



웹표준 환경구축

안 화 수

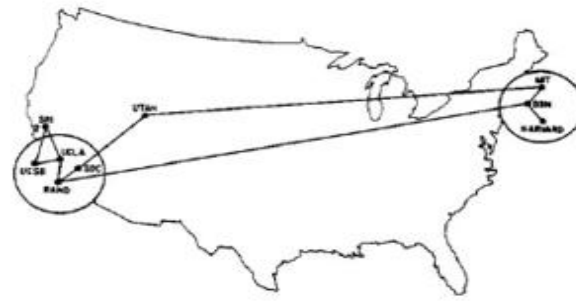
인터넷과 웹

❖ 인터넷의 시작

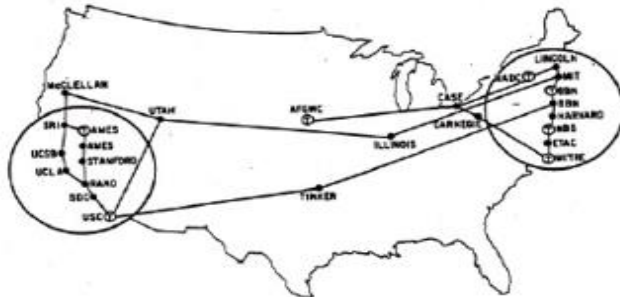
- 미국의 신기술을 연구하는 ARPA에서 현재 웹의 모태가 되는 아파넷_{ARPANET}을 1969년에 개발



1969년 12월



1970년 6월



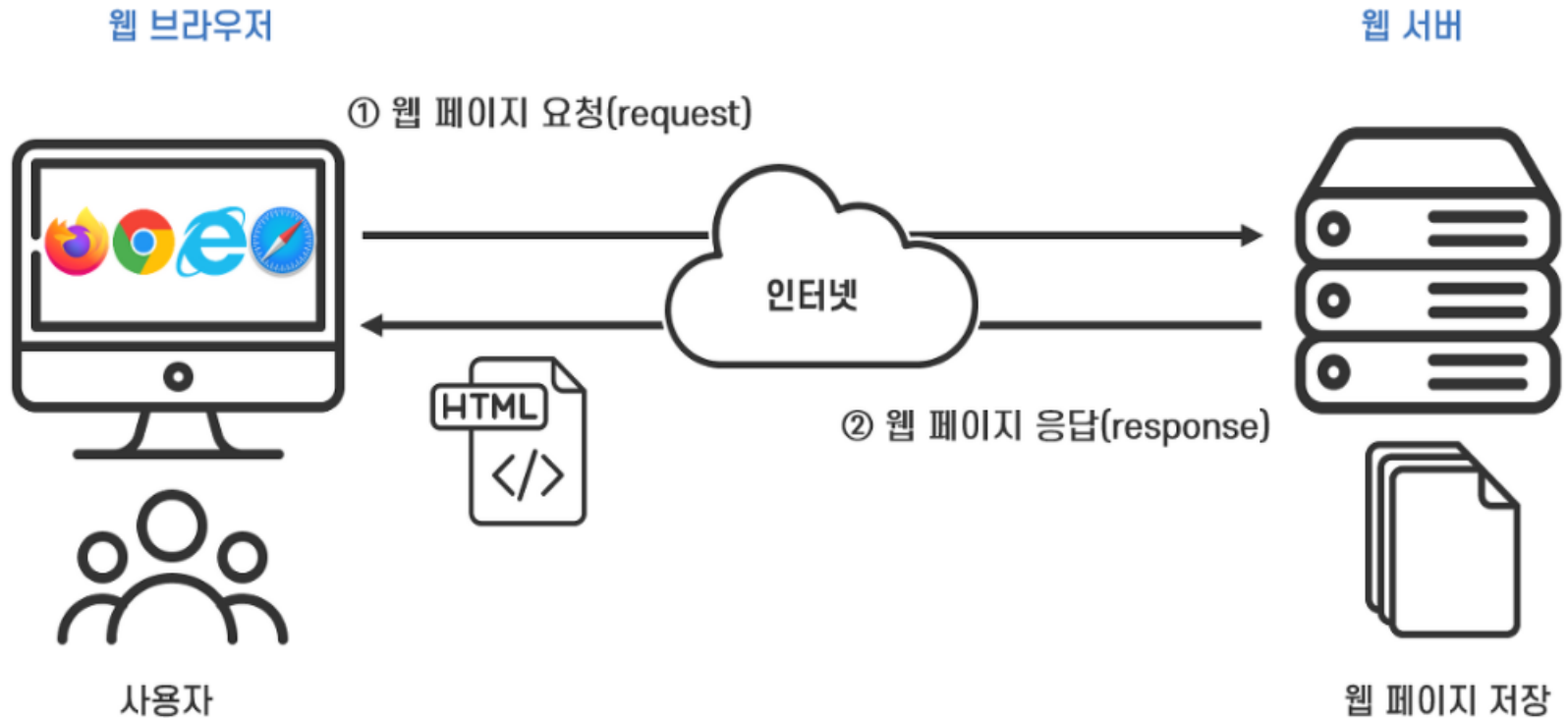
1972년 3월



1977년 7월

인터넷과 웹

❖ 웹 브라우저와 웹 서버



인터넷과 웹

- ❖ 클라이언트 프로그램(프론트엔드 프로그램)
 - 웹표준 : HTML5, CSS, JavaScript
 - 프레임워크 : jQuery, React, Vue.js, Angular.js
- ❖ 서버 프로그램(백엔드 프로그램)
 - 웹프로그램 : ASP, PHP, JSP
 - 프레임워크 : Spring, Springboot, Asp.net, Django, Flask

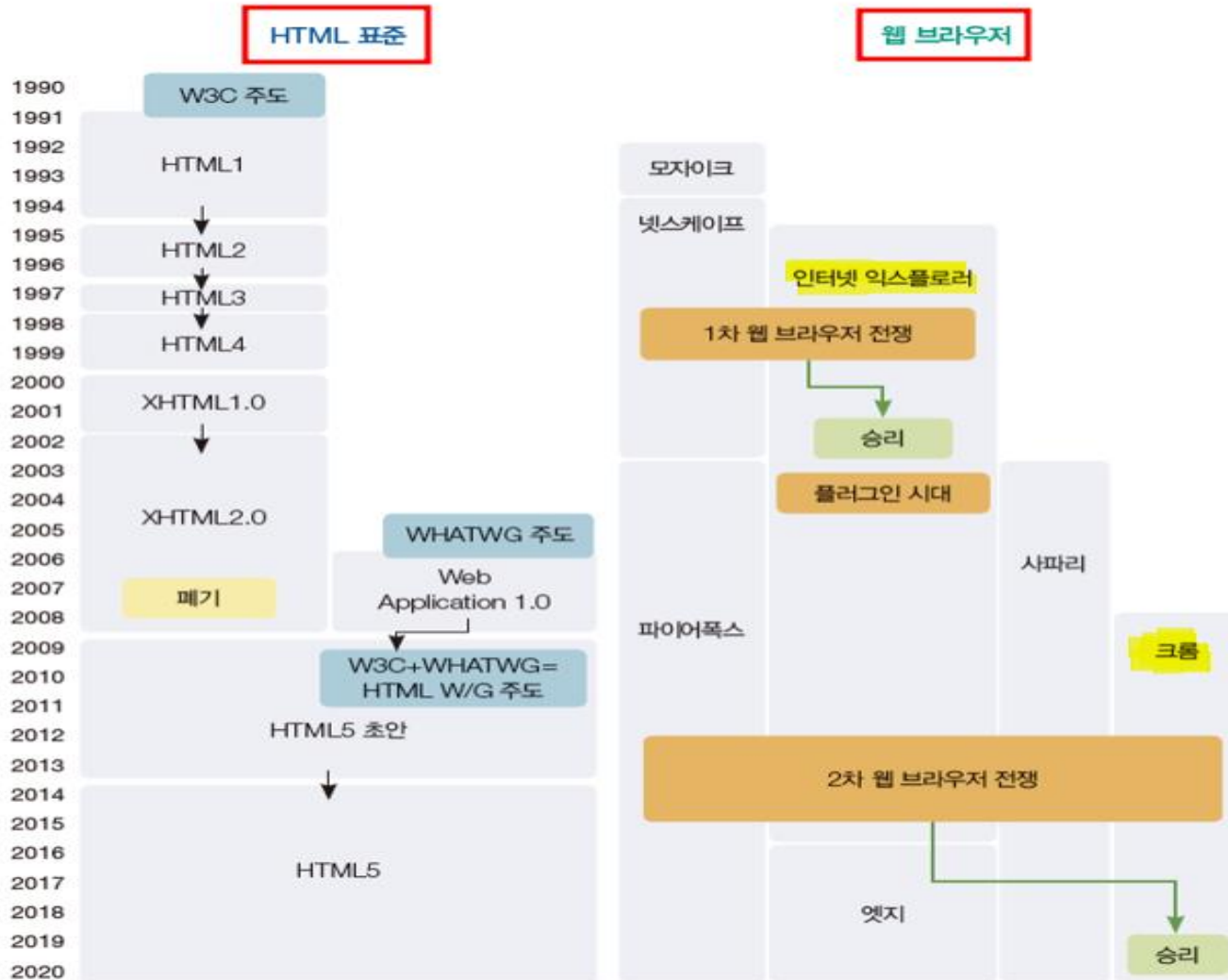
웹표준

❖ 웹표준 기술



웹 표준과 웹 브라우저

■ 웹 표준과 웹 브라우저 타임 라인



웹개발환경 구축

❖ 웹표준 개발환경 구축

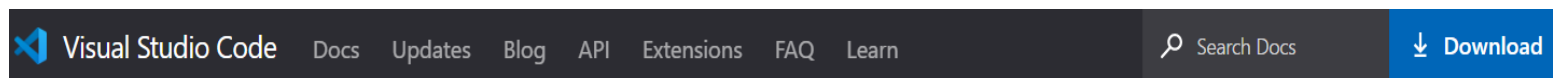
1. 비주얼 스튜디오 코드로 실행

2. Eclipse로 실행

웹개발환경 구축

❖ 비주얼 스튜디오 코드

<https://code.visualstudio.com/Download>



Download Visual Studio Code

Free and built on open source. Integrated Git, debugging and extensions.



↓ Windows

Windows 10, 11

User Installer **x64** x86 Arm64
System Installer x64 x86 Arm64
.zip x64 x86 Arm64
CLI x64 x86 Arm64



↓ .deb

Debian, Ubuntu

↓ .rpm

Red Hat, Fedora, SUSE

.deb x64 Arm32 Arm64
.rpm x64 Arm32 Arm64
.tar.gz x64 Arm32 Arm64
Snap Snap Store
CLI x64 Arm32 Arm64



↓ Mac

macOS 10.11+

.zip Intel chip Apple silicon Universal
CLI Intel chip Apple silicon

웹개발환경 구축

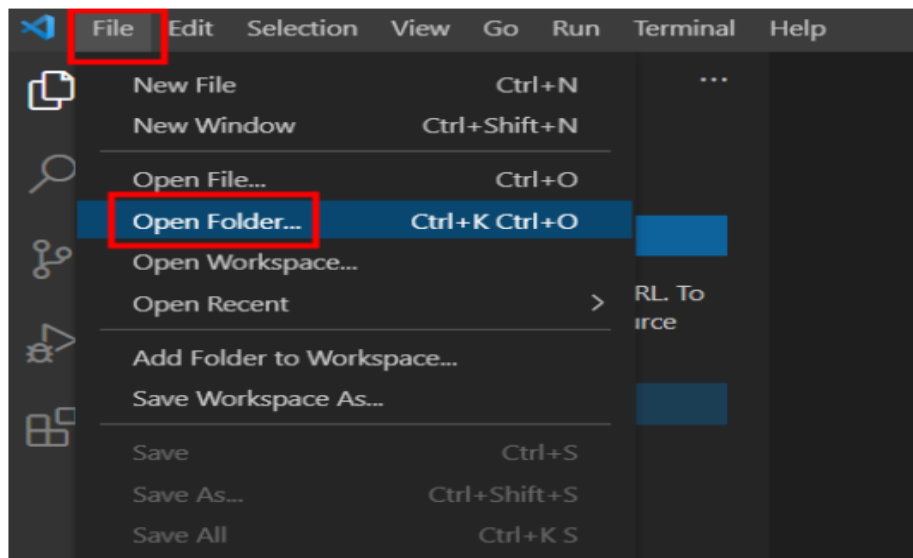
❖ 비주얼 스튜디오 코드

1. 폴더 생성하기

d드라이브에 webproject 폴더를 생성합니다.

2. vscode에서 webproject 폴더 불러오기

vscode의 왼쪽 상단메뉴에서 [File] > Open Folder를 눌러서 webproject폴더를 선택해 줍니다.

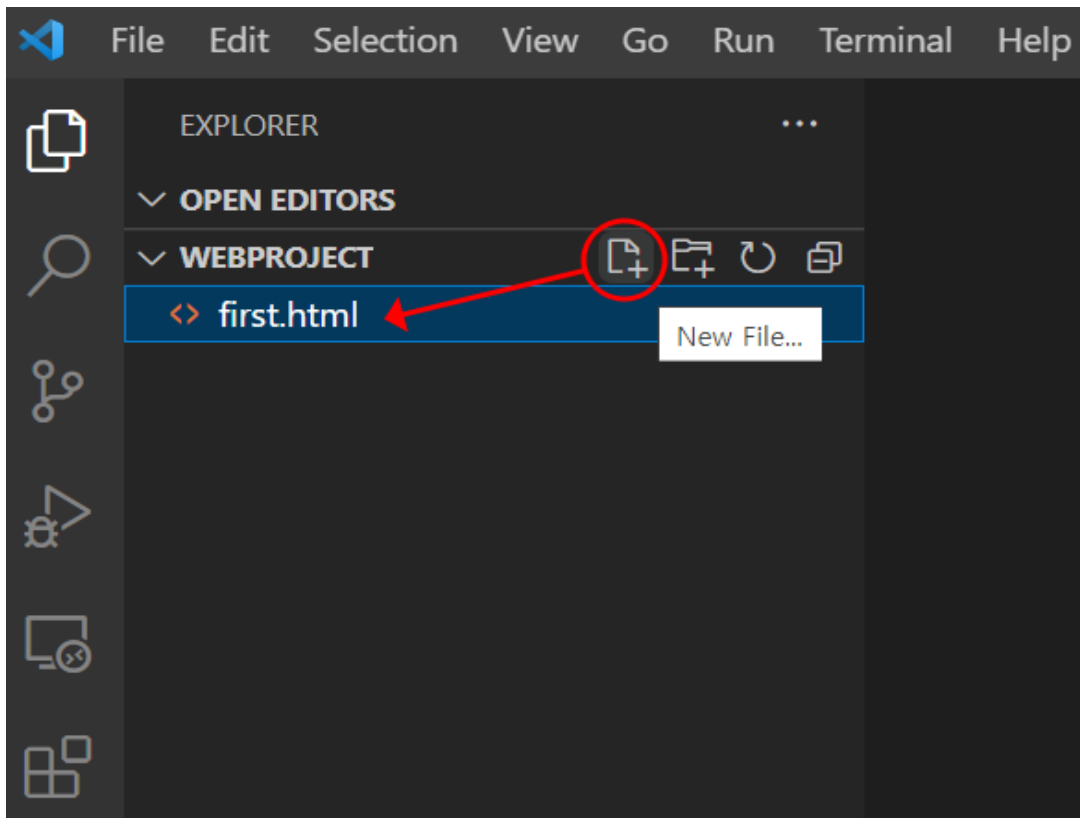


웹개발환경 구축

❖ 비주얼 스튜디오 코드

3. first.html 파일 생성하기

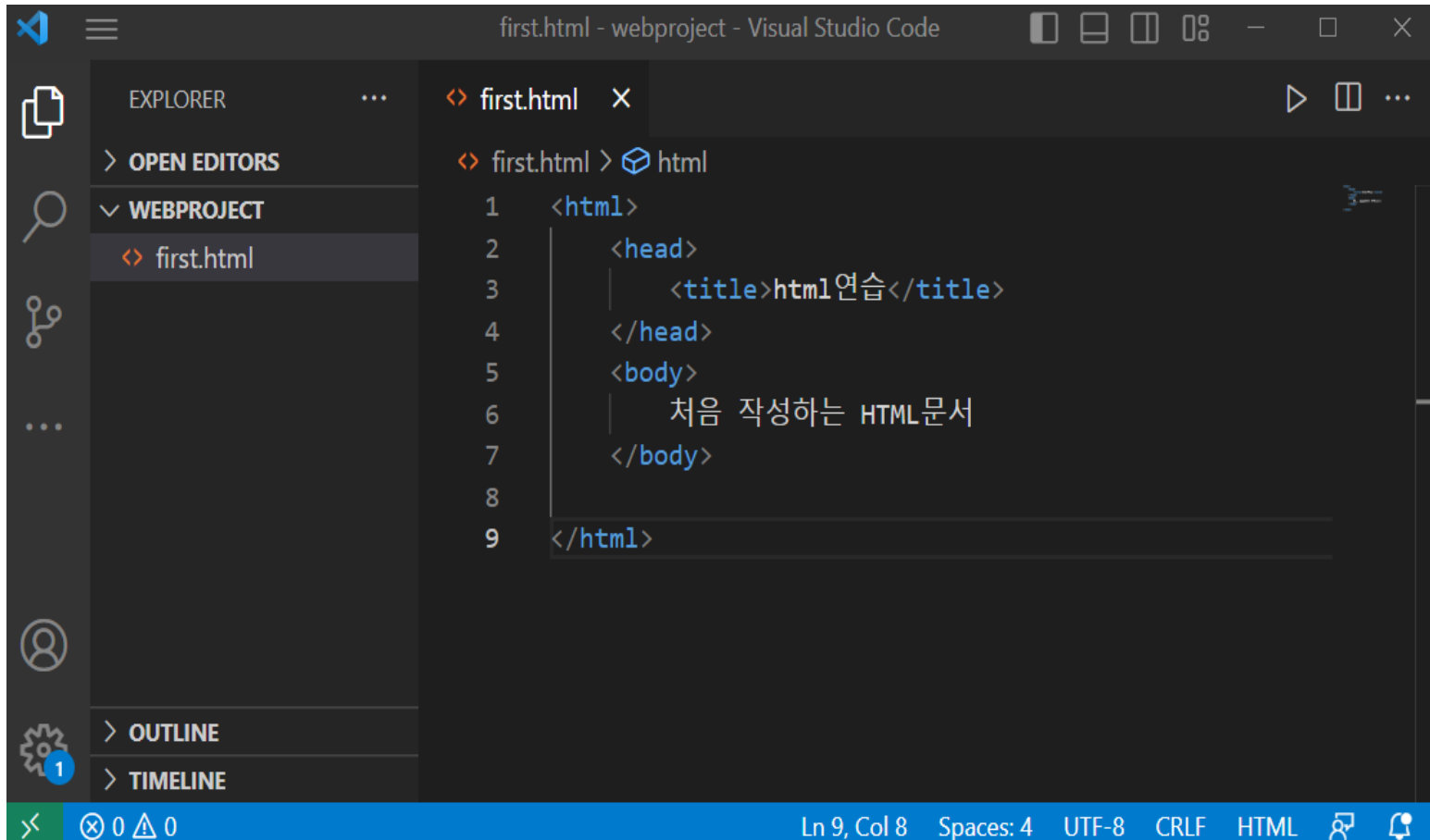
d드라이브에 webproject 폴더를 생성합니다.



웹개발환경 구축

❖ 비주얼 스튜디오 코드

4. first.html 파일 생성후 저장하기 : 저장 단축키 : Ctrl + S



The screenshot shows the Visual Studio Code interface with a dark theme. The Explorer sidebar on the left shows a 'WEBPROJECT' folder containing 'first.html'. The main editor area displays the content of 'first.html', which is an HTML document. The code is as follows:

```
1 <html>
2   <head>
3     <title>html연습</title>
4   </head>
5   <body>
6     처음 작성하는 HTML문서
7   </body>
8
9 </html>
```

The status bar at the bottom indicates the current position is Line 9, Column 8, with 4 spaces, UTF-8 encoding, CRLF line endings, and the HTML language mode selected.

웹개발환경 구축

❖ 비주얼 스튜디오 코드

5. first.html 파일 실행

웹브라우저에 d:/webproject/first.html 입력후 실행



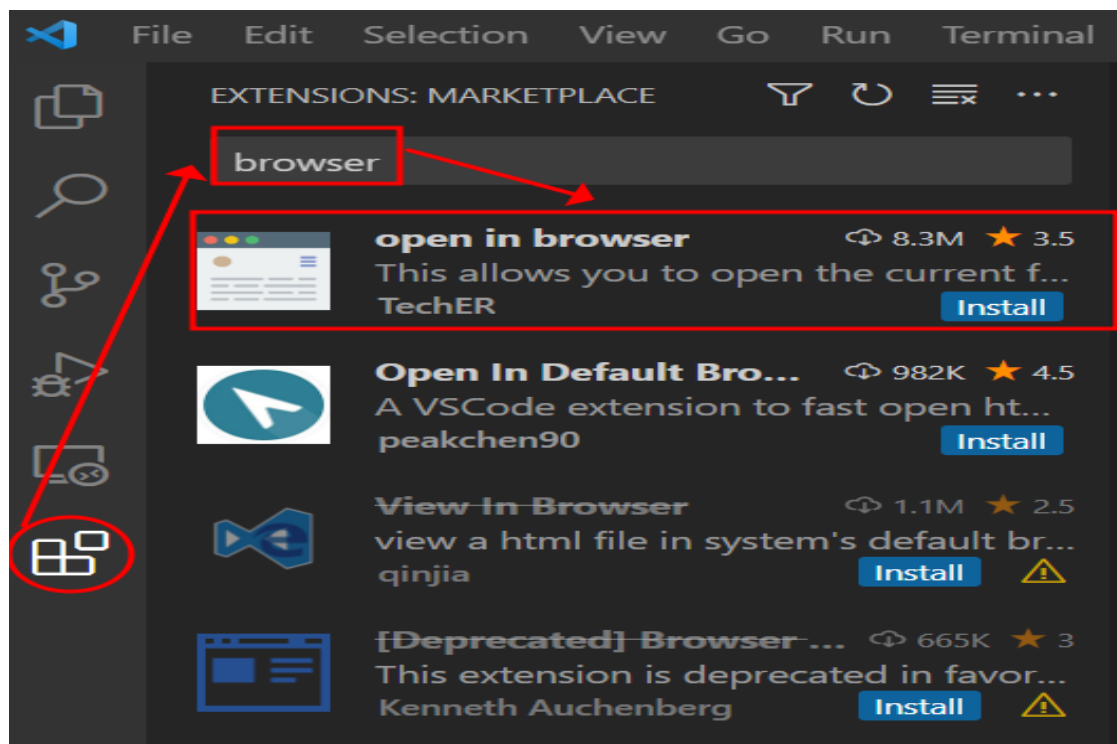
처음 작성하는 HTML문서

웹개발환경 구축

❖ 비주얼 스튜디오 코드에 확장 프로그램 설치

1. VSCode에 Open in browser 설치하면, VSCode에서 html문서를 바로 실행할 수 있습니다.

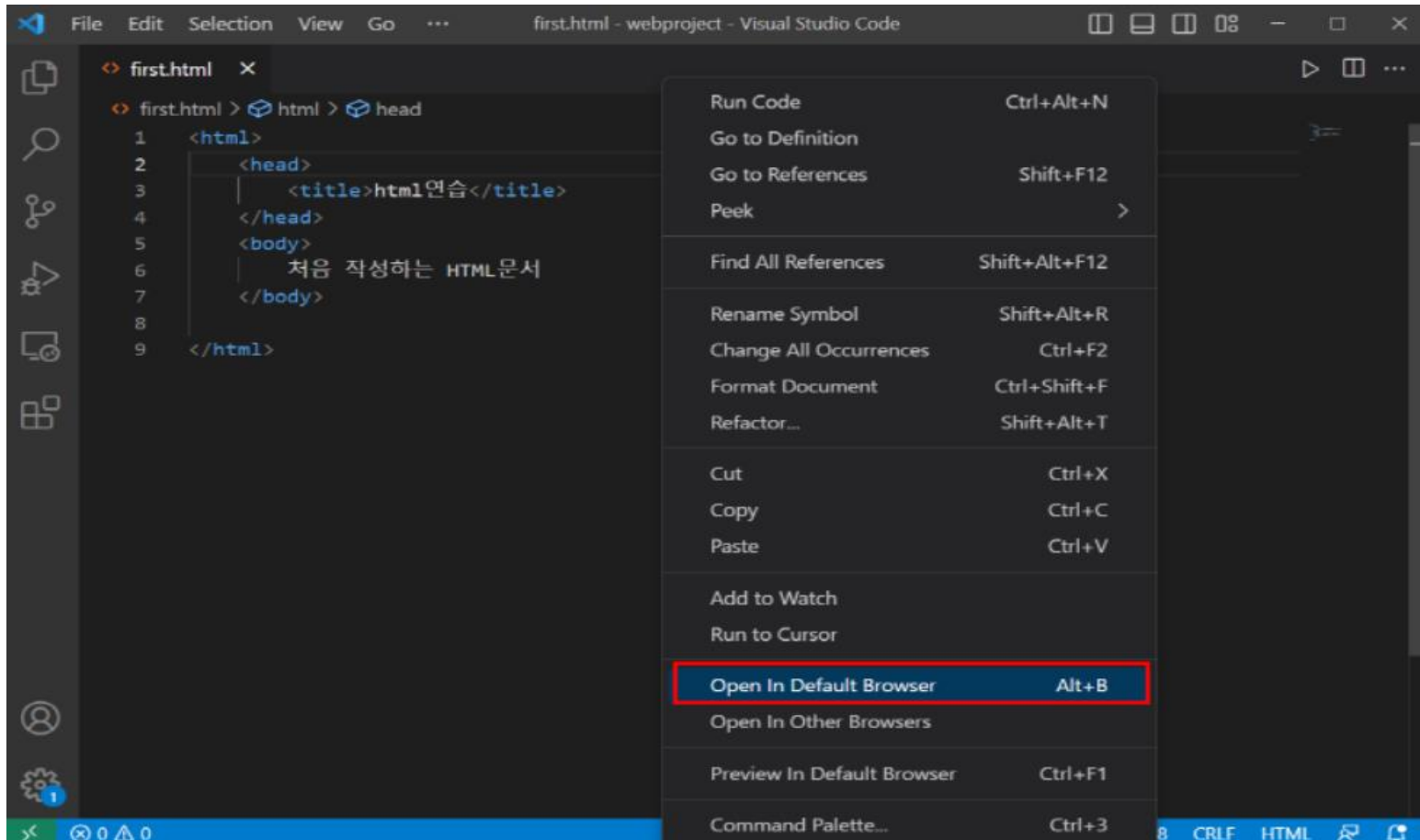
Extension -> **Open in browser** 검색/선택 -> install



웹개발환경 구축

❖ 비주얼 스튜디오 코드에 확장 프로그램 설치

2. VSCode에서 html문서를 바로 실행하기



웹서버 환경 구축

❖ WAS(Web Application Server) 종류

1. 오픈소스

Apache Tomcat : 아파치 재단에서 관리하는 WAS

Jetty : 이클립스 재단에서 관리하며, 임베디드 자바 애플리케이션에서 웹 서비스를 제공한다.

2. 상용 소프트웨어

WebLogic : 오라클에서 관리하는 WAS

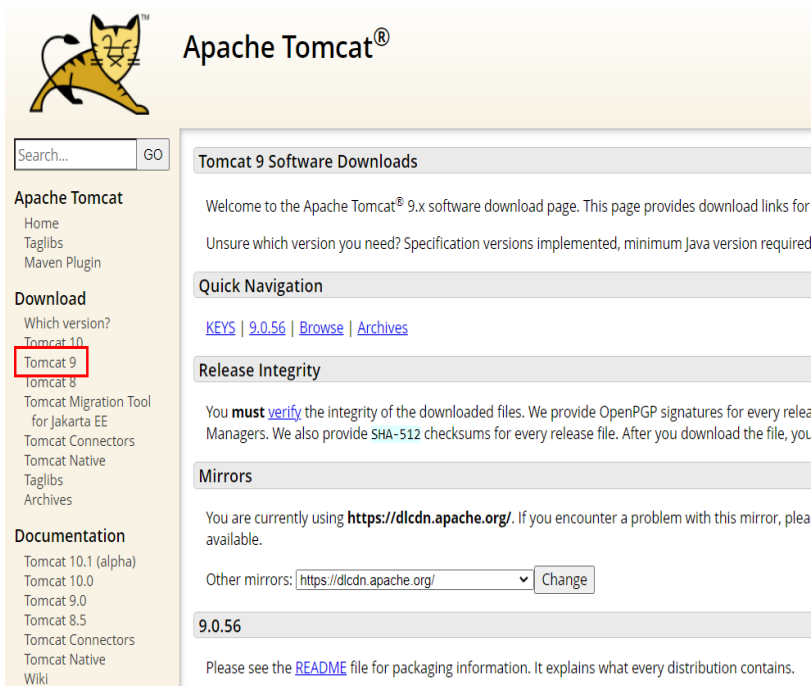
JBoss : 레드햇에서 관리하는 WAS

Jeus : 티맥스소프트에서 관리하는 제품으로써, 국내에서 많이 사용하고 있다.

웹서버 환경 구축

❖ Apache Tomcat 다운로드

<http://tomcat.apache.org>



Apache Tomcat®

Search... GO

Apache Tomcat

- Home
- Taglibs
- Maven Plugin

Download

Which version?

- Tomcat 10
- Tomcat 9**
- Tomcat 8
- Tomcat Migration Tool for Jakarta EE
- Tomcat Connectors
- Tomcat Native
- Taglibs
- Archives

Documentation

- Tomcat 10.1 (alpha)
- Tomcat 10.0
- Tomcat 9.0
- Tomcat 8.5
- Tomcat Connectors
- Tomcat Native
- Wiki

Tomcat 9 Software Downloads

Welcome to the Apache Tomcat® 9.x software download page. This page provides download links for Unsure which version you need? Specification versions implemented, minimum Java version required

Quick Navigation

[KEYS](#) | [9.0.56](#) | [Browse](#) | [Archives](#)

Release Integrity

You **must** [verify](#) the integrity of the downloaded files. We provide OpenPGP signatures for every release Managers. We also provide [SHA-512](#) checksums for every release file. After you download the file, you

Mirrors

You are currently using <https://d1cdn.apache.org/>. If you encounter a problem with this mirror, please available.

Other mirrors:

9.0.56

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

9.0.56

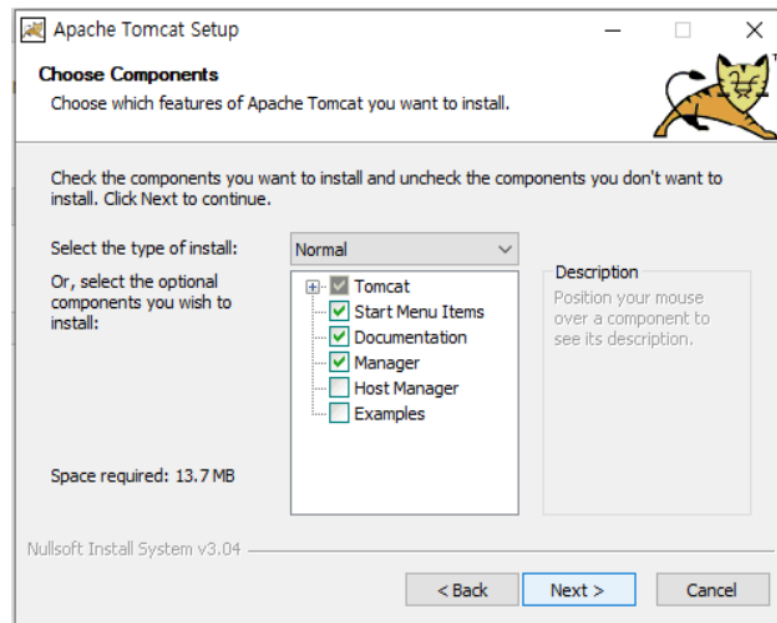
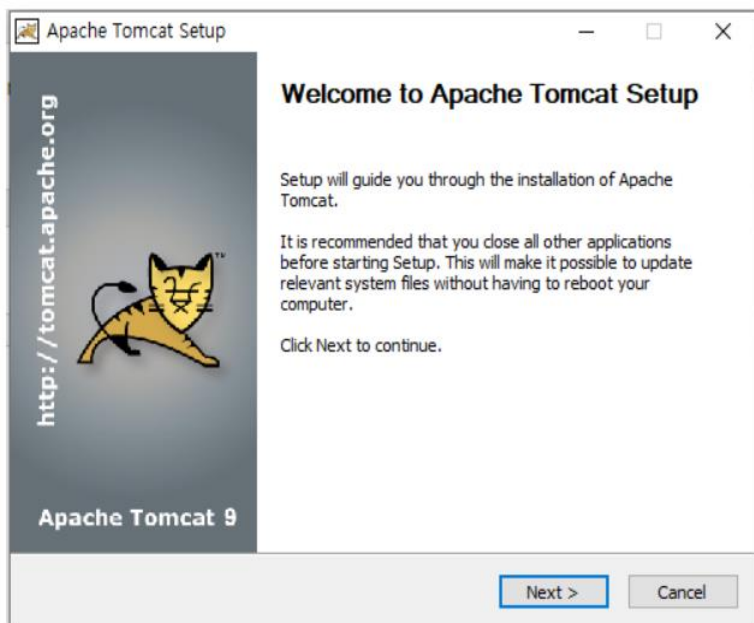
Please see the [README](#) file for packaging information. It explains what every distribution contains.

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 \(pgp, sha512\)](#)
- Embedded:
 - [tar.gz \(pgp, sha512\)](#)
 - [zip \(pgp, sha512\)](#)

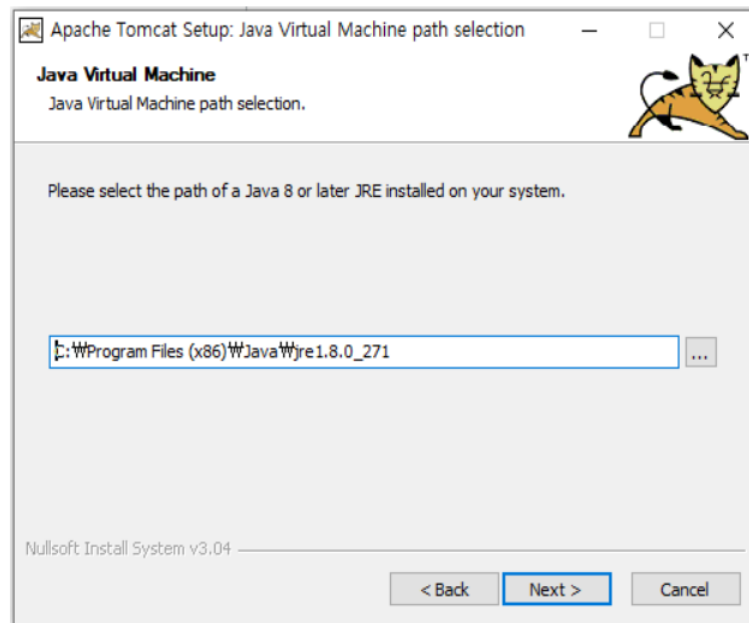
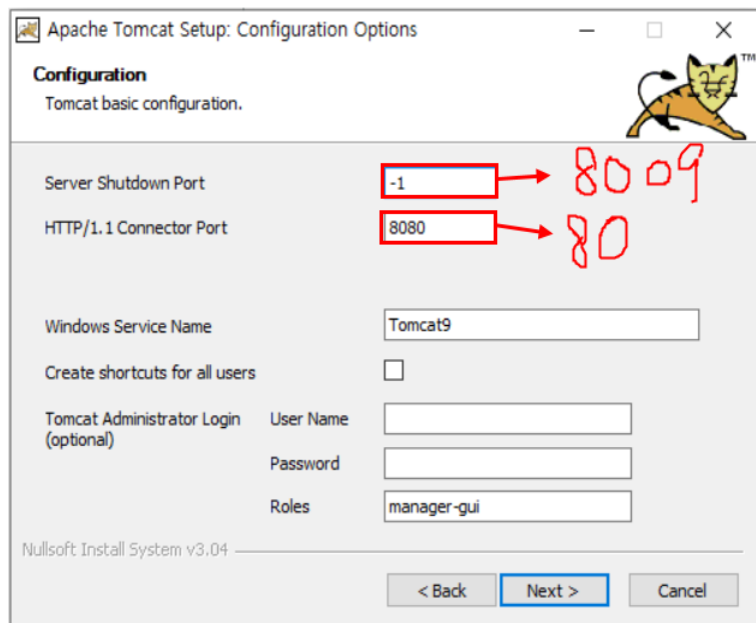
웹서버 환경 구축

❖ Apache Tomcat 설치



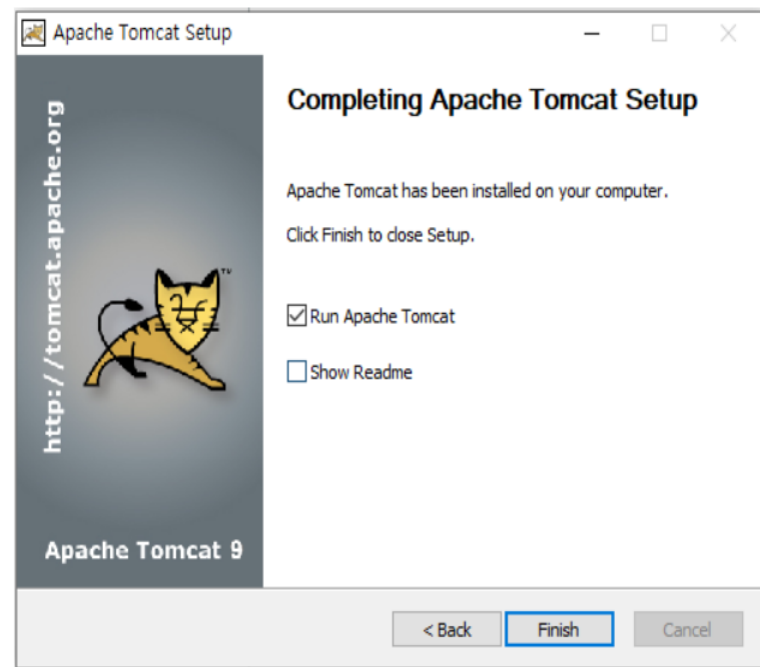
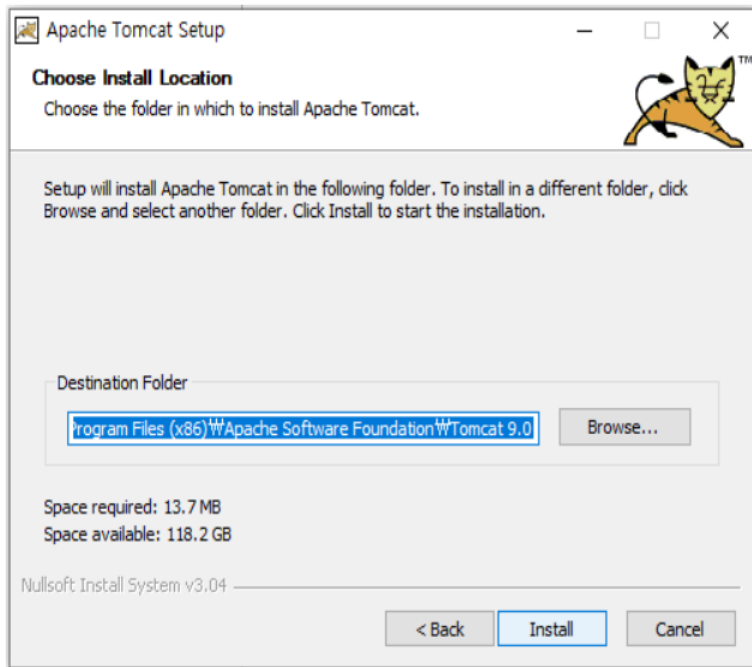
웹서버 환경 구축

❖ Apache Tomcat 설치 : port 변경



웹서버 환경 구축

❖ Apache Tomcat 설치




웹서버 환경 구축


❖ 웹브라우저로 접속 : <http://localhost:80>

C:\Program Files\Apache Software Foundation\Tomcat 9.0\webapps\ROOT\index.jsp 실행

[Home](#) [Documentation](#) [Configuration](#) [Examples](#) [Wiki](#) [Mailing Lists](#) [Find Help](#)

Apache Tomcat/9.0.40 

If you're seeing this, you've successfully installed Tomcat. Congratulations!



Recommended Reading:
[Security Considerations How-To](#)
[Manager Application How-To](#)
[Clustering/Session Replication How-To](#)

[Server Status](#)
[Manager App](#)
[Host Manager](#)

Developer Quick Start
[Tomcat Setup](#) [Realms & AAA](#) [Examples](#) [Servlet Specifications](#)
[First Web Application](#) [JDBC DataSources](#) [Tomcat Versions](#)

Managing Tomcat

For security, access to the [manager webapp](#) is restricted. Users are defined in:

```
$CATALINA_HOME/conf/tomcat-users.xml
```

In Tomcat 9.0 access to the manager application is split between different users.
[Read more...](#)

Release Notes
Changelog
Migration Guide
Security Notices

Documentation

[Tomcat 9.0 Documentation](#)
[Tomcat 9.0 Configuration](#)
[Tomcat Wiki](#)

Find additional important configuration information in:

```
$CATALINA_HOME/RUNNING.txt
```

Developers may be interested in:

[Tomcat 9.0 Bug Database](#)
[Tomcat 9.0 JavaDocs](#)
[Tomcat 9.0 Git Repository at GitHub](#)

Getting Help

FAQ and Mailing Lists

The following mailing lists are available:

[tomcat-announce](#)
Important announcements, releases, security vulnerability notifications. (Low volume).

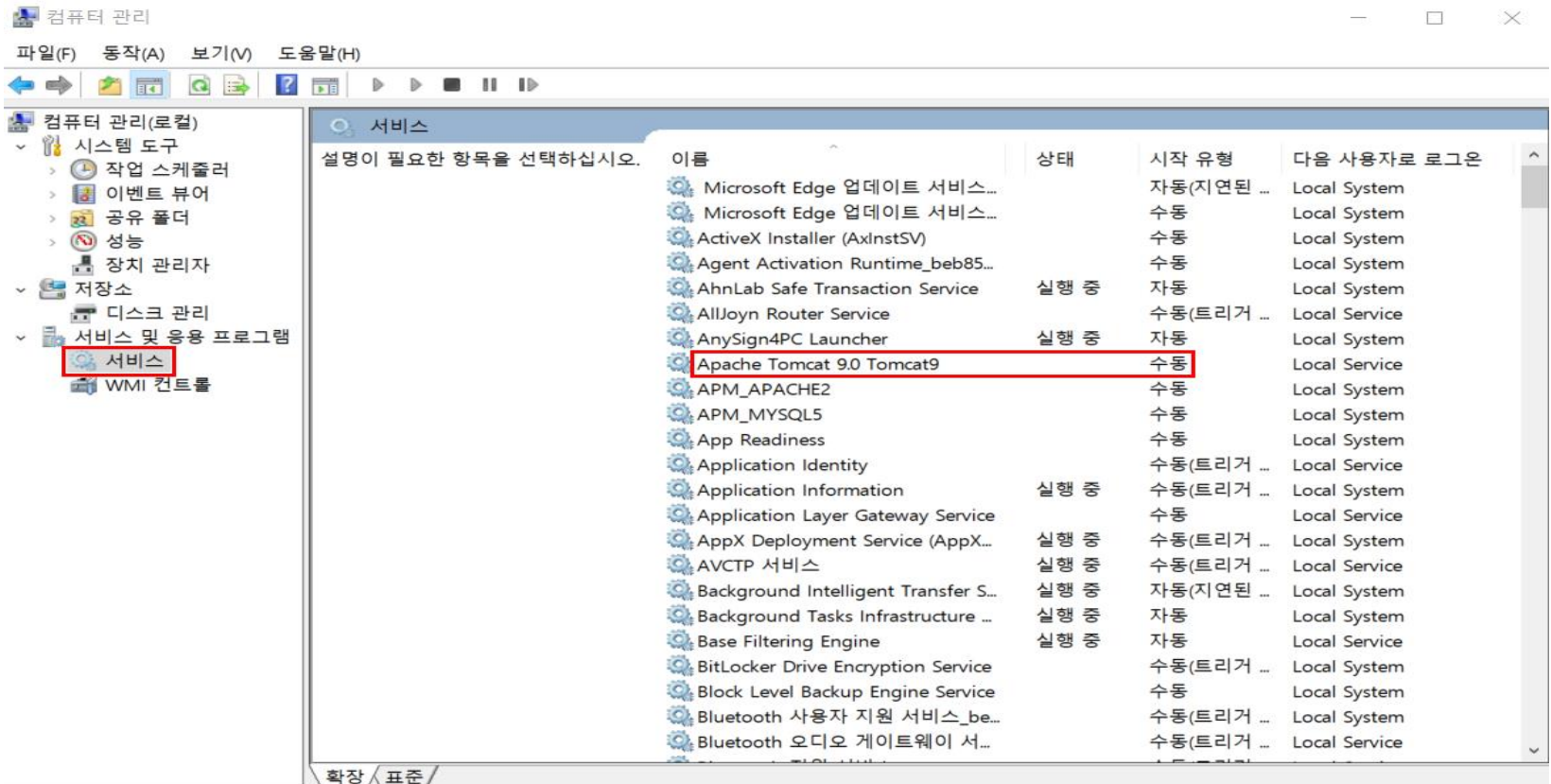
[tomcat-users](#)
User support and discussion

[taglibs-user](#)
User support and discussion for [Apache Taglibs](#)

[tomcat-dev](#)
Development mailing list, including commit messages

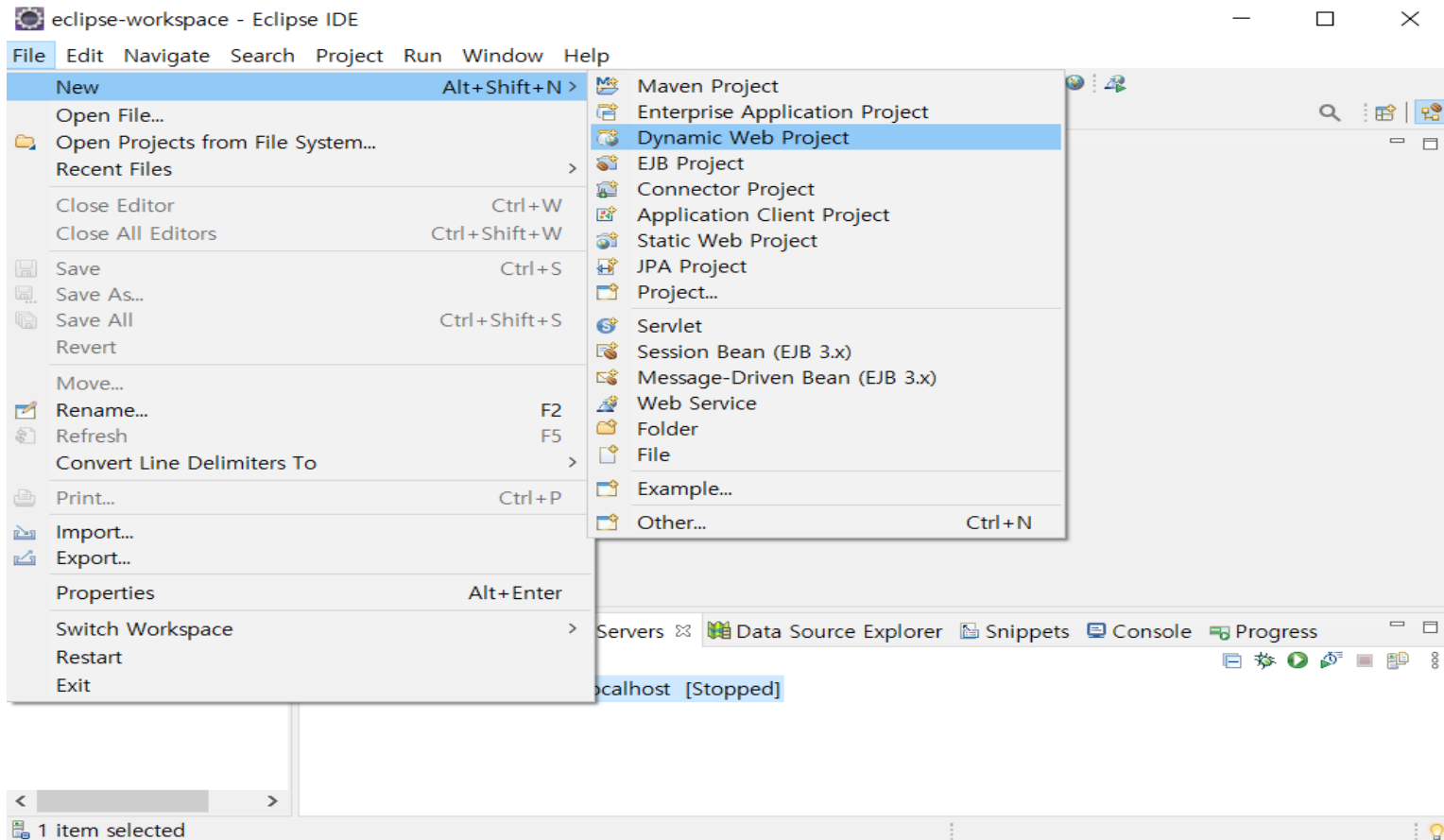
웹서버 환경 구축

❖ Apache Tomcat 서비스 시작 / 중지 [내컴퓨터] - 우클릭후 [관리] 선택



웹서버 환경 구축

❖ 웹프로젝트 생성



웹서버 환경 구축

❖ 웹프로젝트 생성

New Dynamic Web Project

Create a standalone Java-based Web Application or add it to a new or existing Enterprise Application.

Project name: **web**

Project location
☒ Use default location
Location: C:\Users\giduc\workspace-java11\web Browse...

Target runtime
Apache Tomcat v9.0 **New Runtime...**

Dynamic web module version
4.0

Configuration
Default Configuration for Apache Tomcat v9.0 Modify...

A good starting point for working with Apache Tomcat v9.0 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...

New Server Runtime Environment

Define a new server runtime environment

Select the type of runtime environment:
type filter text

- Apache Tomcat v8.5
- Apache Tomcat v9.0**
- Apache Tomcat v10.0
- Apache Tomcat v10.1
- > Basic
- > IBM

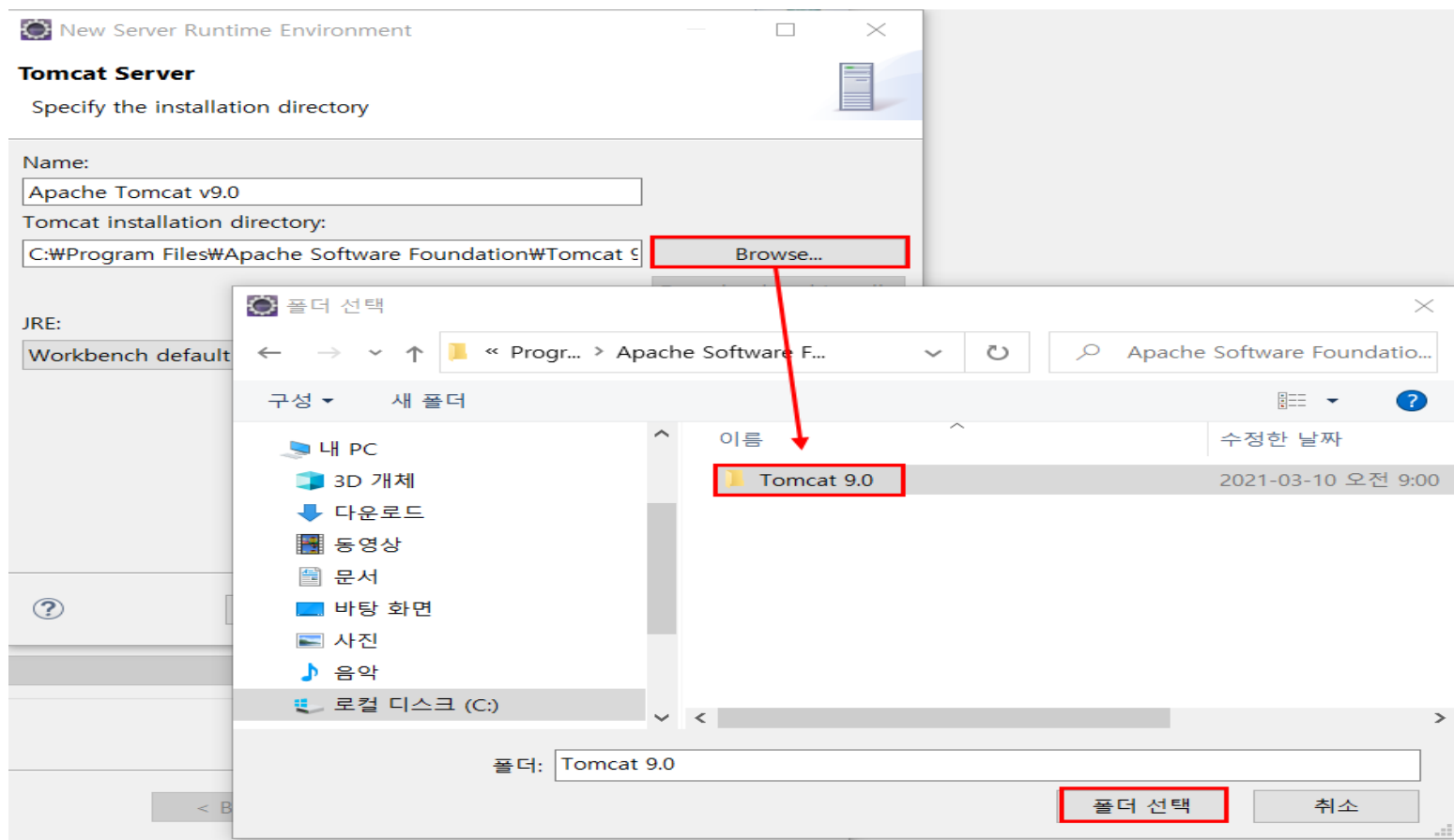
Apache Tomcat v9.0 supports J2EE 1.2, 1.3, 1.4, and Java EE 5, 6, 7, and 8 Web modules.

☐ Create a new local server

< Back **Next >** Finish Cancel

웹서버 환경 구축

❖ 웹프로젝트 생성



웹서버 환경 구축

❖ 웹프로젝트 생성

New Dynamic Web Project

Java

Configure project for building a Java application.

Source folders on build path:

src\main\java

Add Folder...

Edit...

Remove

Default output folder:

build\classes



< Back

Next >

Finish

Cancel

웹서버 환경 구축

❖ 웹프로젝트 생성


New Dynamic Web Project

Web Module
Configure web module settings.

Context root:

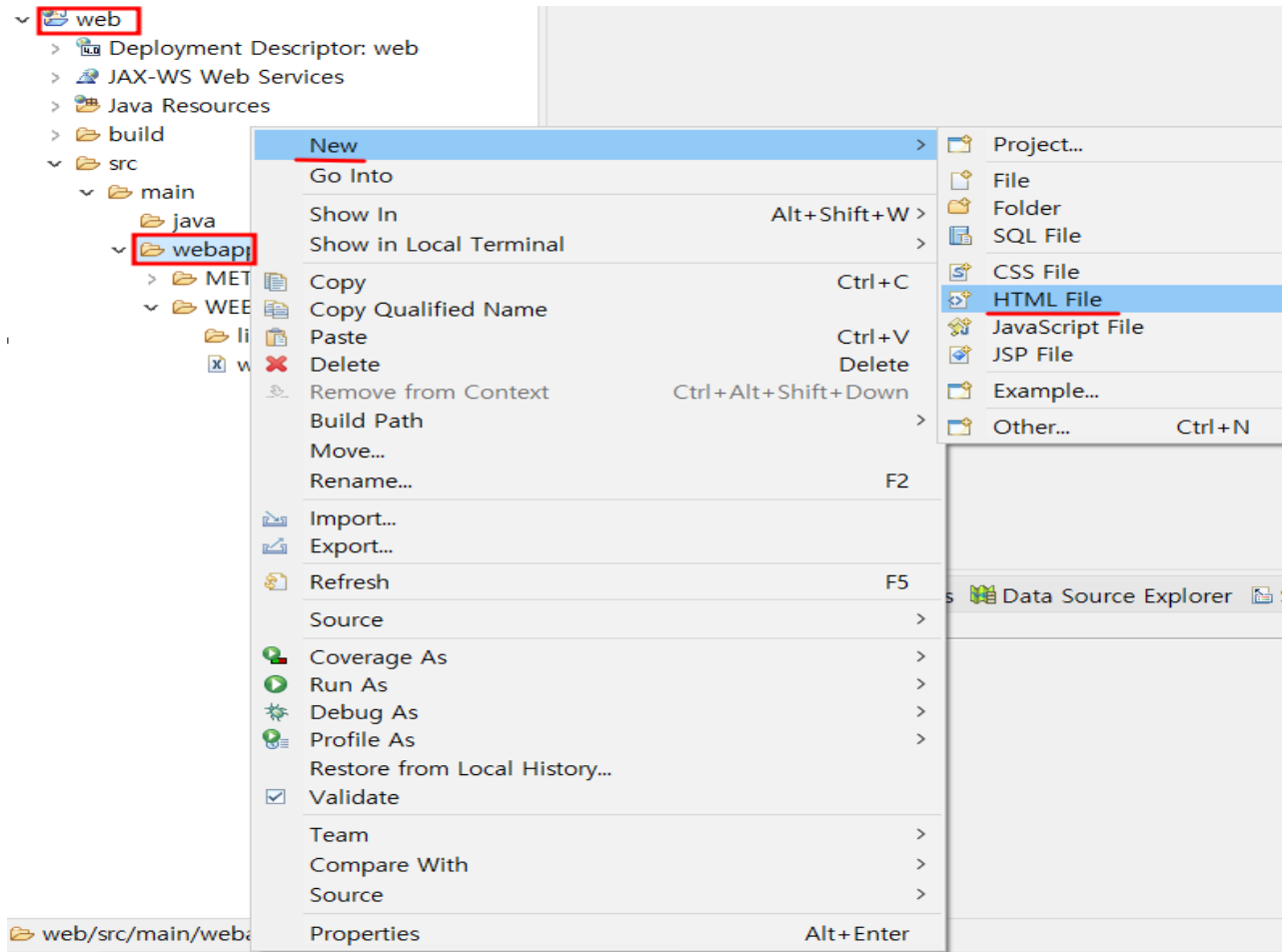
Content directory:

☒ Generate web.xml deployment descriptor



html 파일 생성

❖ index.html 파일 생성



html 파일 생성

❖ index.html 파일 생성

```
index.html ×  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="UTF-8">  
5 <title>Insert title here</title>  
6 </head>  
7 <body>  
8  
9 처음 작성하는 HTML문서  
10  
11 </body>  
12 </html>
```

html 파일 실행

❖ index.html 파일 실행

