

웹 애플리케이션 개발환경 구축

▶ 개발환경 구축 순서

1. <https://tomcat.apache.org/download-80.cgi> 접속
2. Download – Tomcat 8 선택 후 8.5 버전 다운로드
3. D 드라이브의 dev 폴더 생성 후 압축 풀기
4. 이클립스에 설치한 톰캣의 경로로 런타임 등록
5. 테스트 서버 생성 후 실행
6. 정상 start up 확인

▶ 버전별 지원정보 확인



Apache Tomcat®


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Apache Tomcat Versions

Apache Tomcat® is an open source software implementation of the Java Servlet and JavaServer Pages technologies. Different versions of Apache Tomcat are available [specifications](#) and the respective Apache Tomcat versions is:

Servlet Spec	JSP Spec	EL Spec	WebSocket Spec	JASPIC Spec	Apache Tomcat Version	Latest Released Version	Supported Java Versions
4.0	2.3	3.0	1.1	1.1	9.0.x	9.0.26	8 and later
3.1	2.3	3.0	1.1	1.1	8.5.x	8.5.46	7 and later
3.1	2.3	3.0	1.1	N/A	8.0.x (superseded)	8.0.53 (superseded)	7 and later
3.0	2.2	2.2	1.1	N/A	7.0.x	7.0.96	6 and later (7 and later for WebSocket)
2.5	2.1	2.1	N/A	N/A	6.0.x (archived)	6.0.53 (archived)	5 and later
2.4	2.0	N/A	N/A	N/A	5.5.x (archived)	5.5.36 (archived)	1.4 and later
2.3	1.2	N/A	N/A	N/A	4.1.x (archived)	4.1.40 (archived)	1.3 and later
2.2	1.1	N/A	N/A	N/A	3.3.x (archived)	3.3.2 (archived)	1.1 and later

▶ 아파치-톰캣 서버 설치



Apache Tomcat®

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Apache Tomcat

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Download

- Which version?
- Tomcat 9
- Tomcat 8**
- Tomcat 7

Tomcat 8 Software Downloads

Welcome to the Apache Tomcat® 8.x software download page. This page provides download links for the 8.x series.

Users of Tomcat 8.0.x should be aware that it has reached [end of life](#). Users of Tomcat 8.0.x should be aware that it has reached [end of life](#). Users of Tomcat 8.0.x should be aware that it has reached [end of life](#).

Note: End of life has been announced for 8.0.x only. 8.5.x is not affected by this announcement.

Quick Navigation

[KEYS](#) **8.5.46** [Browse](#) | [Archives](#)

Release Integrity

You **must** [verify](#) the integrity of the downloaded files. We provide OpenPGP signatures for every release file. After you download the file, you should calculate a checksum for the file.

▶ 아파치-톰캣 서버 설치

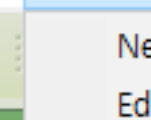
8.5.46

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

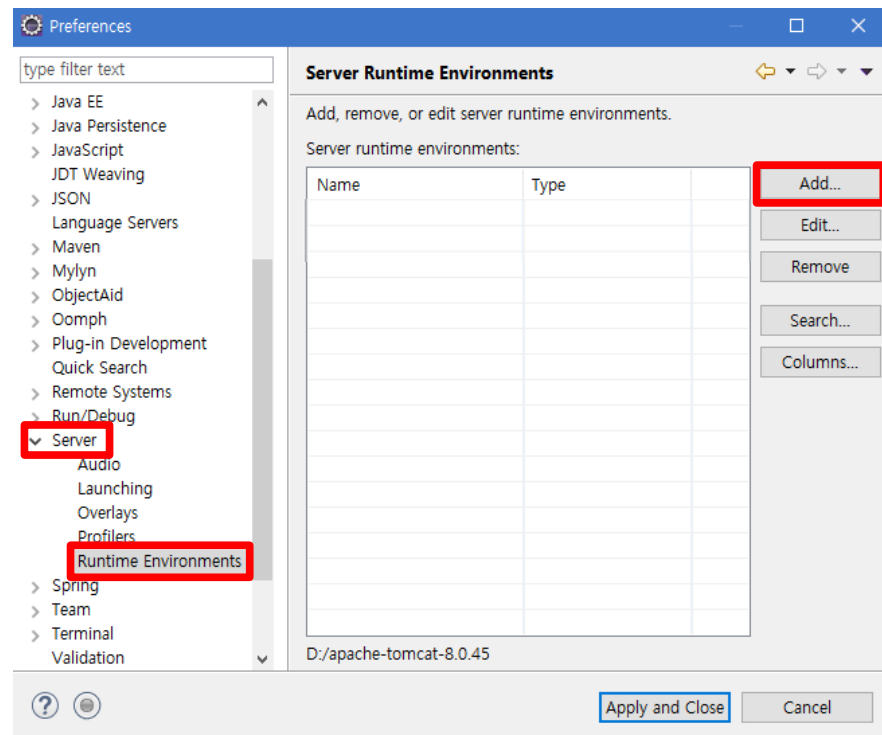
Binary Distributions

- 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:
 - [zip \(pgp, sha512\)](#)
 - [tar.gz \(pgp, sha512\)](#)
- Extras:
 - [JMX Remote jar \(pgp, sha512\)](#)
 - [Web services jar \(pgp, sha512\)](#)
- Embedded:
 - [tar.gz \(pgp, sha512\)](#)
 - [zip \(pgp, sha512\)](#)

D드라이브의 dev 폴더를 생성하여 Tomcat-8.5.46 압축 풀기

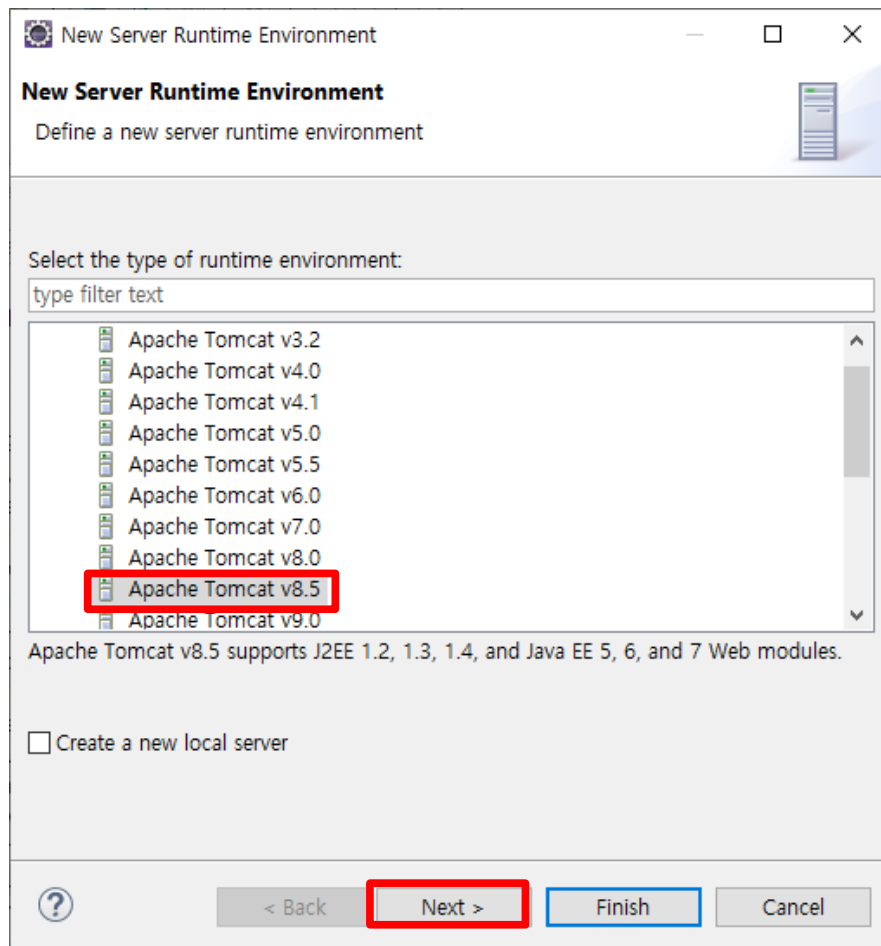


The screenshot shows the 'Window' menu of an IDE. The menu is open, displaying several options: 'New Window', 'Editor', 'Appearance', 'Show View', 'Perspective', 'Navigation', and 'Preferences'. The 'Preferences' option at the bottom is highlighted with a red rectangular border.



▶ 아파치-톰캣 서버 구성하기

New Server Environment 에서 Apache Tomcat v8.5 선택 후 [Next]



▶ 아파치-톰캣 서버 구성하기

[Browse...] 선택하여 Apache-tomcat 설치 경로 등록

New Server Runtime Environment

Tomcat Server
Specify the installation directory

Name:
Apache Tomcat v8.5

Tomcat installation directory:
C:\dev\apache-tomcat-8.5.46\apache-tomcat-8.5.46 **Browse...**

JRE:
Workbench default JRE **Installed JREs...**

Download and Install...

< Back **Next >** **Finish** **Cancel**

PC > 로컬 디스크 (C:) > dev > apache-tomcat-8.5.46 > apache-tomcat-8.5.46

이름	수정된 날짜	유형
bin	2019-09-29 오전 12:42	파일 폴더
conf	2019-09-29 오전 12:42	파일 폴더
lib	2019-09-29 오전 12:42	파일 폴더
logs	2019-09-16 오후 7:17	파일 폴더
temp	2019-09-16 오후 7:17	파일 폴더
webapps	2019-09-29 오전 12:42	파일 폴더
work	2019-09-16 오후 7:17	파일 폴더

[illegible]

▶ 아파치-톰캣 서버 등록하기

Servers 설정에서 new Server 클릭 후, 이미 만들어 둔 환경을 선택하고 Finish

Servers Problems Console

No servers are available. Click this link to create a new server...

New Server

Define a New Server
Choose the type of server to create

Select the server type:
type filter text

- Tomcat v5.0 Server
- Tomcat v5.5 Server
- Tomcat v6.0 Server
- Tomcat v7.0 Server
- Tomcat v8.0 Server
- Tomcat v8.5 Server
- Tomcat v9.0 Server

Publishes and runs J2EE and Java EE Web projects and server configurations to a local Tomcat server.

Server's host name: localhost

Server name: Tomcat v8.5 Server at localhost

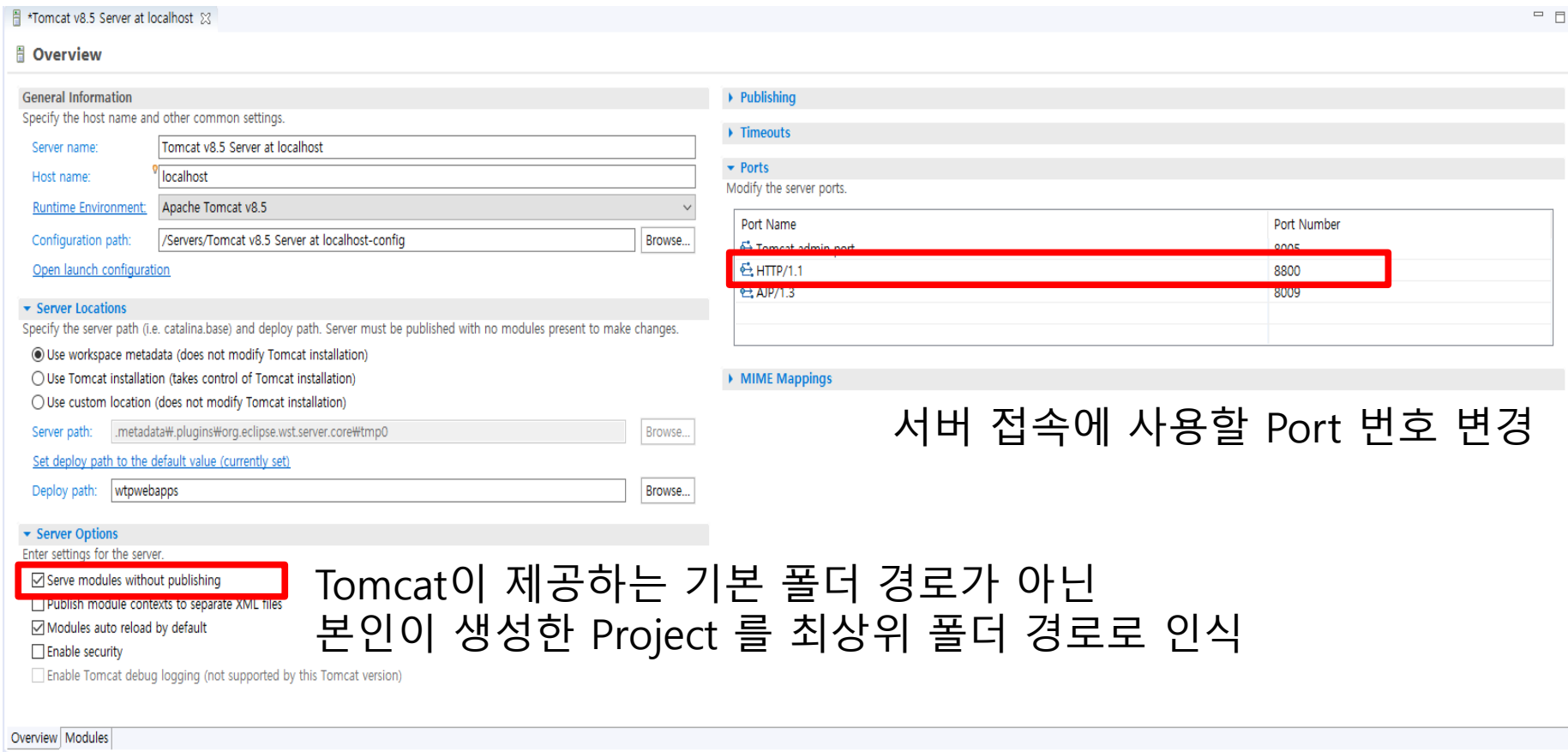
Server runtime environment: Apache Tomcat v8.5 [Add...](#)

[Configure runtime environments...](#)

? < Back Next > **Finish** Cancel

▶ 아파치-톰캣 서버 등록하기

생성된 서버를 더블 클릭하여 서버 설정 변경



Overview

General Information
Specify the host name and other common settings.

Server name: Tomcat v8.5 Server at localhost
Host name: localhost
Runtime Environment: Apache Tomcat v8.5
Configuration path: /Servers/Tomcat v8.5 Server at localhost-config
Open launch configuration

Server Locations
Specify the server path (i.e. catalina.base) and deploy path. Server must be published with no modules present to make changes.

☒ Use workspace metadata (does not modify Tomcat installation)
☐ Use Tomcat installation (takes control of Tomcat installation)
☐ Use custom location (does not modify Tomcat installation)

Server path: .metadata#.plugins#org.eclipse.wst.server.core#tmp0
Set deploy path to the default value (currently set)
Deploy path: wtpwebapps

Server Options
Enter settings for the server.

☒ Serve modules without publishing
☐ Publish module contexts to separate XML files
☒ Modules auto reload by default
☐ Enable security
☐ Enable Tomcat debug logging (not supported by this Tomcat version)

Ports
Modify the server ports.

Port Name	Port Number
Tomcat admin port	8005
HTTP/1.1	8800
AJP/1.3	8009

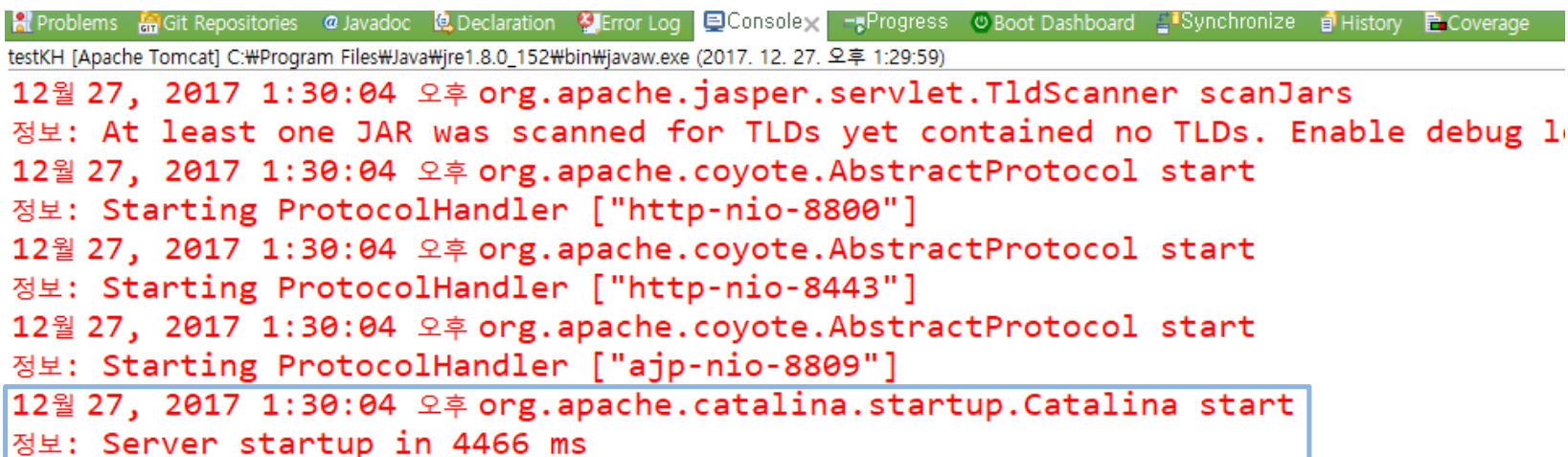
MIME Mappings

서버 접속에 사용할 Port 번호 변경

Tomcat이 제공하는 기본 폴더 경로가 아닌
본인이 생성한 Project 를 최상위 폴더 경로로 인식

▶ 아파치-톰캣 서버 등록하기

Server가 정상 구동 되는지 확인

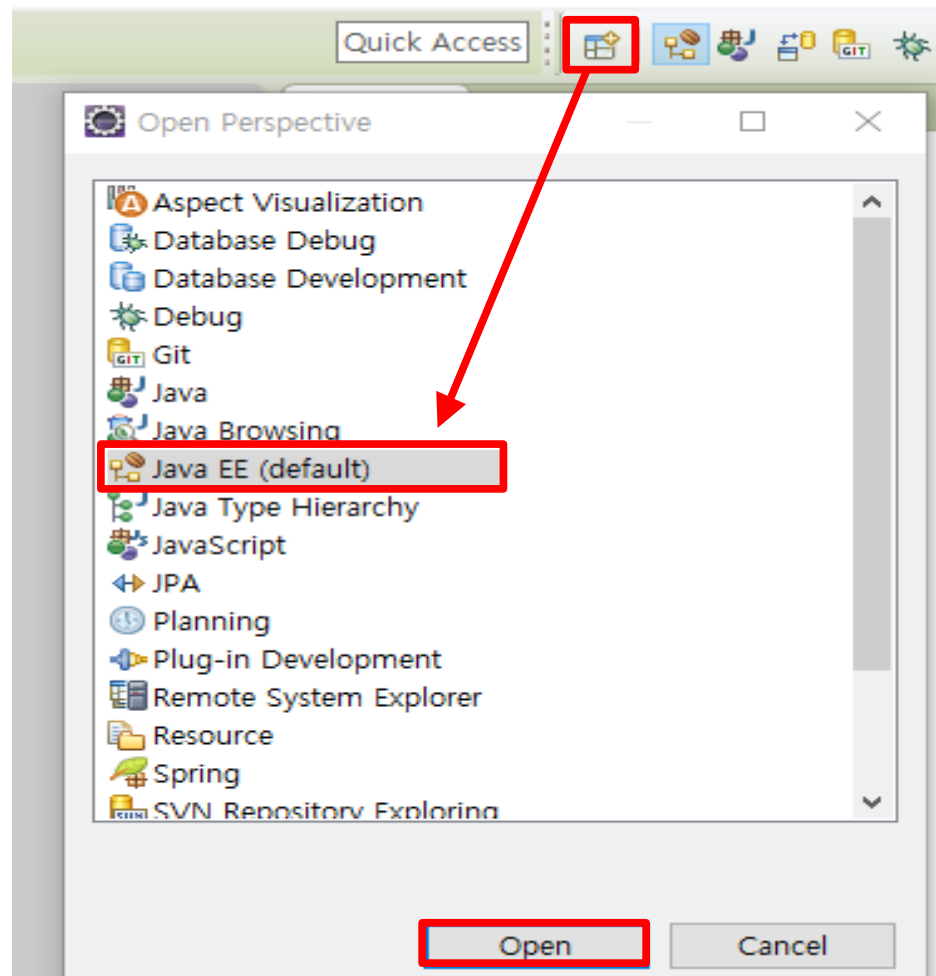


The screenshot shows an IDE console window with the following tabs: Problems, Git Repositories, Javadoc, Declaration, Error Log, Console (selected), Progress, Boot Dashboard, Synchronize, History, and Coverage. The console output is as follows:

```
testKH [Apache Tomcat] C:\Program Files\Java\jre1.8.0_152\bin\javaw.exe (2017. 12. 27. 오후 1:29:59)  
12월 27, 2017 1:30:04 오후 org.apache.jasper.servlet.TldScanner scanJars  
정보: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging to see this message.  
12월 27, 2017 1:30:04 오후 org.apache.coyote.AbstractProtocol start  
정보: Starting ProtocolHandler ["http-nio-8800"]  
12월 27, 2017 1:30:04 오후 org.apache.coyote.AbstractProtocol start  
정보: Starting ProtocolHandler ["http-nio-8443"]  
12월 27, 2017 1:30:04 오후 org.apache.coyote.AbstractProtocol start  
정보: Starting ProtocolHandler ["ajp-nio-8809"]  
12월 27, 2017 1:30:04 오후 org.apache.catalina.startup.Catalina start  
정보: Server startup in 4466 ms
```

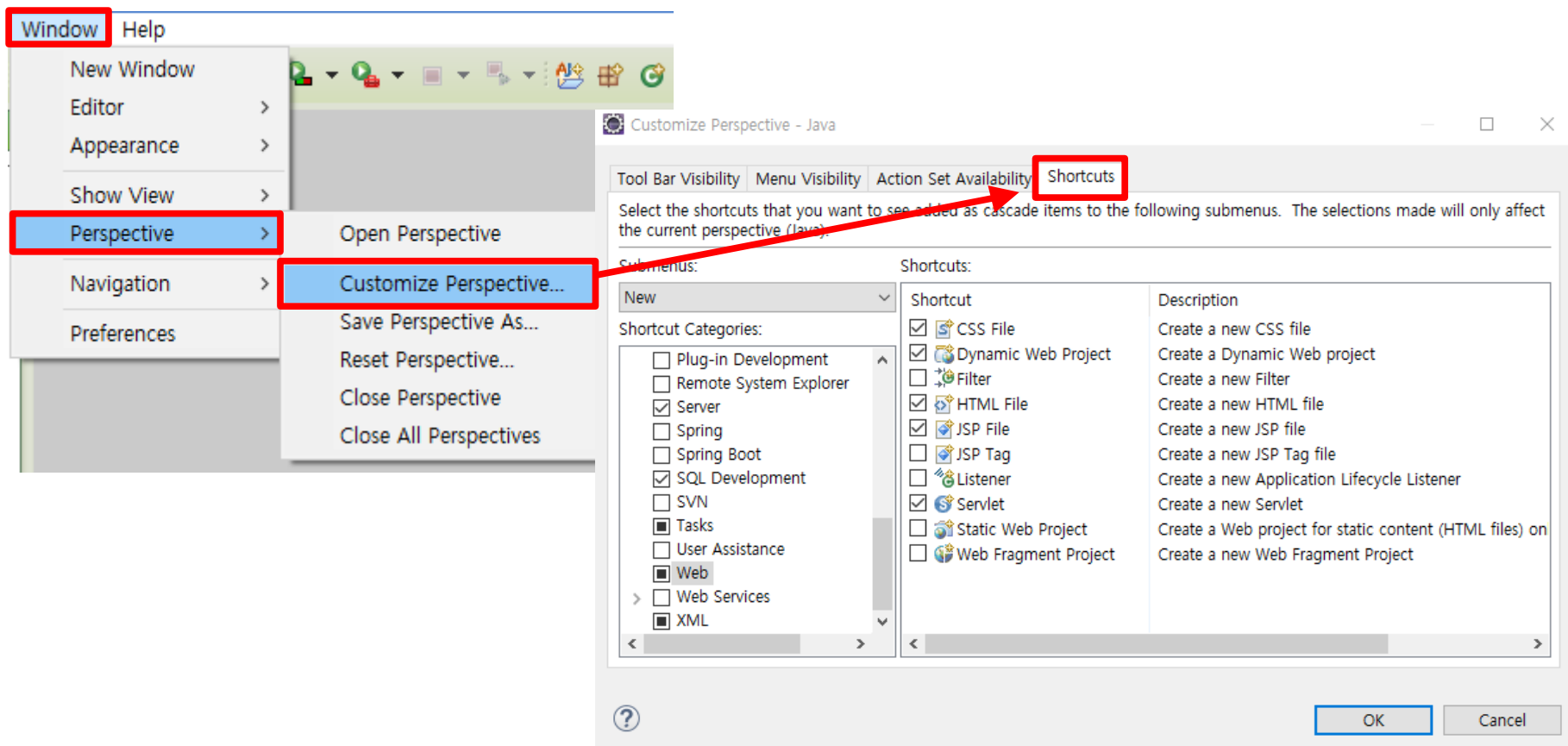
▶ 이클립스 환경 설정

이클립스의 구동환경을 Java EE 로 변경



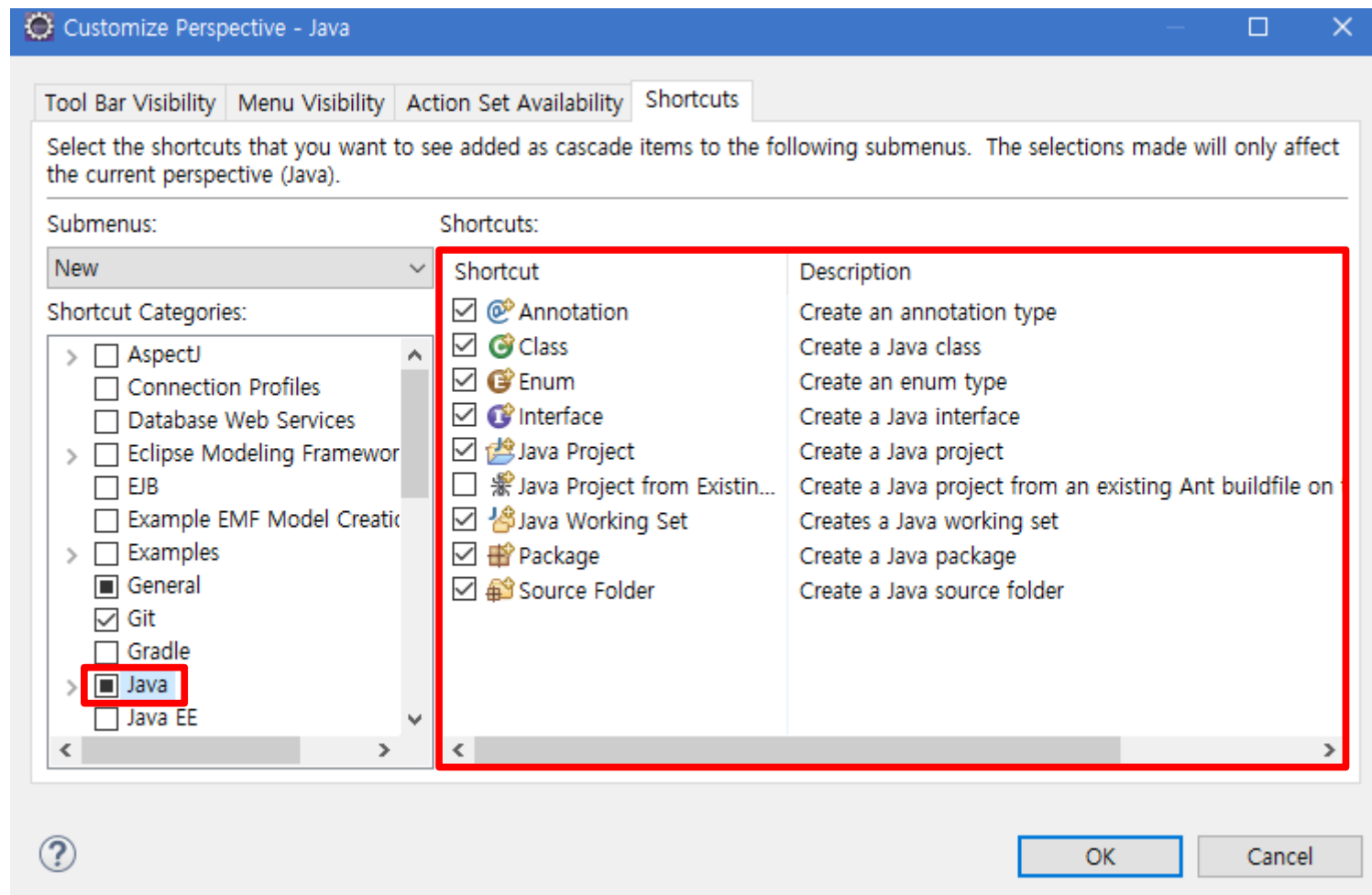
▶ 이클립스 환경 설정

웹 애플리케이션 구현 시 생성해야 할 파일의 바로가기를 생성



▶ 이클립스 환경 설정

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▶ 이클립스 환경 설정

웹 애플리케이션 구현 시 생성해야 할 파일의 바로가기를 생성

Customize Perspective - Java

Tool Bar Visibility Menu Visibility Action Set Availability Shortcuts

Select the shortcuts that you want to see added as cascade items to the following submenus. The selections made will only affect the current perspective (Java).

Submenus:

New

Shortcut Categories:

- ☐ Plug-in Development
- ☐ Remote System Explorer
- ☒ Server
- ☐ Spring
- ☐ Spring Boot
- ☒ SQL Development
- ☐ SVN
- ☒ Tasks
- ☐ User Assistance
- ☒ Web
- ☐ Web Services
- ☒ XML

Shortcuts:

Shortcut	Description
<input checked="" type="checkbox"/> CSS File	Create a new CSS file
<input checked="" type="checkbox"/> Dynamic Web Project	Create a Dynamic Web project
<input type="checkbox"/> Filter	Create a new Filter
<input checked="" type="checkbox"/> HTML File	Create a new HTML file
<input checked="" type="checkbox"/> JSP File	Create a new JSP file
<input type="checkbox"/> JSP Tag	Create a new JSP Tag file
<input type="checkbox"/> Listener	Create a new Application Lifecycle Listener
<input checked="" type="checkbox"/> Servlet	Create a new Servlet
<input type="checkbox"/> Static Web Project	Create a Web project for static content (HTML files) or
<input type="checkbox"/> Web Fragment Project	Create a new Web Fragment Project

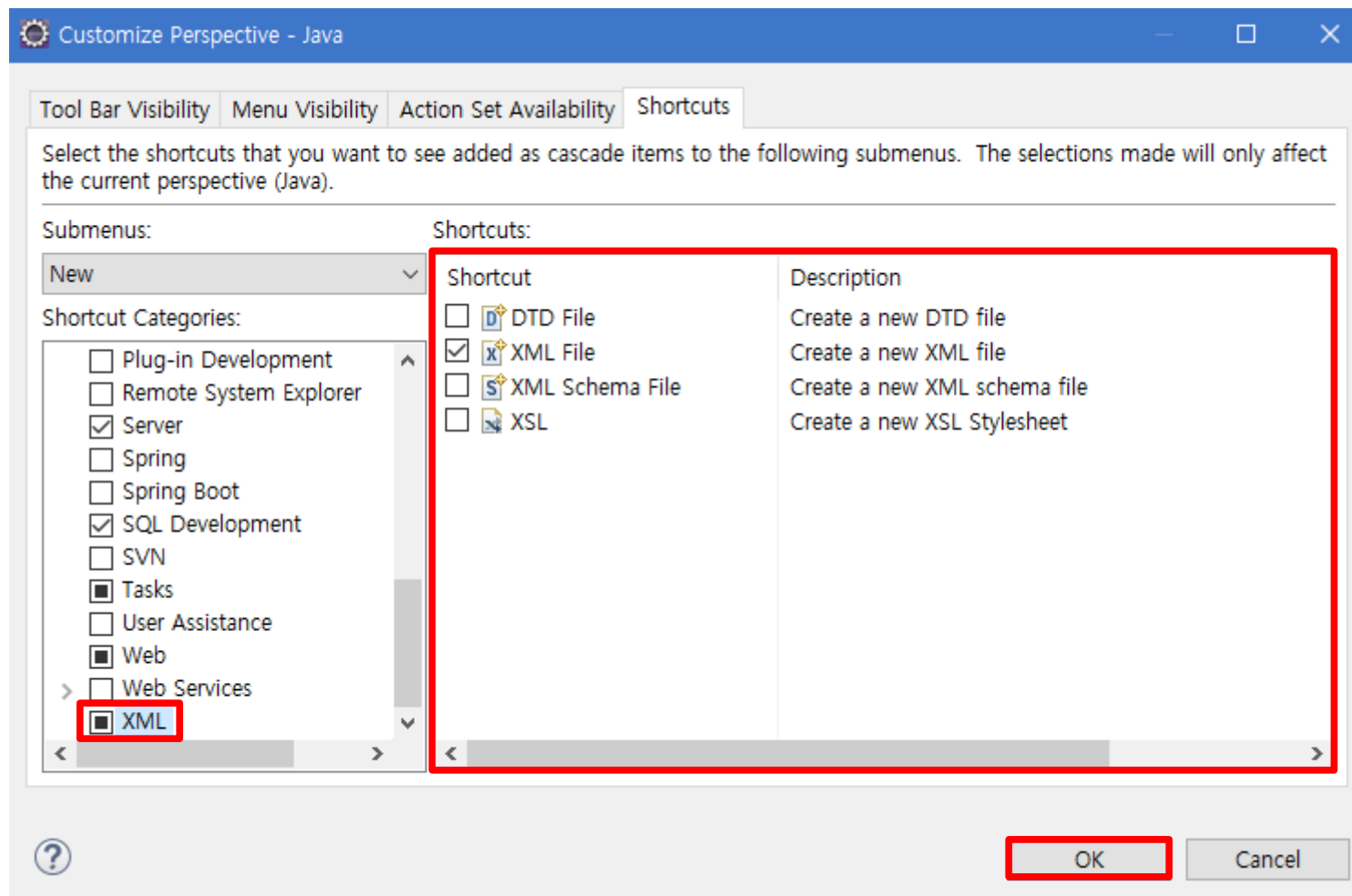


OK

Cancel

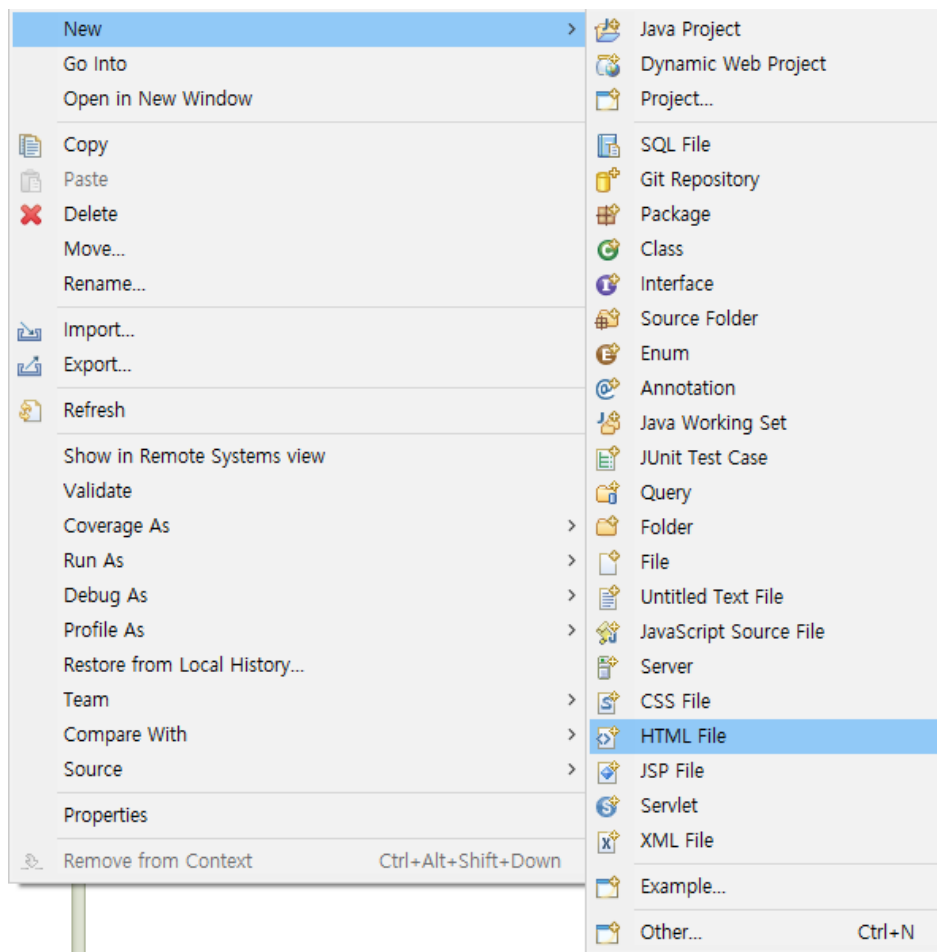
▶ 이클립스 환경 설정

웹 애플리케이션 구현 시 생성해야 할 파일의 바로가기를 생성



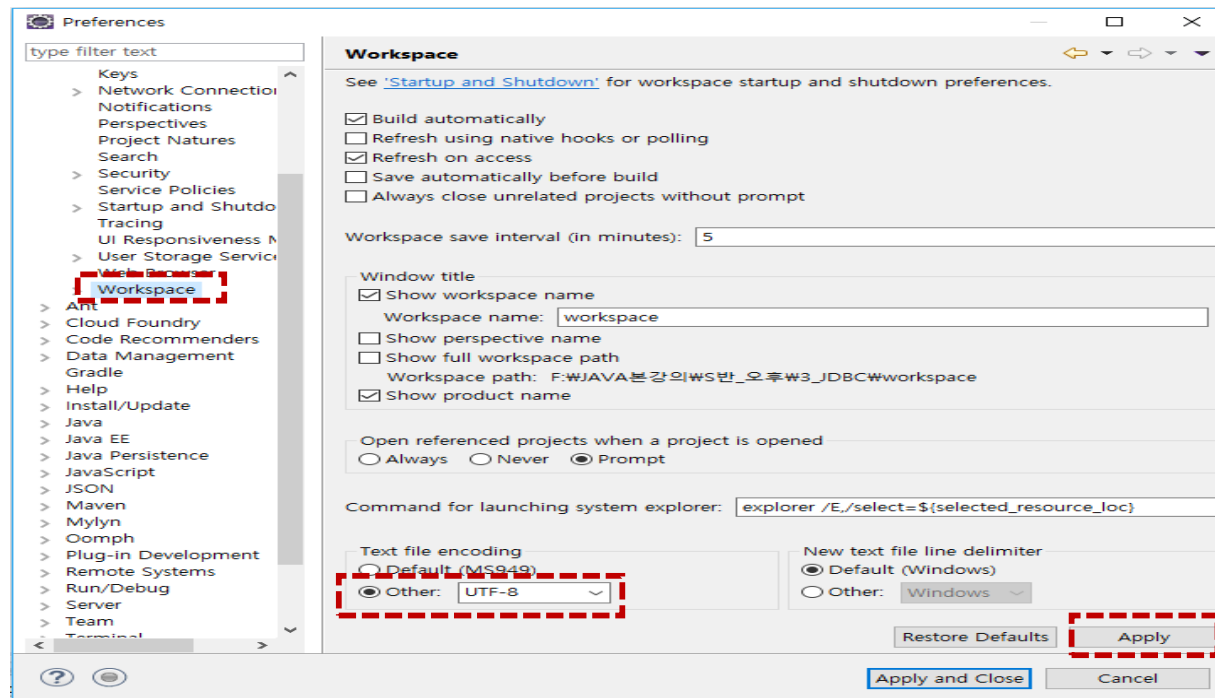
▶ 이클립스 환경 설정

우클릭하여 [New] 메뉴 접근 시다음과 같이 나오면 완료



▶ 이클립스 환경 설정

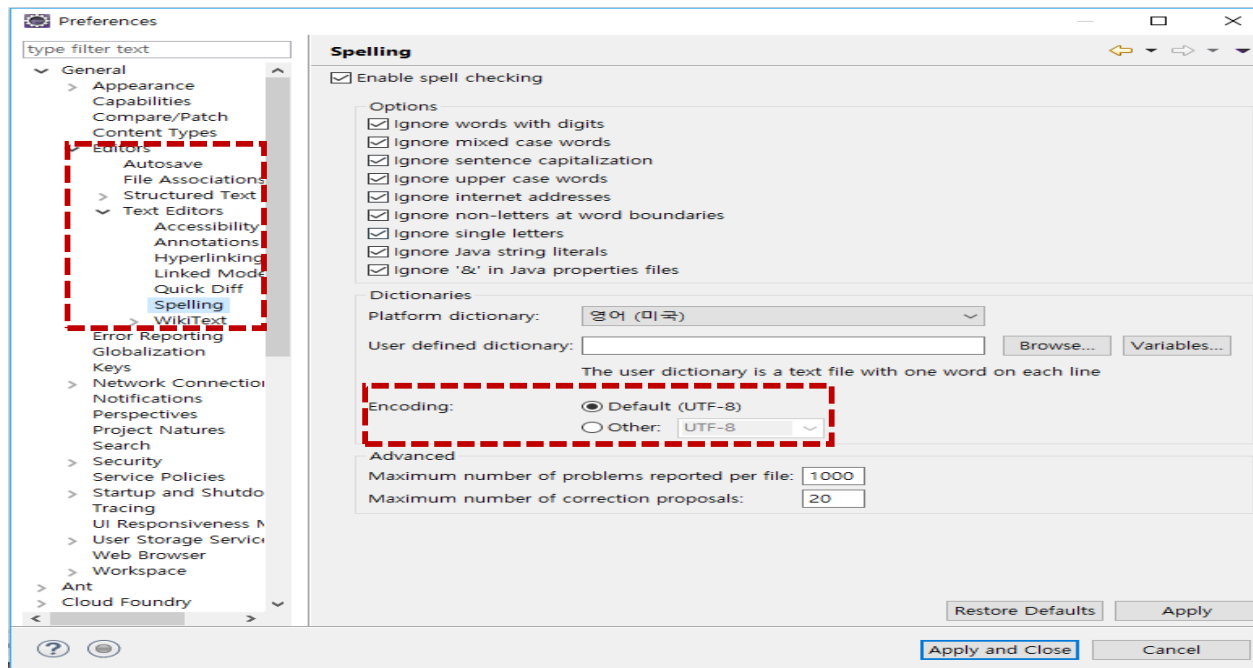
✓ 기본 문자 인코딩



* General – Workspace – Text file encoding – other에서 UTF-8 선택

▶ 이클립스 환경 설정

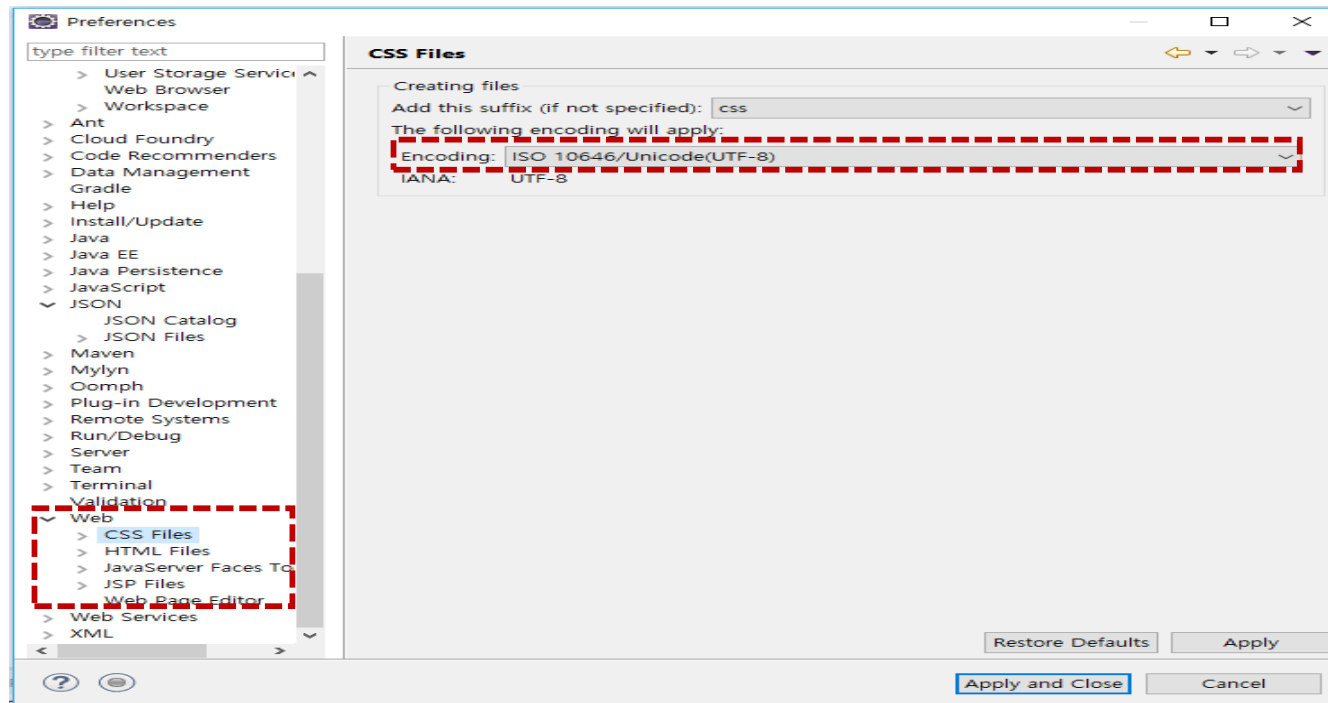
✓ 기본 문자 인코딩



* General – Editors – Text Editors – Spelling UTF-8 변경

▶ 이클립스 환경 설정

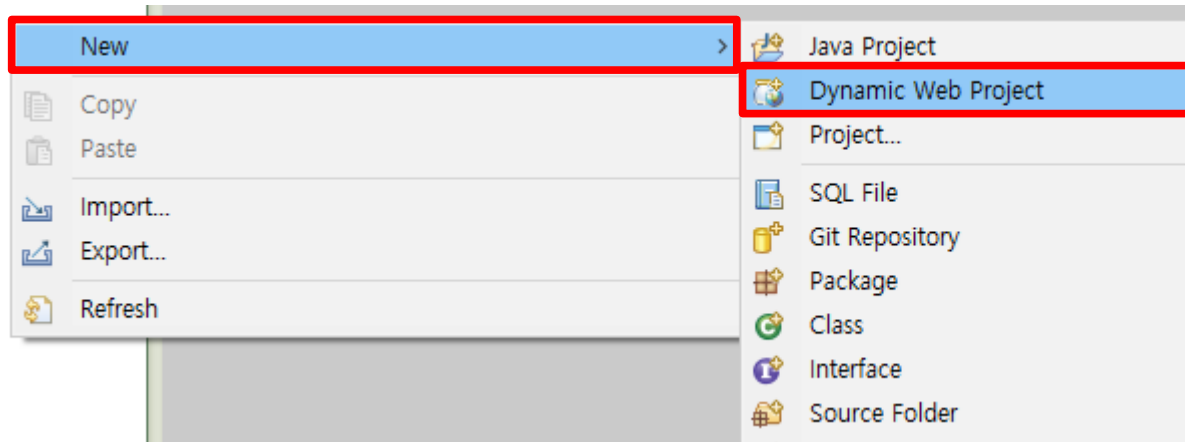
✓ Web 인코딩



* CSS Files, HTML Files, JSP Files, XML Files도 수정

▶ Web Project 서버에 등록하기

[New] – [Dynamic Web Project] 생성



▶ Web Project 서버에 등록하기

1. 프로젝트 이름을 설정
2. Target runtime 을 이전에 생성한 서버로 설정 후 [Next] 클릭

New Dynamic Web Project

Dynamic Web Project
Create a standalone Dynamic Web project or add it to a new or existing Enterprise Application.

Project name: 1_Servlet

Project location
☒ Use default location
Location: C:\Users\#byeol\workspace\#1_Servlet Browse...

Target runtime
Apache Tomcat v8.5 New Runtime...

Dynamic web module version
3.1

Configuration
Default Configuration for Apache Tomcat v8.5 Modify...
A good starting point for working with Apache Tomcat v8.5 runtime. Additional facets can later be installed to add new functionality to the project.

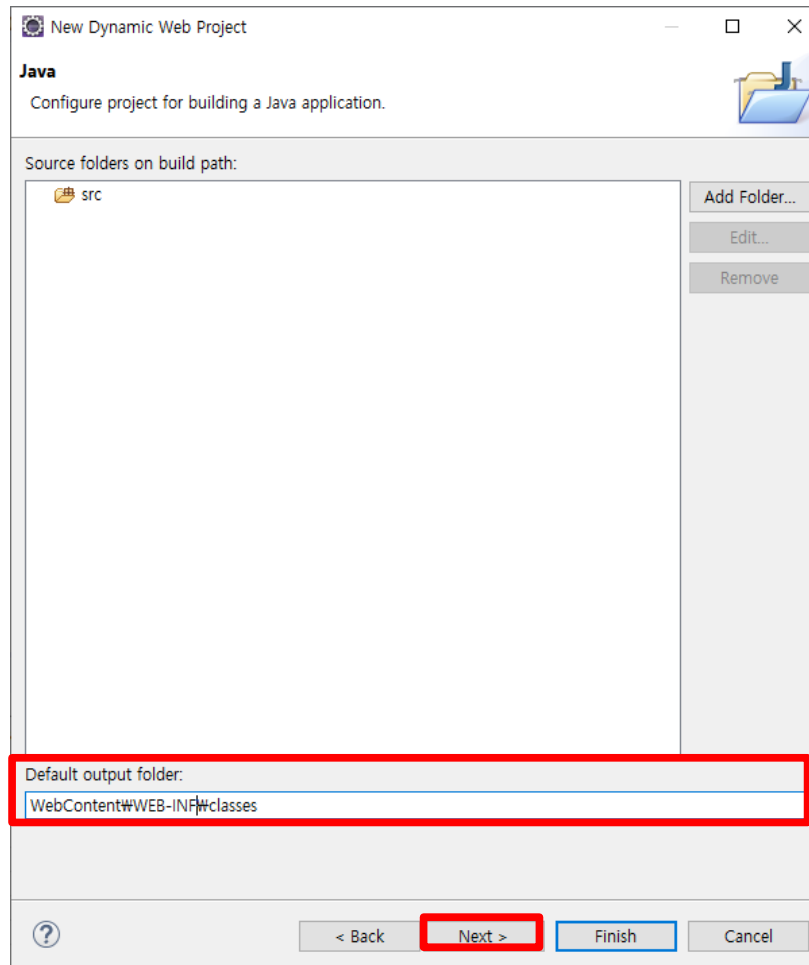
EAR membership
☐ Add project to an EAR
EAR project name: EAR New Project...

Working sets
☐ Add project to working sets New...
Working sets: Select...

< Back **Next >** Finish Cancel

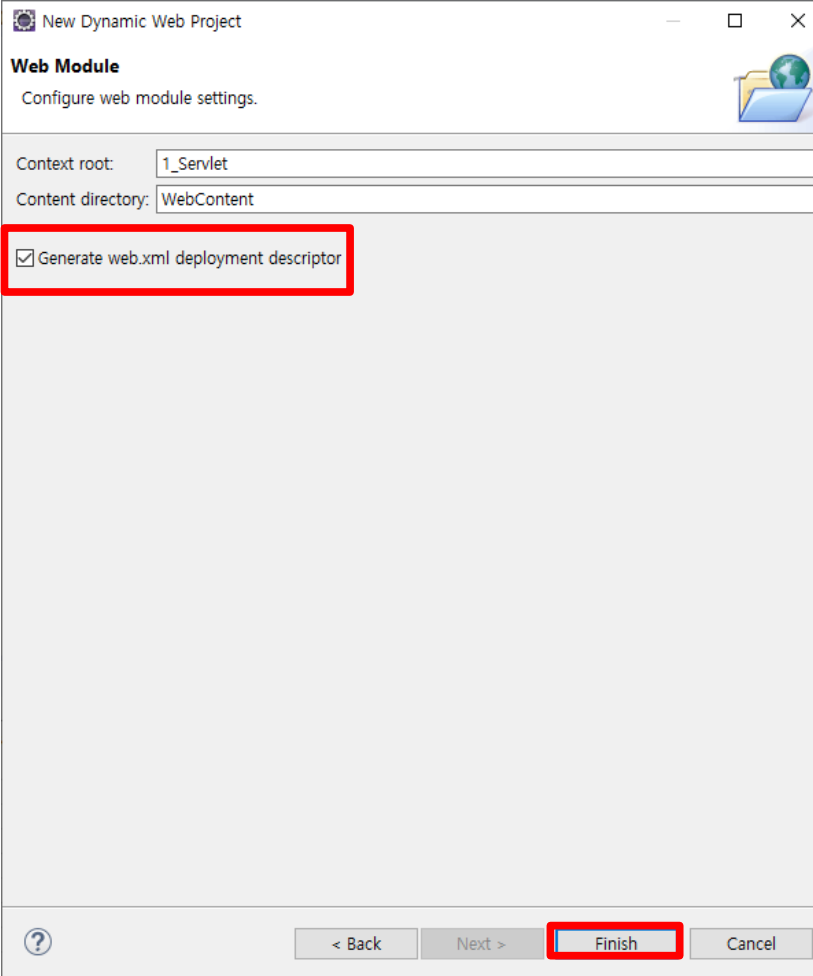
▶ Web Project 서버에 등록하기

source 폴더의 위치를 WebContent\WEB-INF\classes 로 설정 후 [Next]



▶ Web Project 서버에 등록하기

체크박스를 체크하여 웹 프로젝트 기본 설정 파일인 web.xml 생성 [Finish]



New Dynamic Web Project

Web Module
Configure web module settings.

Context root: 1_Servlet

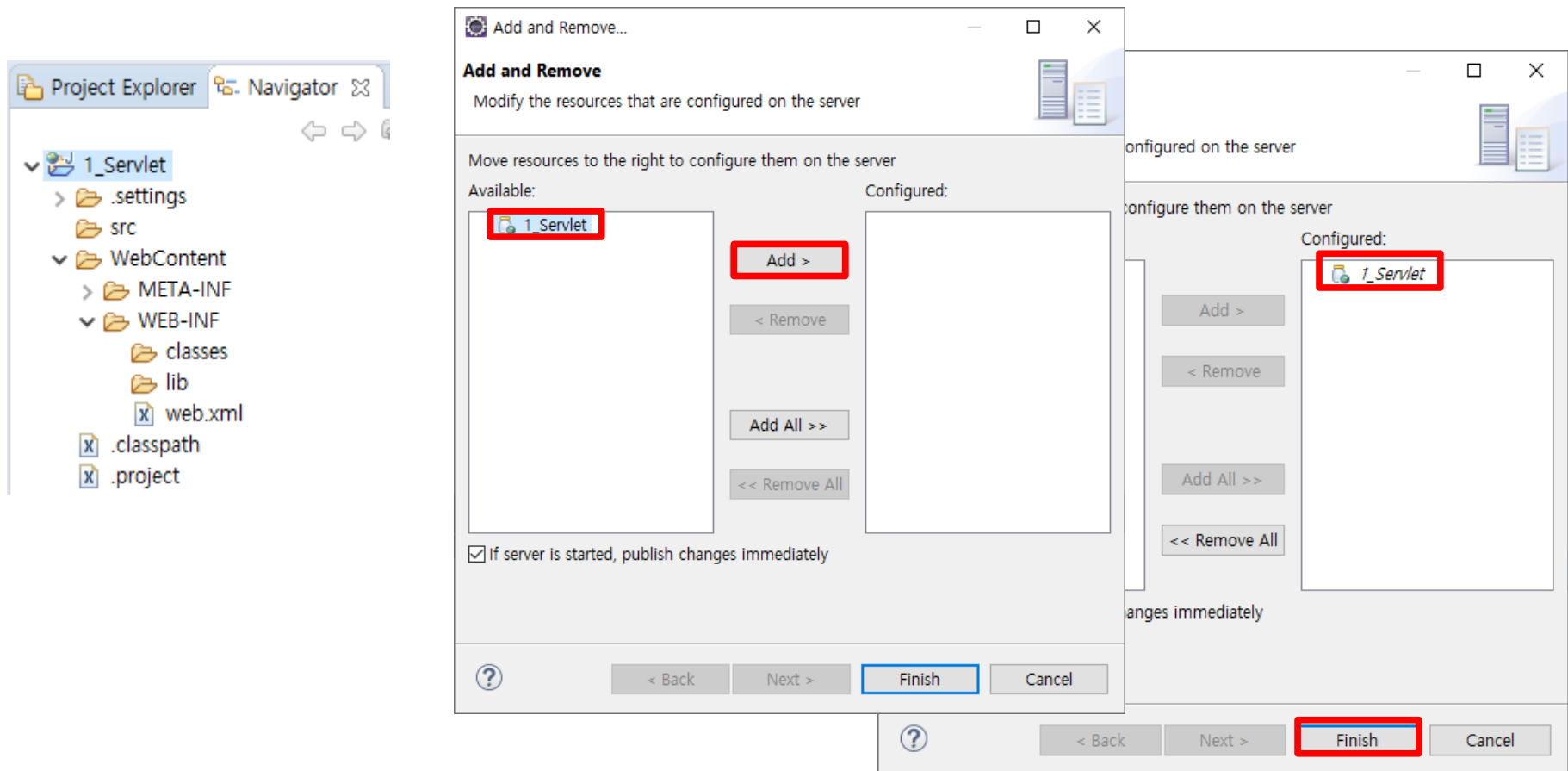
Content directory: WebContent

☒ Generate web.xml deployment descriptor

< Back Next > **Finish** Cancel

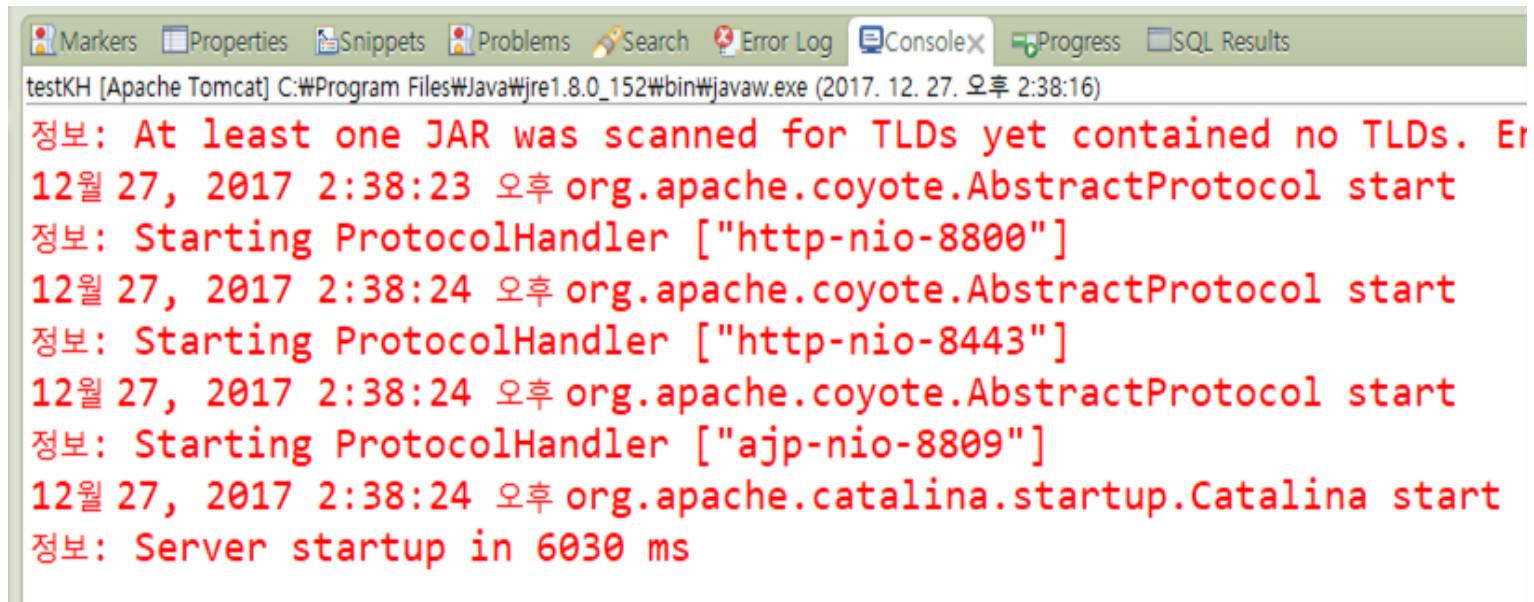
▶ Web Project 서버에 등록하기

Web 프로젝트가 생성된 것을 확인하고, 서버 우 클릭하여 Add and Remove
클릭 후 해당 프로젝트 추가



▶ Web Project 서버에 등록하기

서버 재기동하여 실행 확인



The screenshot shows an IDE console window with the following tabs: Markers, Properties, Snippets, Problems, Search, Error Log, Console (selected), Progress, and SQL Results. The console output is as follows:

```
testKH [Apache Tomcat] C:\Program Files\Java\jre1.8.0_152\bin\javaw.exe (2017. 12. 27. 오후 2:38:16)  
정보: At least one JAR was scanned for TLDs yet contained no TLDs. Er  
12월 27, 2017 2:38:23 오후 org.apache.coyote.AbstractProtocol start  
정보: Starting ProtocolHandler ["http-nio-8800"]  
12월 27, 2017 2:38:24 오후 org.apache.coyote.AbstractProtocol start  
정보: Starting ProtocolHandler ["http-nio-8443"]  
12월 27, 2017 2:38:24 오후 org.apache.coyote.AbstractProtocol start  
정보: Starting ProtocolHandler ["ajp-nio-8809"]  
12월 27, 2017 2:38:24 오후 org.apache.catalina.startup.Catalina start  
정보: Server startup in 6030 ms
```