# 제5장 클라이언트와 웹 서버의 연동

- 1. 웹 연동 서버 구축
- 2. 웹을 연동하기 위한 핵심 기반 기술

## 웹 연동 서버 구축 : JSP 개발환경

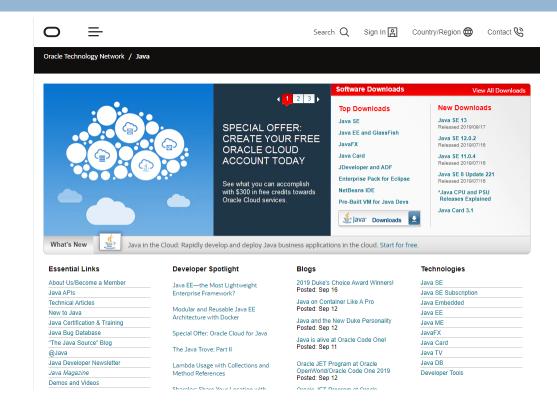
- □ 웹 서버
  - □ JDK, JSP 엔진
- □ 손쉬운 개발 환경
  - 에디터 등
- DBMS

필요 시스템	기본 설치 폴더	편의를 위한 본서의 설치 폴더
자바 개발 및 운영 환경	JSP	[C:\JSP\jdkx.x.x]
웹 서버 및 JSP 엔진	Apache Tomcat Server	[C:\JSP\Tomcat x.x]
JSP 통합 개발 환경	Eclipse	[C:\JSP\Eclipse jee]
데이터베이스관리시스템	MySQL	[C:\SP\MySQL x.x]

# 웹 연동 서버 구축 : JDK 설치

### □ 내려받기

java.sun.com



### □ 설치폴더

모듈	기본 설치 폴더	편의를 위한 수정된 설치 폴더
JDK	[C:\Program Files\Java\jdkx.x.x]	[C:\JSP\jdkx.x.x]
JRE	[C:\Program Files\Java\jrex.x.x]	[C:\Program Files\Java\jrex.x.x]

## 웹 연동 서버 구축 : JSP 웹 서버 내려 받기

### Tomcat

\_\_tomcat.apache.org

Apache Tomcat<sup>®</sup>





APACHECON LAS VEGAS: Sept. 9-12, 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

### **Apache Tomcat**

The Apache Tomcat® software is an open source implementation of WebSocket technologies. The Java Servlet, JavaServer Pages, Java Exi Tomcat 7 Software Downloads under the Java Community Process.

The Apache Tomcat software is developed in an open and participat The Apache Tomcat project is intended to be a collaboration of the I participate in this open development project. To learn more about g Quick Navigation

Apache Tomcat software powers numerous large-scale, mission-crit organizations. Some of these users and their stories are listed on th

Apache Tomcat, Tomcat, Apache, the Apache feather, and the Apach Foundation

### Tomcat 9.0.26 Released

The Apache Tomcat Project is proud to announce the release of vers include:

- . Update to Commons Daemon 1.2.1 to pick up fixes for regres using a 32-bit JVM on Windows.
- · Avoid an NPE when accessing an https port using http.
- . Correct the invalid automatic module names for the embedde
- Fix a potential hang when using HTTP/2 with the asynchronol 7.0.96

Full details of these changes, and all the other changes, are available

Welcome to the Apache Tomcat® 7.x software download page. This page provides download links for obtaining the latest version of Tomcat 7.0.x software, as well as links to the archives of older releases.

KEYS | 7.0.96 | 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.

You are currently using http://apache.tt.co.kr/. 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.

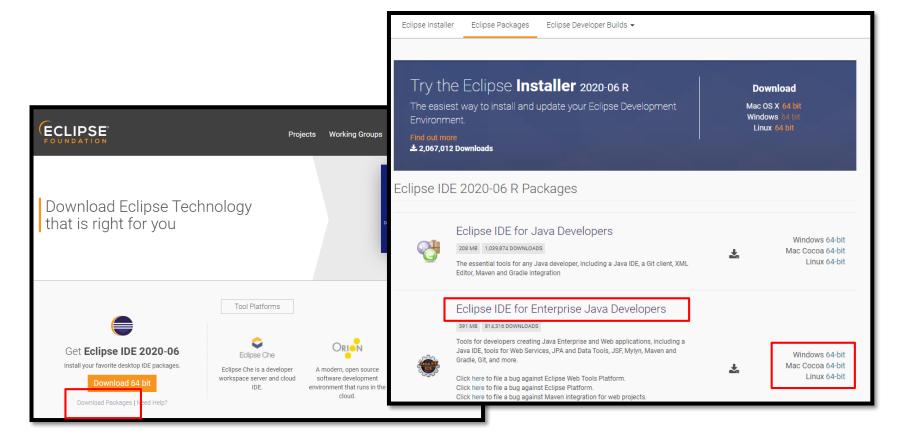
Other mirrors: http://apache.mirror.cdnetworks.com/

Please see the README file for packaging information. It explains what every distribution contains.

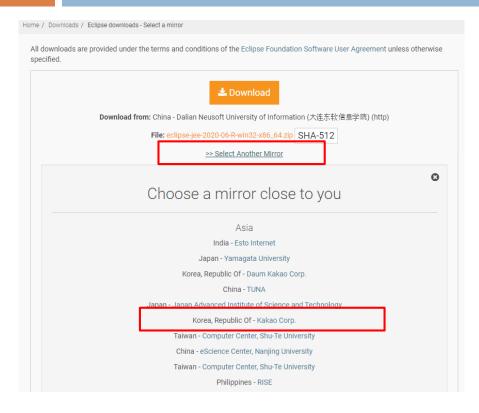
### **Binary Distributions**

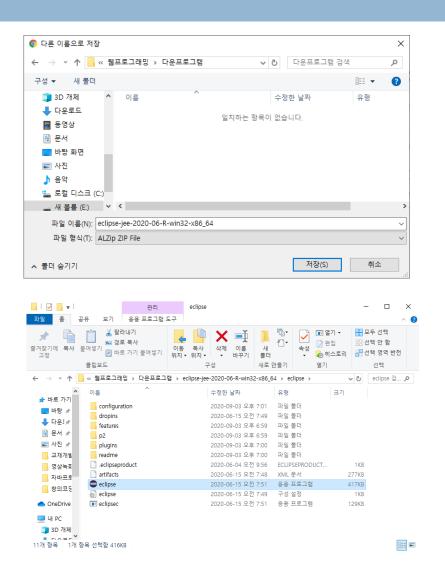
- · Core:
  - zip (pgp, sha512)
  - tar.gz (pgp, sha512)
  - 32-bit Windows zip (pgp, sha512)
  - 64-bit Windows zip (pgp, sha512)
  - 32-bit/64-bit Windows Service Installer (pgp, sha512)
- · Full documentation:
  - tar.gz (pgp, sha512)
- Deployer:

- www.eclipse.org/downloads
- □ 버전
  - Eclipse IDE for Java EE Developers

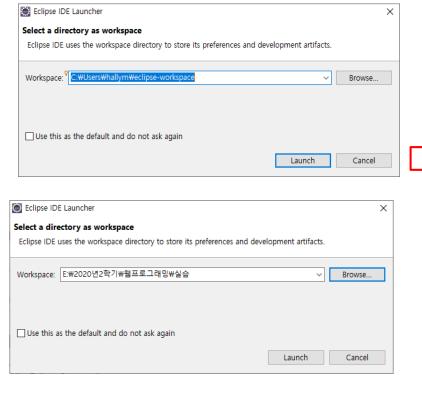


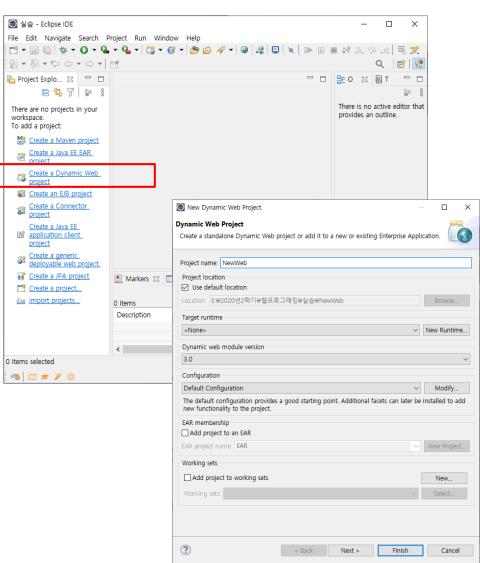
6

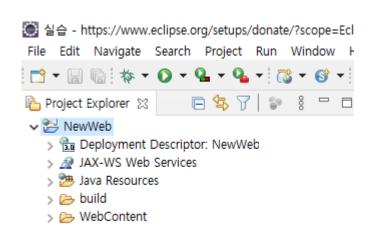


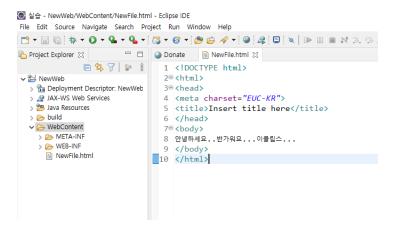


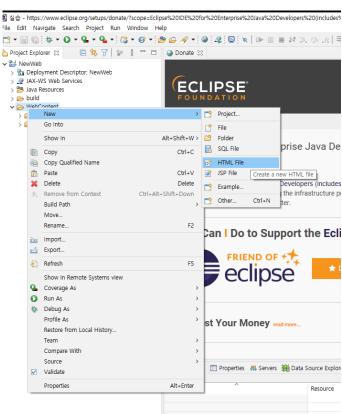
7



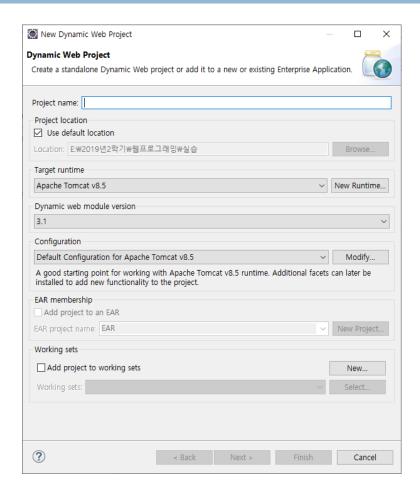


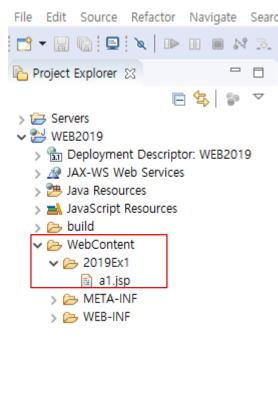




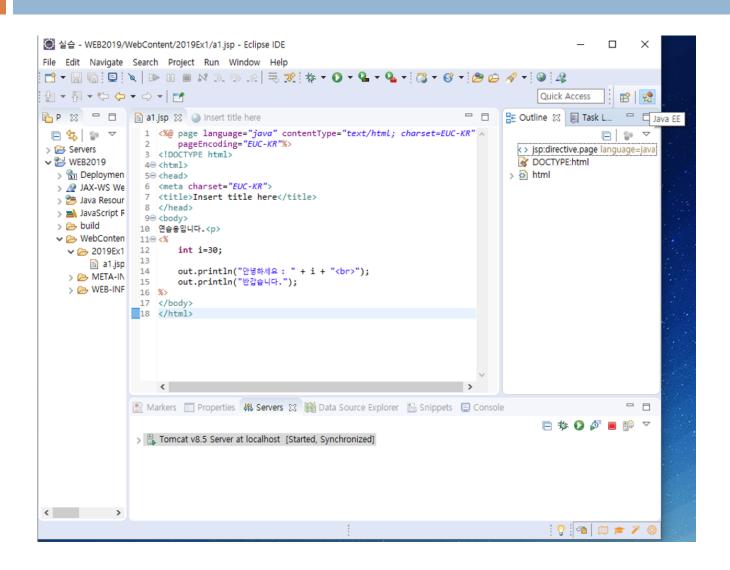


## 웹 연동 서버 구축 : 이클립스 프로젝트





# 웹 연동 서버 구축 : 이클립스 작업 환경



# 웹 연동 서버 구축 : JSP파일 실행

```
1 
page language="java" contentType="text/html; charset=EUC-KR"
         pageEncoding="EUC-KR"%>
  3 <!DOCTYPE html>
                                                             Eclipse IDE
  4⊕ <html>
                                                             Project Run Window Help
  5⊕ <head>
                                                                           New Window
                                                                                          😘 + 🚱 + 😕 🔑 🥠 + 🔞 🖳 🖖 + 🎋
                                                              P 20 20
  6 <meta charset="EUC-KR">
                                                                           Editor
  7 <title>Insert title here</title>
                                                             al.jsp 🔀
                                                                           Appearance
  8 </head>
                                                              1 <%0 page
                                                                                          Type="text/html; charset=EUC-KR"
  9⊖ <body>
                                                                   page
                                                                           Show View
                                                              3 <!DOCTYP
 10 연습용입니다.
                                                                           Perspective
                                                              40 <html>
 11⊖ <%
                                                              5⊖ <head>
                                                                           Navigation
                                                              6 <meta ch
 12
         int i=30:
                                                              7 <title>I
                                                                                             O Internal Web Browser
                                                                           Web Browser
 13
                                                              8 </head>
         out.println("안녕하세요: " + i + "<br>");
                                                                           Preferences
                                                                                             1 Default system web browser
 14
                                                              9⊖ <body>
                                                             10 연습용입니다.
         out.println("반갑습니다.");
 15
                                                                                             2 Internet Explorer
                                                             119 (%
 16 %>
                                                                   int i=30;
                                                                                             3 Chrome
                                                             12
                                                             13
 17 </body>
                                                                   out.println("안녕하세요: " + i + "<br>");
                                                             14
18 </html>
                                                             15
                                                                   out.println("반갑습니다.");
                                                             16 %>
                                                             17 </body>
                                                             18 </html>
                   Insert title here 
      a1.jsp
                       http://localhost:8080/WEB2019/2019Ex1/a1.jsp
      연습용입니다.
      안녕하세요:30
      반갑습니다.
```

### 웹을 연동하기 위한 핵심 기반 기술

- □ 클라이언트 기반 핵심 개발 기술
  - HTML5
  - CSS3
  - JavaScript
- □ 서버 기반 핵심 개발 기술
  - □ 애플리케이션 개발 언어 : JSP, PHP, ASP ...
  - □ 프레임워크 : 클래스와 라이브러리가 합쳐진 형태
    - Spring: Java의 웹 프레임워크
    - Apache 시리즈 (Sling, Structs 2, Wicket 등)
    - JWT
    - Django: Python의 웹 프레임워크
    - Flask: Python의 마이크로 웹 프레임워크
    - Ruby on Rails: Ruby의 웹 프레임워크
    - Laravel, Codeigniter, CakePHP, Symfony, Zend: PHP의 웹 프레임워크
    - Bootstrap: 트위터의 jQuery 기반 웹 프레임워크
    - .NET Framework

- Qt
- Node.js의 Express.js, NestJS, meteor 프레임워크
- 웹 프론트엔드의 SPA용 프레임워크 (AngularJS, Angular, Vue.js 등)
- Play: 함수형 언어 Scala의 웹 프레임워크
- 안드로이드: 안드로이드 애플리케이션용 프레임워크
- Cocoa: iOS, macOS 애플리케이션용 프레임워크