64.tar.gz

- 압축파일명이 긴 경우 압축해제 중에 일부 누락될 수 있어 파일명 변경 후 압축 해제 권장
- 압축 해제 후 sts-bundle\sts-3.9.18.RELEASE\STS.exe 파일을 실행하여 사용

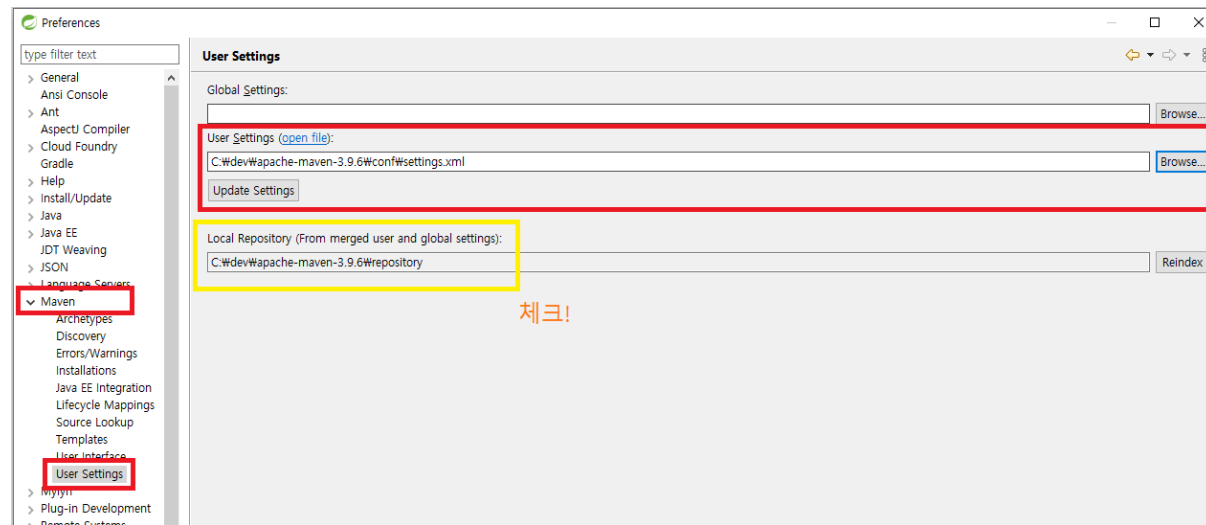
STS 실행 후 인코딩 설정 (UTF-8)

- Window -> Preferences
 - General > Editors > Text Editors > Spelling
 - General > Workspace
 - JSON > JSON Files
 - Web > CSS Files
 - Web > HTML Files
 - Web > JSP Files
 - XML > XML Files

Maven 관련 설정

- Window -> Preferences

- Maven > User Settings



User Settings 부분을 Browser... 클릭 후 메이븐 폴더의 settings.xml 파일을 설정.

설정 후 하단 Local Repository 부분에 settings.xml 파일에 적용했던 경로가 표시되는 지 확인

프로젝트 생성

MVC Template 사용 (최근 거의 안되는 경우 많음...!)

- Window -> Show view -> progress bar // 프레임워크가 어떠한 작업 중인 경우 표시됨! (이때는 되도록.. 기다리자!)
- 프로젝트 추가를 위해 Navigator 또는 Project Explorer 창에서 우클릭 > New > Spring Legacy Project 선택
- Spring MVC Template 선택 (없을 경우 다음 방법으로 진행)

Maven Project 사용

Project 추가 시 Maven Project 선택 후 첫 화면에서 Create a simple... 체크 후 Next

New Maven Project

New Maven project
Select project name and location

☒ Create a simple project (skip archetype selection)

☒ Use default Workspace location

Location: Browse...

☐ Add project(s) to working set

Working set: More...

► Advanced

? < Back Next > Finish Cancel

아래 화면과 같이 3개 항목 확인 후 Next

- Group Id : 그룹 식별자 (보통 도메인명을 거꾸로 작성)
- Artifact Id : 프로젝트 식별자
- Packaging : 빌드 형태 지정

New Maven Project
Configure project

Artifact

Group Id:

Artifact Id:

Version:

Packaging:

Name:

Description:

Parent Project

Group Id:

Artifact Id:

Version:

► **Advanced**

- pom.xml 파일에 아래 내용 추가 (파일 내용 변경 후 우클릭->Maven->Update Project 실행)

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
  <!--
    * pom.xml 구조
    project : 프로젝트 정보 + properties + [repositories] + dependencies
  -->
  <!-- 프로젝트에 대한 기본적인 정보 -->
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.kh</groupId>
  <artifactId>spring</artifactId>
  <name>springProject</name>
  <version>0.0.1-SNAPSHOT</version>
  <packaging>war</packaging>

  <!-- 변수와 같은 것! pom.xml에서 사용할 수 있도록 정의하는 부분 -->
  <properties>
    <java-version>11</java-version>
    <org.springframework-version>5.3.33</org.springframework-version>
    <org.aspectj-version>1.6.10</org.aspectj-version>
    <org.slf4j-version>1.6.6</org.slf4j-version>
  </properties>

  <!-- dependencies : 다운로드 받고자 하는 라이브러리들 -->
  <dependencies>

    <!-- Spring -->
    <dependency>
      <groupId>org.springframework</groupId>
```

```
<artifactId>spring-context</artifactId>
<version>${org.springframework-version}</version>
<exclusions>
    <!-- Exclude Commons Logging in favor of SLF4j -->
    <exclusion>
        <groupId>commons-logging</groupId>
        <artifactId>commons-logging</artifactId>
    </exclusion>
</exclusions>
</dependency>
<dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring-webmvc</artifactId>
    <version>${org.springframework-version}</version>
</dependency>

<!-- AspectJ -->
<dependency>
    <groupId>org.aspectj</groupId>
    <artifactId>aspectjrt</artifactId>
    <version>${org.aspectj-version}</version>
</dependency>

<!-- Logging -->
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>${org.slf4j-version}</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>jcl-over-slf4j</artifactId>
    <version>${org.slf4j-version}</version>
```



```
        <scope>runtime</scope>
    </dependency>
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-log4j12</artifactId>
        <version>${org.slf4j-version}</version>
        <scope>runtime</scope>
    </dependency>
    <dependency>
        <groupId>log4j</groupId>
        <artifactId>log4j</artifactId>
        <version>1.2.15</version>
        <exclusions>
            <exclusion>
                <groupId>javax.mail</groupId>
                <artifactId>mail</artifactId>
            </exclusion>
            <exclusion>
                <groupId>javax.jms</groupId>
                <artifactId>jms</artifactId>
            </exclusion>
            <exclusion>
                <groupId>com.sun.jdmk</groupId>
                <artifactId>jmxtools</artifactId>
            </exclusion>
            <exclusion>
                <groupId>com.sun.jmx</groupId>
                <artifactId>jmxri</artifactId>
            </exclusion>
        </exclusions>
        <scope>runtime</scope>
    </dependency>
```

```
<!-- @Inject -->
<dependency>
    <groupId>javax.inject</groupId>
    <artifactId>javax.inject</artifactId>
    <version>1</version>
</dependency>

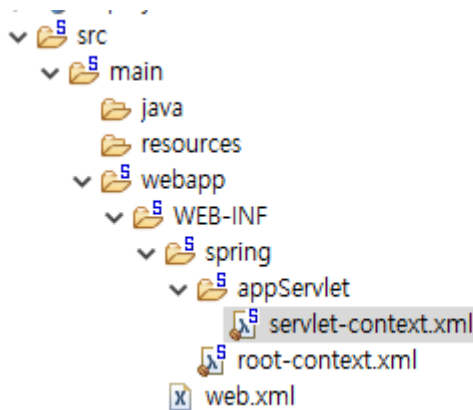
<!-- Servlet -->
<dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>servlet-api</artifactId>
    <version>2.5</version>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>javax.servlet.jsp</groupId>
    <artifactId>jsp-api</artifactId>
    <version>2.1</version>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>jstl</artifactId>
    <version>1.2</version>
</dependency>

<!-- Test -->
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.7</version>
    <scope>test</scope>
</dependency>
```

```
</dependencies>

<build>
  <plugins>
    <plugin>
      <artifactId>maven-compiler-plugin</artifactId>
      <version>3.8.1</version>
      <configuration>
        <source>${java-version}</source>
        <target>${java-version}</target>
        <compilerArgument>-Xlint:all</compilerArgument>
        <showWarnings>true</showWarnings>
        <showDeprecation>true</showDeprecation>
      </configuration>
    </plugin>
    <plugin>
      <artifactId>maven-war-plugin</artifactId>
      <version>3.2.3</version>
    </plugin>
  </plugins>
</build>
</project>
```

- 폴더 구조 설정



- 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">

    <!-- The definition of the Root Spring Container shared by all Servlets and
Filters -->
    <context-param>
        <param-name>contextConfigLocation</param-name>
        <param-value>
            /WEB-INF/spring/root-context.xml
        </param-value>
    </context-param>

    <!-- Creates the Spring Container shared by all Servlets and Filters -->
    <listener>

<listener-class>org.springframework.web.context.ContextLoaderListener</listener-
class>

    </listener>
```

```
<!-- Processes application requests -->
<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>

<filter>
    <filter-name>encodingFilter</filter-name>

    <filter-class>org.springframework.web.filter.CharacterEncodingFilter</filter-class>
    <!-- 옵션1. 인코딩방식을 UTF-8 -->
    <init-param>
        <param-name>encoding</param-name>
        <param-value>UTF-8</param-value>
    </init-param>
    <!-- 옵션2. 혹시 충돌이 나더라도 강제로 인코딩방식을 UTF-8 -->
    <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>

</web-app>
```

- 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">

</beans>
```

- 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
https://www.springframework.org/schema/mvc/spring-mvc.xsd
    http://www.springframework.org/schema/beans
https://www.springframework.org/schema/beans/spring-beans.xsd
    http://www.springframework.org/schema/context
```

```
https://www.springframework.org/schema/context/spring-context.xsd">
```

```
<!-- DispatcherServlet Context: defines this servlet's request-processing infrastructure -->
```

```
<!-- Enables the Spring MVC @Controller programming model -->  
<annotation-driven />
```

```
<!-- Handles HTTP GET requests for /resources/** by efficiently serving up static resources in the ${webappRoot}/resources directory -->
```

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

```
<!-- Resolves views selected for rendering by @Controllers to .jsp resources in the /WEB-INF/views directory -->
```

```
<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>
```

```
<context:component-scan base-package="com.kh.spring" />
```

```
</beans:beans>
```

- Java 버전 체크 참고

