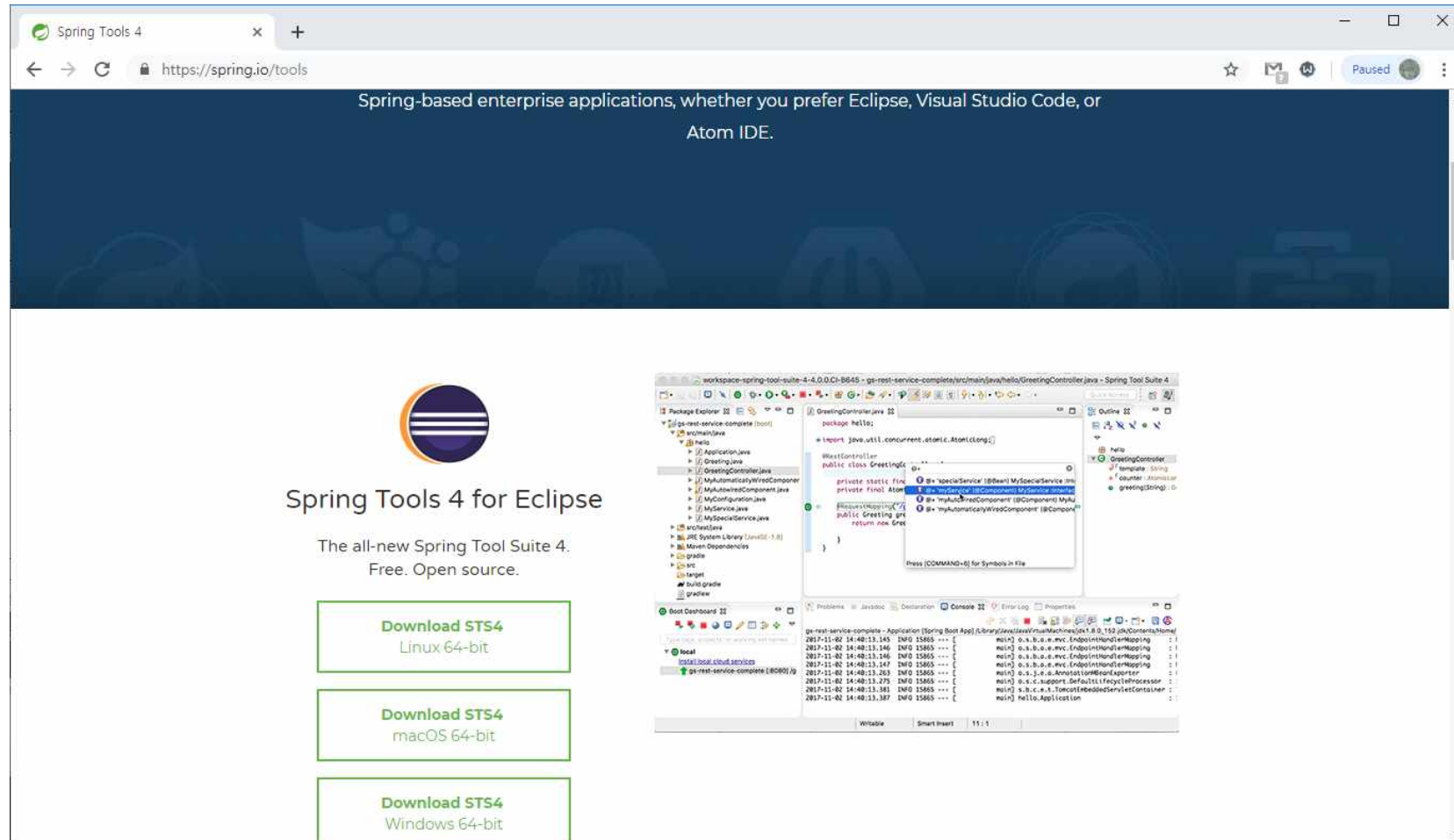



Spring

<https://spring.io/tools>



The screenshot displays the Spring Tools 4 website and a preview of the Spring Tool Suite 4 IDE. The website header reads "Spring-based enterprise applications, whether you prefer Eclipse, Visual Studio Code, or Atom IDE." Below this, the Spring logo is shown, followed by the text "Spring Tools 4 for Eclipse" and "The all-new Spring Tool Suite 4. Free. Open source." Three download buttons are provided: "Download STS4 Linux 64-bit", "Download STS4 macOS 64-bit", and "Download STS4 Windows 64-bit". To the right, a screenshot of the Spring Tool Suite 4 IDE is shown, featuring a Package Explorer, a Java editor with a code snippet for a Spring application, and a console window displaying application logs.

Spring-based enterprise applications, whether you prefer Eclipse, Visual Studio Code, or Atom IDE.



Spring Tools 4 for Eclipse

The all-new Spring Tool Suite 4.
Free. Open source.

[Download STS4
Linux 64-bit](#)

[Download STS4
macOS 64-bit](#)

[Download STS4
Windows 64-bit](#)

The IDE screenshot shows a workspace with a project named "workspace-spring-tool-suite-4-4.0.0-CH-8645". The Package Explorer on the left lists files like "Application.java", "GreetingController.java", "MyAutomaticallyWiredComponent.java", "MyConfiguration.java", "MyService.java", and "MySpecService.java". The Java editor in the center shows the following code:

```
package hello;

import java.util.concurrent.atomic.AtomicLong;

@RestController
public class Greeting {

    private static final AtomicLong counter = new AtomicLong(0);

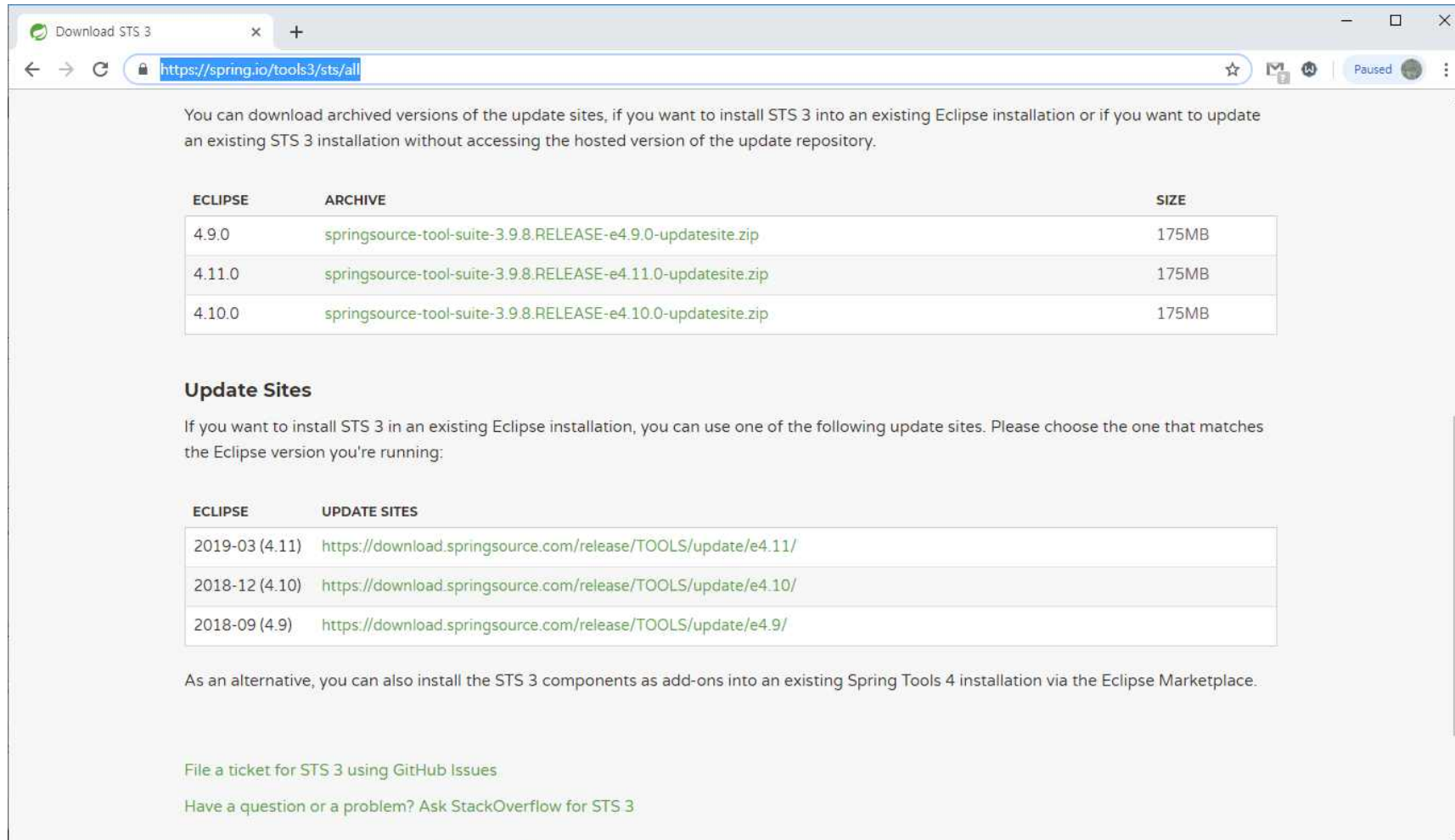
    @GetMapping("/hello")
    public Greeting getGreeting() {
        counter.incrementAndGet();
        return new Greeting(counter.get());
    }
}
```

The console window at the bottom shows the following output:

```
2017-11-02 14:40:13.145 INFO 15865 --- [main] o.s.b.a.mvc.EndpointHandlerMapping :
2017-11-02 14:40:13.146 INFO 15865 --- [main] o.s.b.a.mvc.EndpointHandlerMapping :
2017-11-02 14:40:13.147 INFO 15865 --- [main] o.s.b.a.mvc.EndpointHandlerMapping :
2017-11-02 14:40:13.263 INFO 15865 --- [main] o.s.j.e.a.AnnotationMethodProcessor :
2017-11-02 14:40:13.275 INFO 15865 --- [main] o.s.c.support.DefaultLifecycleProcessor :
2017-11-02 14:40:13.381 INFO 15865 --- [main] s.b.c.x.t.TomcatEmbeddedServletContainer :
2017-11-02 14:40:13.387 INFO 15865 --- [main] hello.Application :
```

Spring

<https://spring.io/tools3/sts/all>

A screenshot of a web browser window showing the Spring Tools 3 download page. The browser's address bar displays the URL 'https://spring.io/tools3/sts/all'. The page content includes a heading 'Download STS 3', a paragraph explaining that archived update sites can be downloaded for installation or updates, and two tables. The first table lists Eclipse versions (4.9.0, 4.11.0, 4.10.0) and their corresponding archive names and sizes (all 175MB). The second table, titled 'Update Sites', lists Eclipse versions (2019-03 (4.11), 2018-12 (4.10), 2018-09 (4.9)) and their corresponding update site URLs. At the bottom, there are links to 'File a ticket for STS 3 using GitHub Issues' and 'Have a question or a problem? Ask StackOverflow for STS 3'.

Download STS 3

<https://spring.io/tools3/sts/all>

You can download archived versions of the update sites, if you want to install STS 3 into an existing Eclipse installation or if you want to update an existing STS 3 installation without accessing the hosted version of the update repository.

ECLIPSE	ARCHIVE	SIZE
4.9.0	springsource-tool-suite-3.9.8.RELEASE-e4.9.0-updatesite.zip	175MB
4.11.0	springsource-tool-suite-3.9.8.RELEASE-e4.11.0-updatesite.zip	175MB
4.10.0	springsource-tool-suite-3.9.8.RELEASE-e4.10.0-updatesite.zip	175MB

Update Sites

If you want to install STS 3 in an existing Eclipse installation, you can use one of the following update sites. Please choose the one that matches the Eclipse version you're running:

ECLIPSE	UPDATE SITES
2019-03 (4.11)	https://download.springsource.com/release/TOOLS/update/e4.11/
2018-12 (4.10)	https://download.springsource.com/release/TOOLS/update/e4.10/
2018-09 (4.9)	https://download.springsource.com/release/TOOLS/update/e4.9/

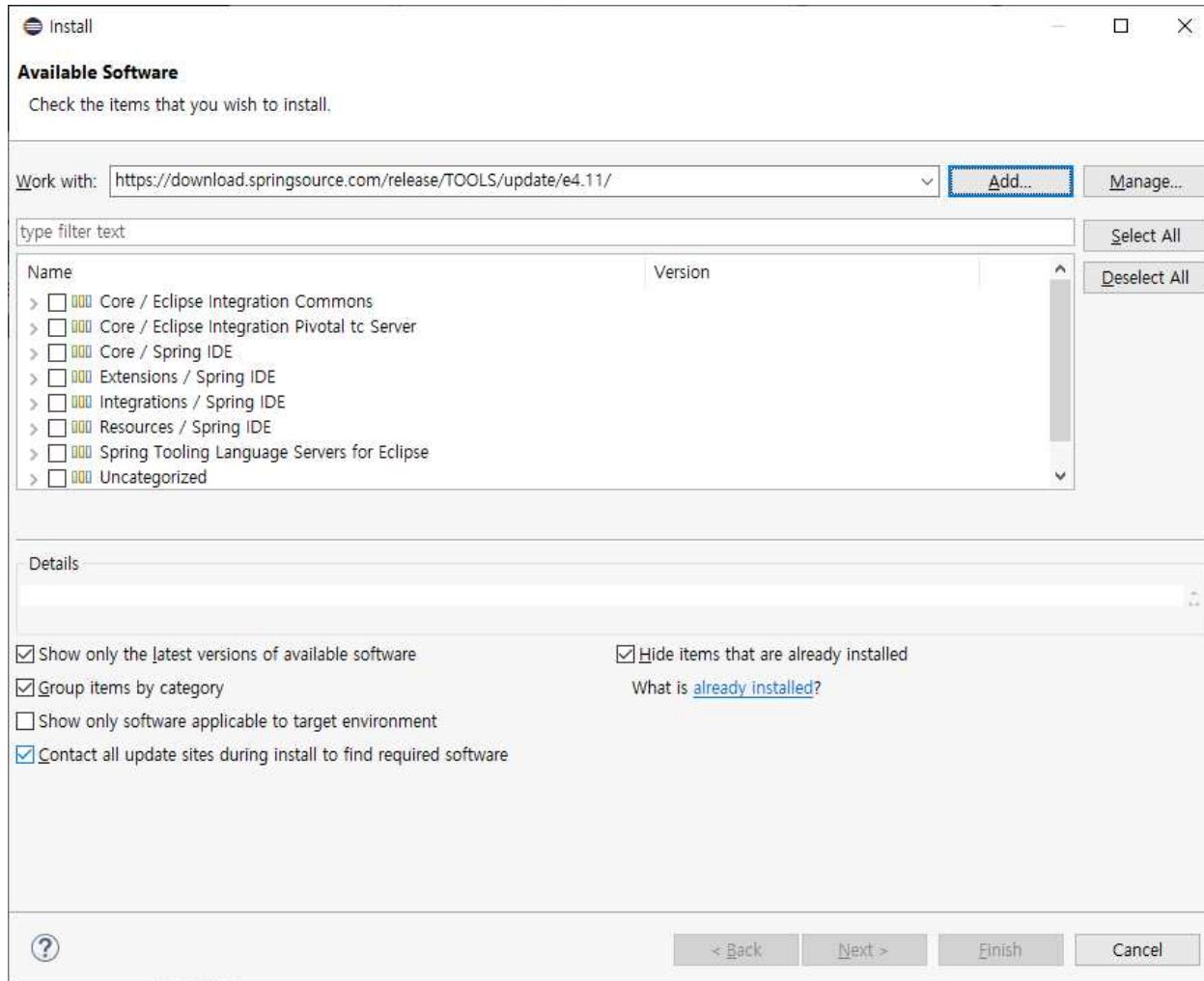
As an alternative, you can also install the STS 3 components as add-ons into an existing Spring Tools 4 installation via the Eclipse Marketplace.

[File a ticket for STS 3 using GitHub Issues](#)

[Have a question or a problem? Ask StackOverflow for STS 3](#)

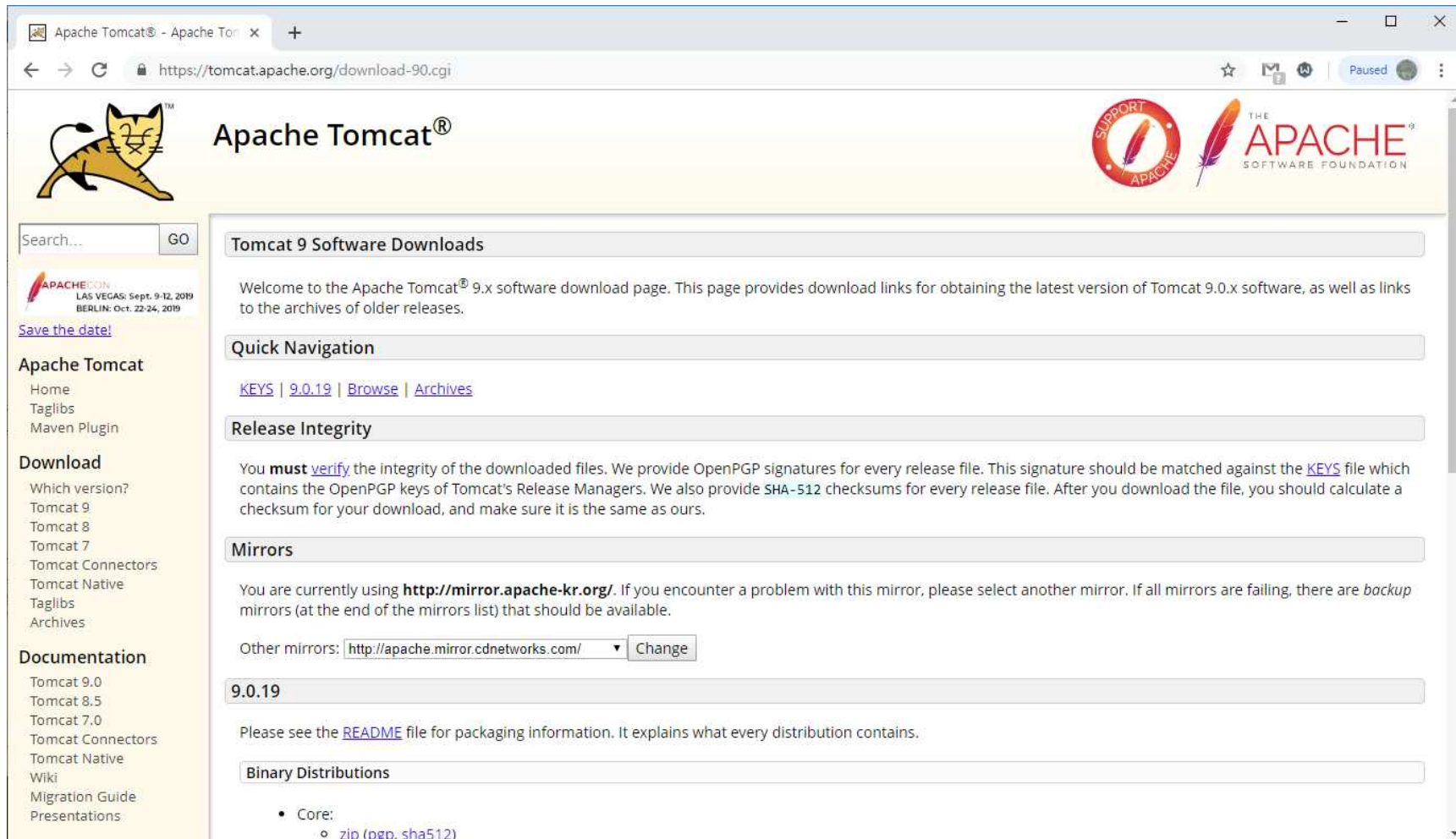
Spring

업데이트 주소 복사 후 Help > Install New Software



Spring

<https://tomcat.apache.org/download-90.cgi>



The screenshot shows the Apache Tomcat 9.0.19 download page. The browser address bar displays `https://tomcat.apache.org/download-90.cgi`. The page features the Apache Tomcat logo (a yellow cat) and the Apache Software Foundation logo. A search bar is located on the left. The main content area is titled "Tomcat 9 Software Downloads" and includes a welcome message, quick navigation links (KEYS, 9.0.19, Browse, Archives), release integrity instructions, a list of mirrors (currently showing `http://mirror.apache-kr.org/`), and a section for the 9.0.19 release with a link to the README file. The left sidebar contains navigation links for Home, Taglibs, Maven Plugin, Download (with sub-links for Which version?, Tomcat 9, Tomcat 8, Tomcat 7, Tomcat Connectors, Tomcat Native, Taglibs, Archives), and Documentation (with sub-links for Tomcat 9.0, Tomcat 8.5, Tomcat 7.0, Tomcat Connectors, Tomcat Native, Wiki, Migration Guide, Presentations).

Apache Tomcat®

Search... GO

APACHECON LAS VEGAS: Sept. 9-12, 2019 BERLIN: Oct. 22-24, 2019
[Save the date!](#)

Apache Tomcat

- Home
- Taglibs
- Maven Plugin

Download

Which version?

- Tomcat 9
- Tomcat 8
- Tomcat 7
- Tomcat Connectors
- Tomcat Native
- Taglibs
- Archives

Documentation

- Tomcat 9.0
- Tomcat 8.5
- Tomcat 7.0
- Tomcat Connectors
- Tomcat Native
- Wiki
- Migration Guide
- Presentations

Tomcat 9 Software Downloads

Welcome to the Apache Tomcat® 9.x software download page. This page provides download links for obtaining the latest version of Tomcat 9.0.x software, as well as links to the archives of older releases.

Quick Navigation

[KEYS](#) | [9.0.19](#) | [Browse](#) | [Archives](#)

Release Integrity

You **must** [verify](#) the integrity of the downloaded files. We provide OpenPGP signatures for every release file. This signature should be matched against the [KEYS](#) file which contains the OpenPGP keys of Tomcat's Release Managers. We also provide [SHA-512](#) checksums for every release file. After you download the file, you should calculate a checksum for your download, and make sure it is the same as ours.

Mirrors

You are currently using <http://mirror.apache-kr.org/>. If you encounter a problem with this mirror, please select another mirror. If all mirrors are failing, there are *backup* mirrors (at the end of the mirrors list) that should be available.

Other mirrors:

9.0.19

Please see the [README](#) file for packaging information. It explains what every distribution contains.

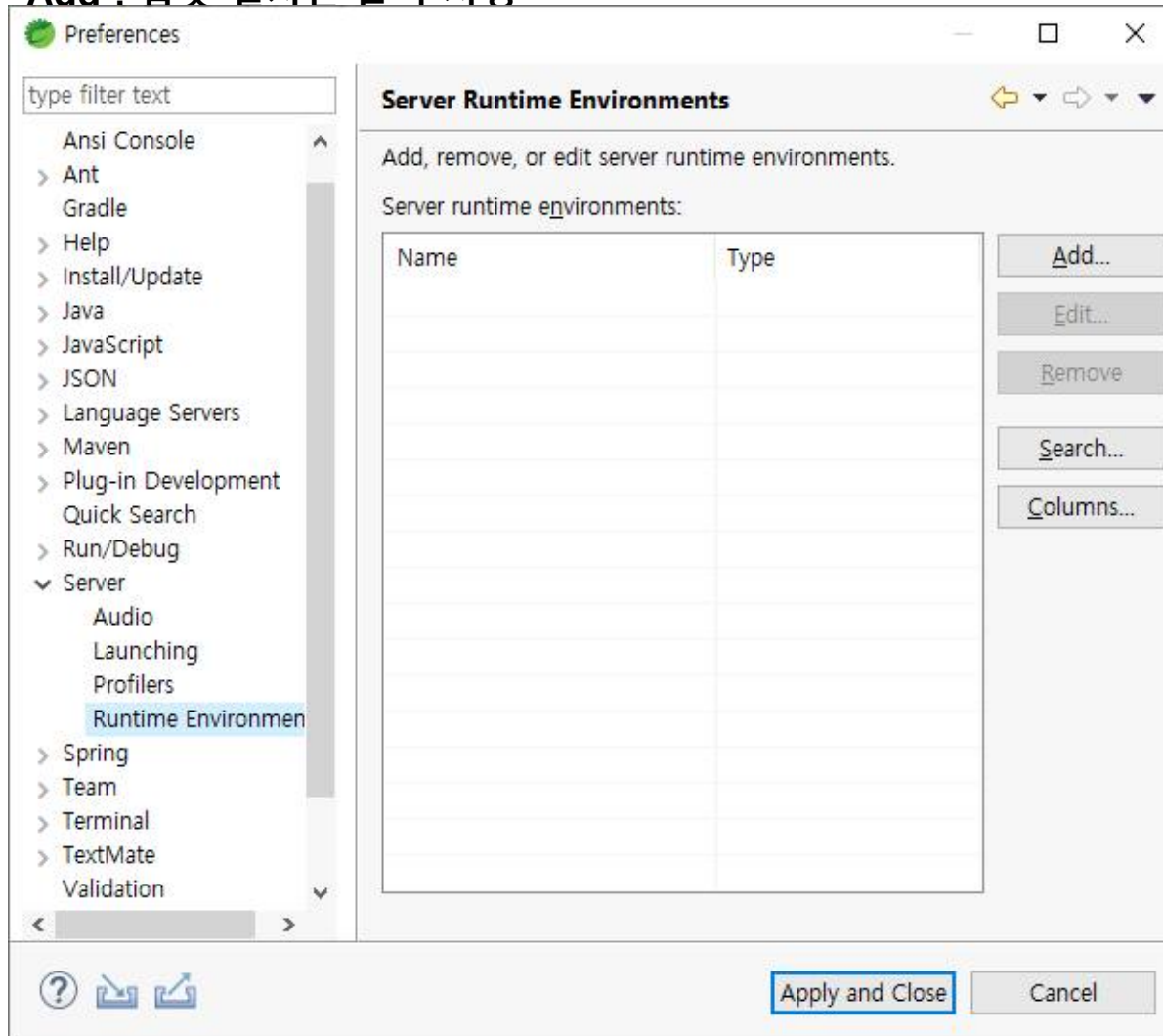
Binary Distributions

- Core:
 - [zip \(pgp, sha512\)](#)

Spring

Window > Preferences > Server > Runtime Environments

Add : 톰캣 설치된 폴더 지정

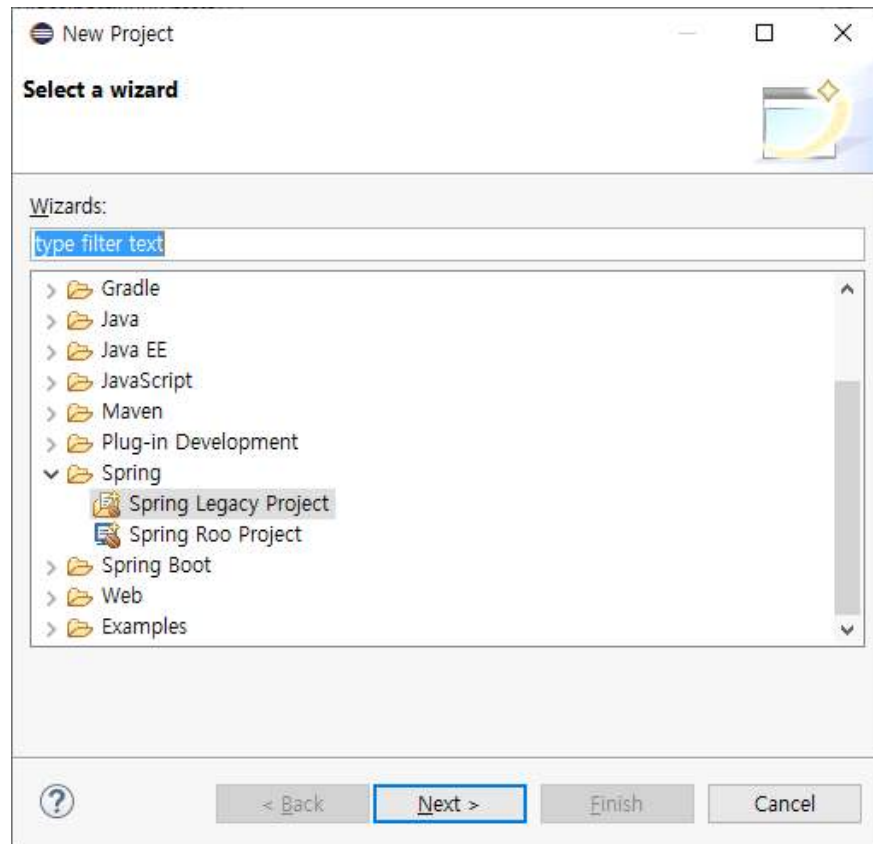


Spring

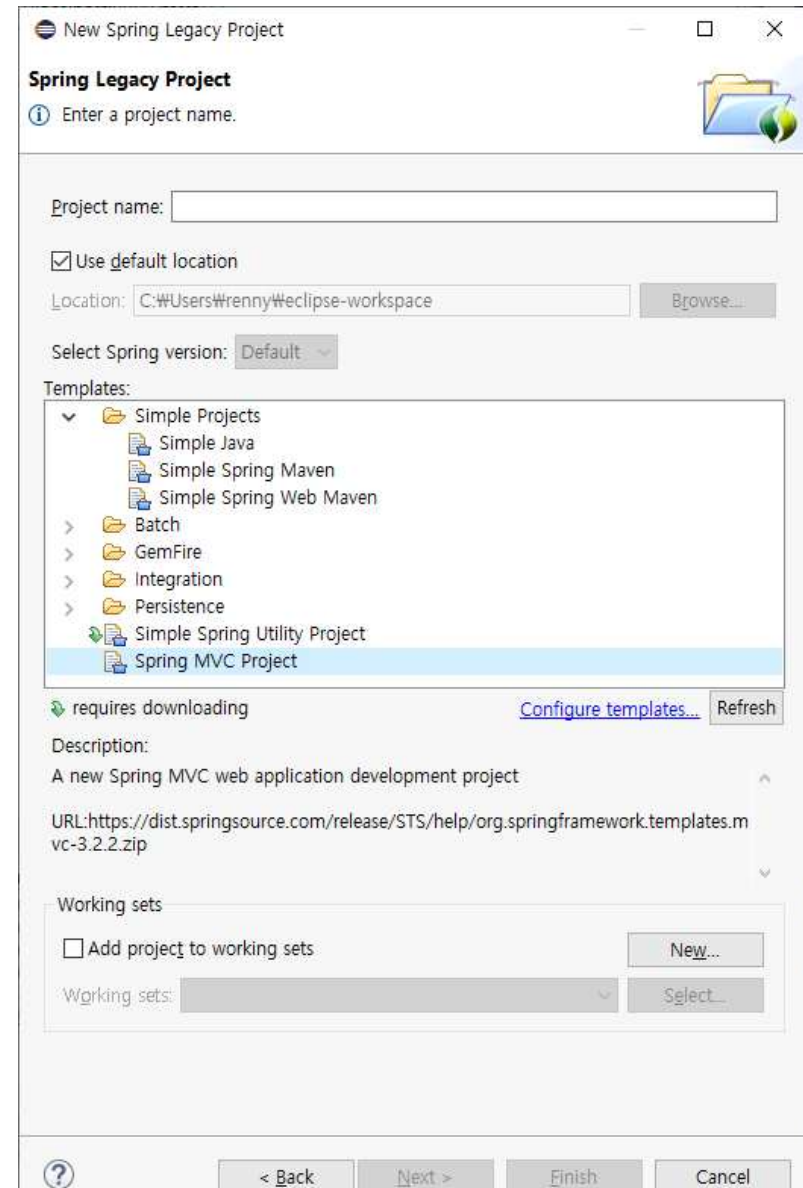
Window > Preferences > Web > CSS, HTML, JSP
UTF-8으로 인코딩 변경

Window > Preferences > General > Workspace
UTF-8으로 인코딩 변경

Spring



프로젝트 생성
Spring Legacy Project > Spring MVC Project



Spring

view 파일 위치

src > main > webapp > WEB-INF > views 밑에 jsp 파일

html 문법으로 작성

출력하고 싶은 변수는 `${변수이름}`으로 표현

controller 파일 위치

src/main/java > 패키지이름 밑에 java파일

어노테이션 주의

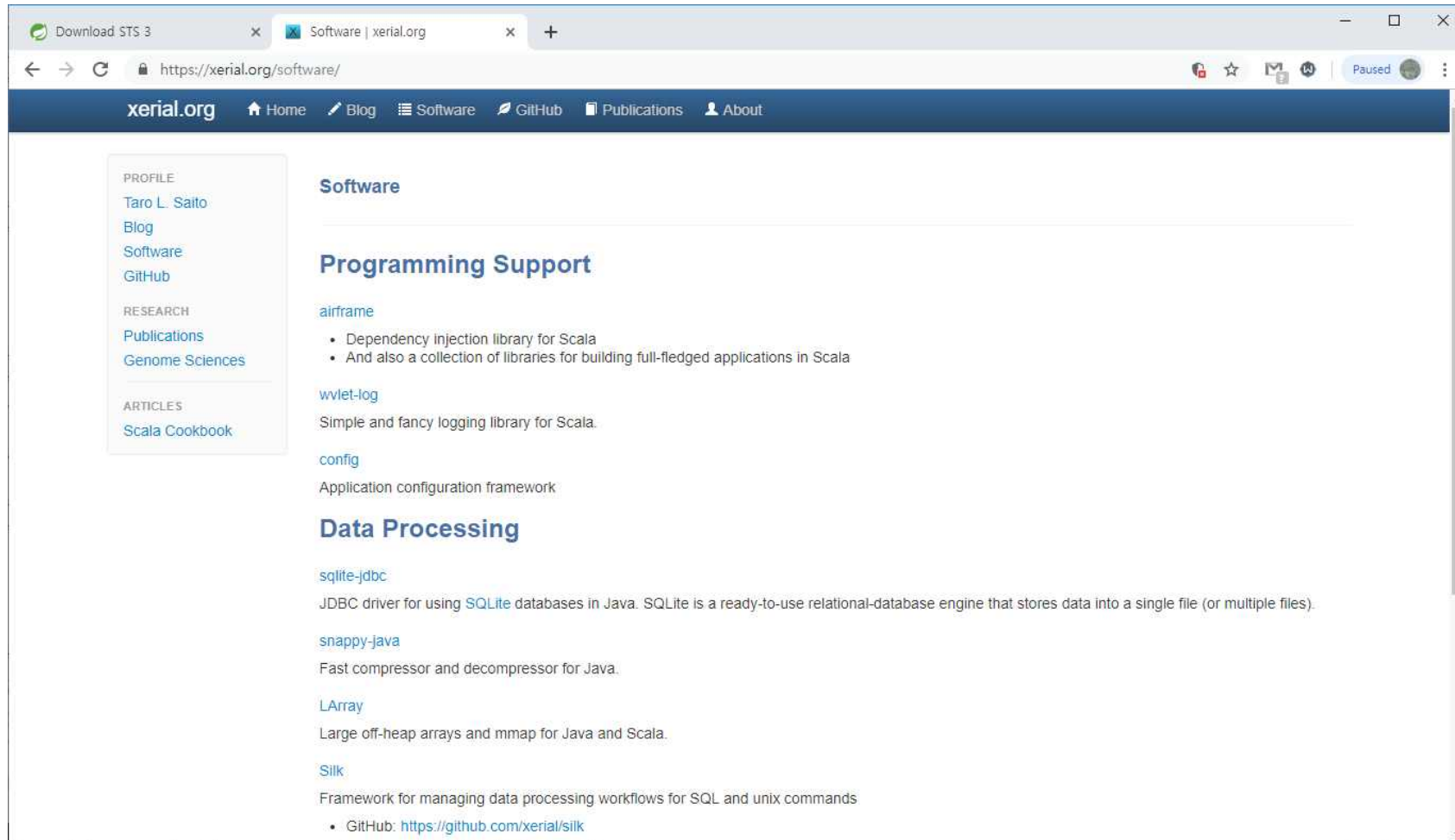
`@Controller`

`@RequestMapping(value = "/페이지", method = RequestMethod.GET)`

`return "JSP파일이름"`

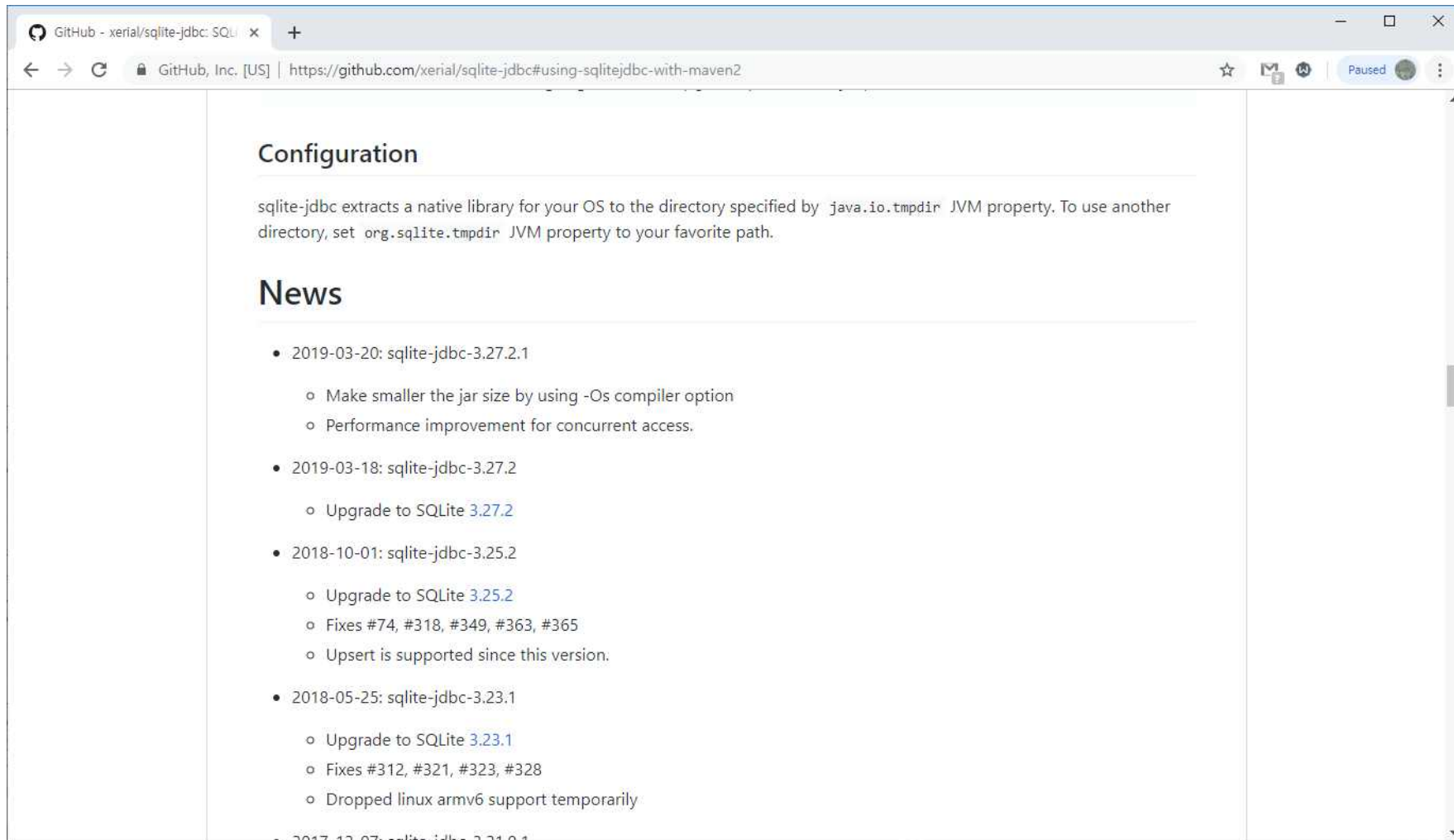
Sqlite 사용

<https://xerial.org/software/>



Sqlite 사용

<https://github.com/xerial/sqlite-jdbc#using-sqlitejdbc-with-maven2>



The screenshot shows a web browser window displaying the GitHub repository page for `xerial/sqlite-jdbc`. The browser's address bar shows the URL `https://github.com/xerial/sqlite-jdbc#using-sqlitejdbc-with-maven2`. The page content is divided into two main sections: **Configuration** and **News**.

Configuration

sqlite-jdbc extracts a native library for your OS to the directory specified by `java.io.tmpdir` JVM property. To use another directory, set `org.sqlite.tmpdir` JVM property to your favorite path.

News

- 2019-03-20: sqlite-jdbc-3.27.2.1
 - Make smaller the jar size by using `-Os` compiler option
 - Performance improvement for concurrent access.
- 2019-03-18: sqlite-jdbc-3.27.2
 - Upgrade to SQLite [3.27.2](#)
- 2018-10-01: sqlite-jdbc-3.25.2
 - Upgrade to SQLite [3.25.2](#)
 - Fixes #74, #318, #349, #363, #365
 - Upsert is supported since this version.
- 2018-05-25: sqlite-jdbc-3.23.1
 - Upgrade to SQLite [3.23.1](#)
 - Fixes #312, #321, #323, #328
 - Dropped linux armv6 support temporarily
- 2017-12-07: sqlite-jdbc-3.21.0.1

pom.xml

```
<dependency>  
    <groupId>org.xerial</groupId>  
    <artifactId>sqlite-jdbc</artifactId>  
    <version>3.27.2.1</version>  
</dependency>
```

dependencies 안에 위 코드 추가

home.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@ page session="false" %>
<html>
<head>
    <title>Home</title>
</head>
<body>
<P> Query result is ${query_result}. </P>
</body>
</html>
```

HomeController.java

```
@RequestMapping(value = "/", method = RequestMethod.GET)
public String home(Locale locale, Model model) {
    DataReader dataReader = new DataReader("c:\\\\tomcat\\\\tomcat.sqlite",
"students");
    dataReader.open();
    try {
        model.addAttribute("query_result", dataReader.selectData() );
    } catch (SQLException e) {
        e.printStackTrace();
    } catch (Exception e) {
    } finally {
        dataReader.close();
    }

    return "home";
}
```

DataReader.java

```
public class DataReader {  
    private Connection connection;  
    private String dbFileName;  
    private String dbTableName;  
    static {  
        try {  
            Class.forName("org.sqlite.JDBC");  
        } catch (Exception e) {  
            e.printStackTrace();  
        }  
    }  
  
    public DataReader(String databaseFileName, String dbTableName) {  
        this.dbFileName = databaseFileName;  
        this.dbTableName = dbTableName;  
    }  
}
```

DataReader.java

```
public boolean open() {
    try {
        SQLiteConfig config = new SQLiteConfig();
        this.connection = DriverManager.getConnection("jdbc:sqlite://" +
this.dbFileName, config.toProperties());
    } catch (SQLException e) {
        e.printStackTrace();
        return false;
    }
    return true;
}

public boolean close() {
    if (this.connection == null) {
        return true;
    }
    try {
        this.connection.close();
    } catch (SQLException e) {
        e.printStackTrace();
        return false;
    }
    return true;
}
```

DataReader.java

```
public int createTable() throws Exception {
    if (this.connection == null) {
        throw new Exception("DB is not open");
    }
    String query = "CREATE TABLE " + this.dbTableName + "(idx INT PRIMARY KEY,
name TEXT, score REAL);";
    Statement statement = this.connection.createStatement();
    int result = statement.executeUpdate(query);
    statement.close();
    return result;
}

public int insertData() throws SQLException {
    String query = "INSERT INTO " + this.dbTableName + "(name, score)
VALUES('abc',11);";
    Statement statement = this.connection.createStatement();
    int result = statement.executeUpdate(query);
    statement.close();
    return result;
}
```


DataReader.java

```
public boolean selectData() throws SQLException {
    boolean result = false;
    String query = "SELECT * FROM " + this.dbTableName + " WHERE ?;";
    PreparedStatement preparedStatement = this.connection.prepareStatement(query);
    preparedStatement.setInt(1, 1);
    ResultSet resultSet = preparedStatement.executeQuery();
    if (resultSet.next()) {
        System.out.println(resultSet.getString("name"));
        result = true;
    }
    resultSet.close();
    preparedStatement.close();
    return result;
}
```