

Course: Web Application Development
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Lab 0: Setup Environment & Implement a website

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Content:

- Setup IDE: NetBeans (using the latest version, server: Tomcat/Glassfish)
- Setup database: MySQL (database server), others
- Implement a website using HTML

Duration: 3 hours

Part 1: Setup visual code:

Install VSCode: [Setup Visual Studio Code for Web Development in 2022 \(youtube.com\)](#)

- Install live server extensions
- Run First HTLM file

Part 2: Setup NetBeans IDE (for lab 04)

NOTE: You can also use Eclipse or IntelliJ

Download Tomcat server: [Apache Tomcat® - Apache Tomcat 10 Software Downloads](#)

Unzip to specific folder: example C:\apache-tomcat-10.1.29



Apache Tomcat®

Search... GO

COMMUNITY
THE ASF CONFERENCE
CODE
Denver, Colorado
October 7-10, 2024

Apache Tomcat

- Home
- Taglibs
- Maven Plugin

Download

- Which version?
- Tomcat 11 (beta)
- Tomcat 10** (highlighted with a red box)
- Tomcat 9
- Tomcat Migration Tool for Jakarta EE
- Tomcat Connectors
- Tomcat Native
- Taglibs
- Archives

Documentation

- Tomcat 11.0 (beta)
- Tomcat 10.1
- Tomcat 9.0
- Upgrading
- Tomcat Connectors
- Tomcat Native 2
- Tomcat Native 1.3
- Wiki
- Migration Guide
- Presentations
- Specifications

Tomcat 10 Software Downloads

Welcome to the Apache Tomcat® 10.x software download page. This page provides direct links to the latest releases.

Unsure which version you need? Specification versions implemented, minimum Java versions required, and system requirements are listed below.

Users of Tomcat 10 onwards should be aware that, as a result of the move from Java EE 8 to Jakarta EE, many features will almost certainly require code changes to enable applications to migrate from Tomcat 9 to Tomcat 10.

Quick Navigation

[KEYS](#) | [10.1.29](#) | [Browse](#) | [Archives](#)

Release Integrity

You **must** verify the integrity of the downloaded files. We provide OpenPGP signatures and checksums for every release file. After you download the file, you should calculate a checksum and compare it with the one provided.

Mirrors

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

Other mirrors:

10.1.29

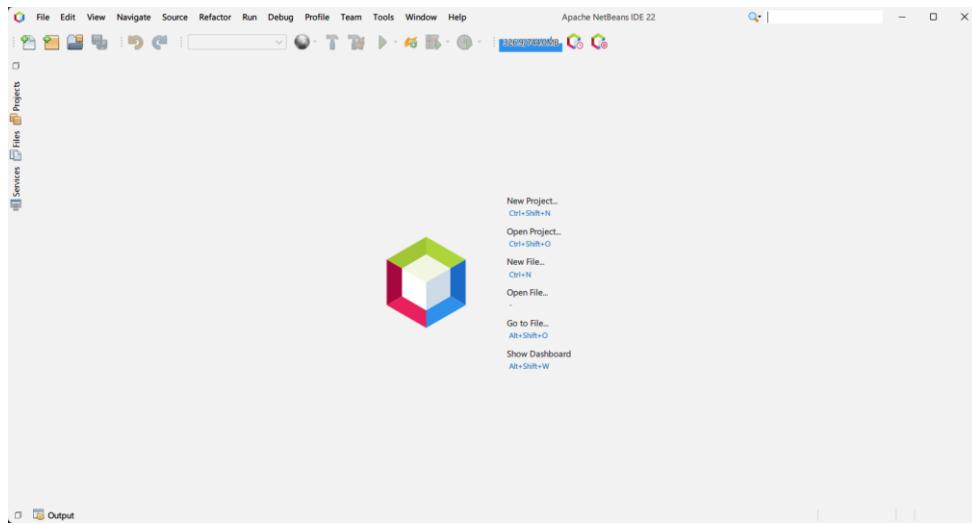
Please see the [README](#) file for packaging information. It explains what every distribution contains.

Binary Distributions

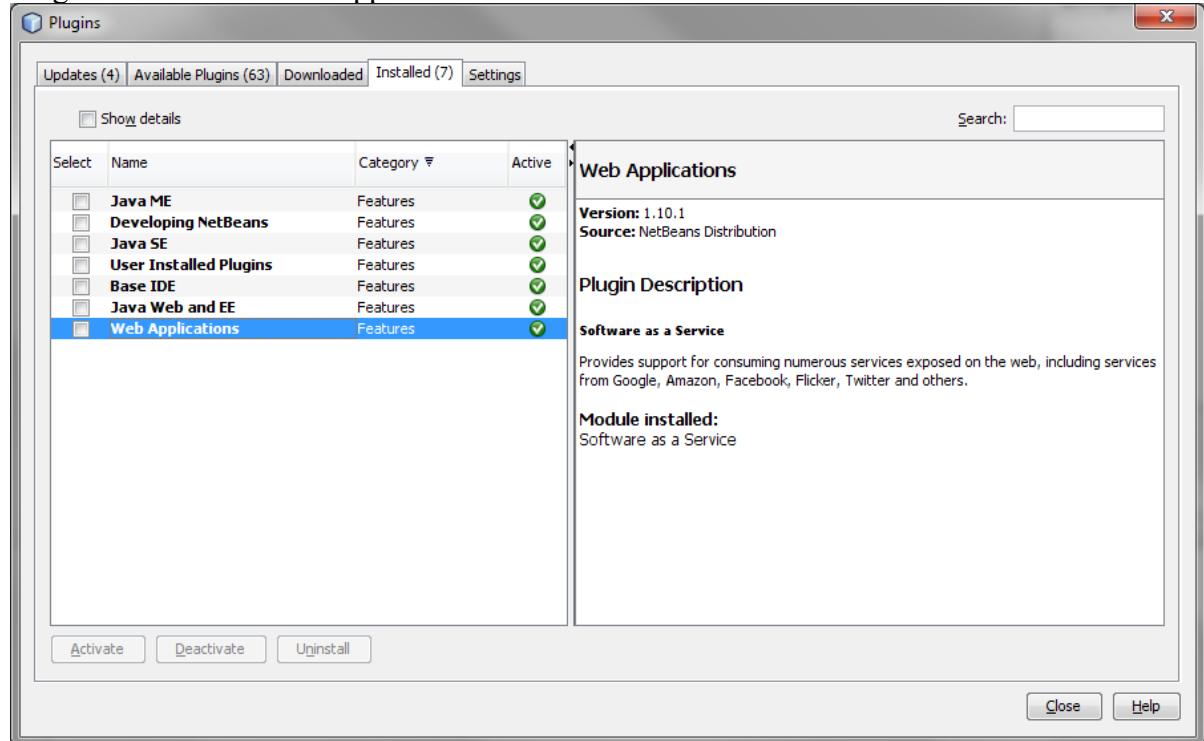
- Core:
 - [zip \(pgp, sha512\)](#) (highlighted with a red box)
 - [tar.gz \(pgp, sha512\)](#)
 - [32-bit Windows zip \(pgp, sha512\)](#)
 - [64-bit Windows zip \(pgp, sha512\)](#)
 - [32-bit/64-bit Windows Service Installer \(pgp, sha512\)](#)
- Full documentation:
 - [tar.gz \(pgp, sha512\)](#)
- Deployer:

Download and install Netbeans www.netbeans.org/ The latest version

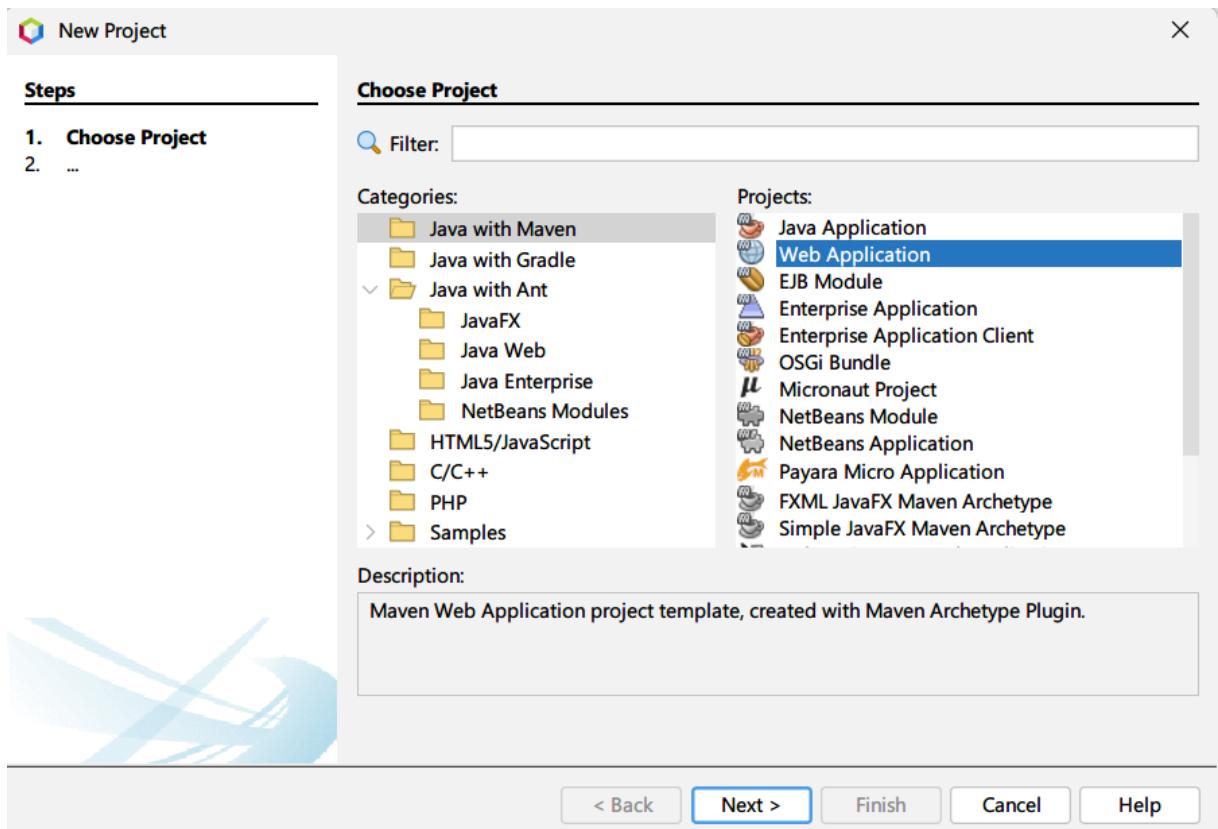
This is an example of Interface when finish installation: (note: you should download the latest version)



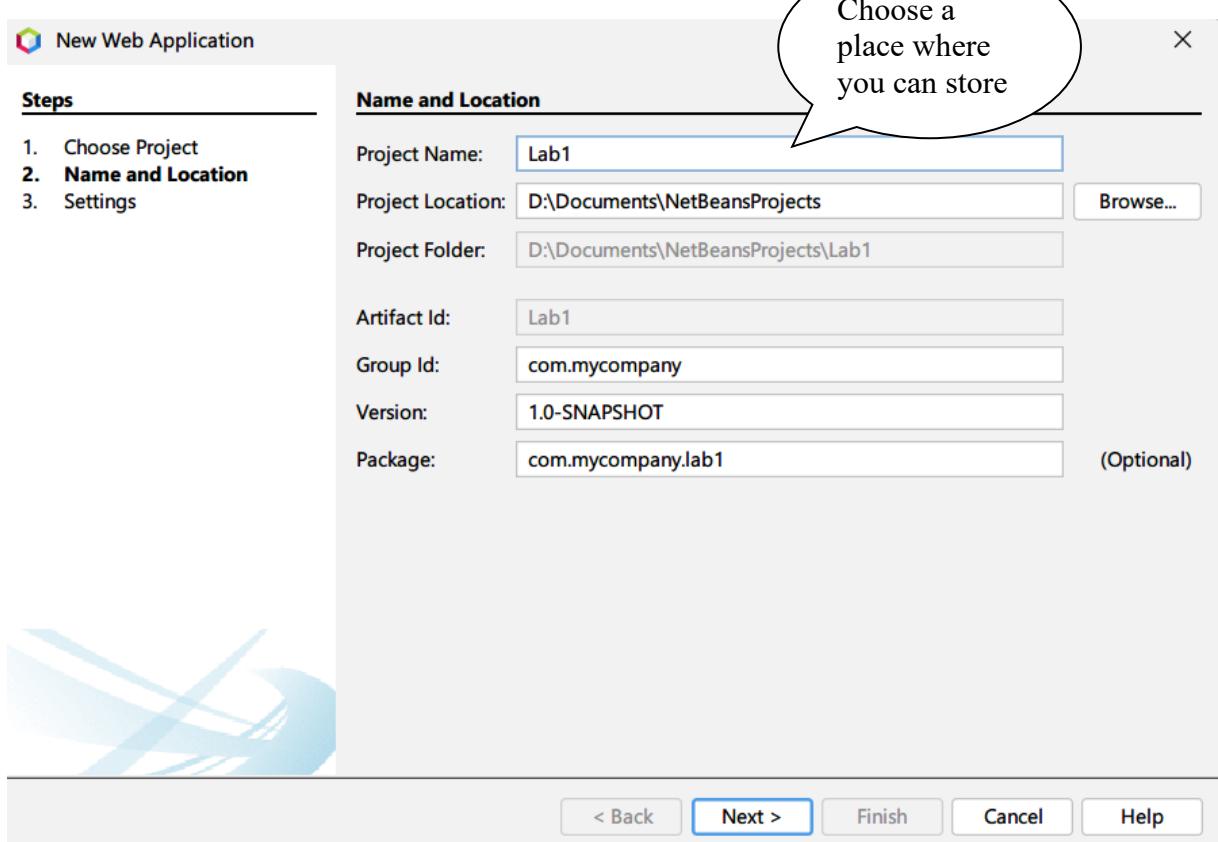
Create a website to test Netbeans environment: Select File > New Project > Java with Maven > Web Application: If Web Application project template does not exist, that means Web Applications plugin is not installed. You can install it by choosing Tool>Plugin>Available Plugin then choose Web Applications



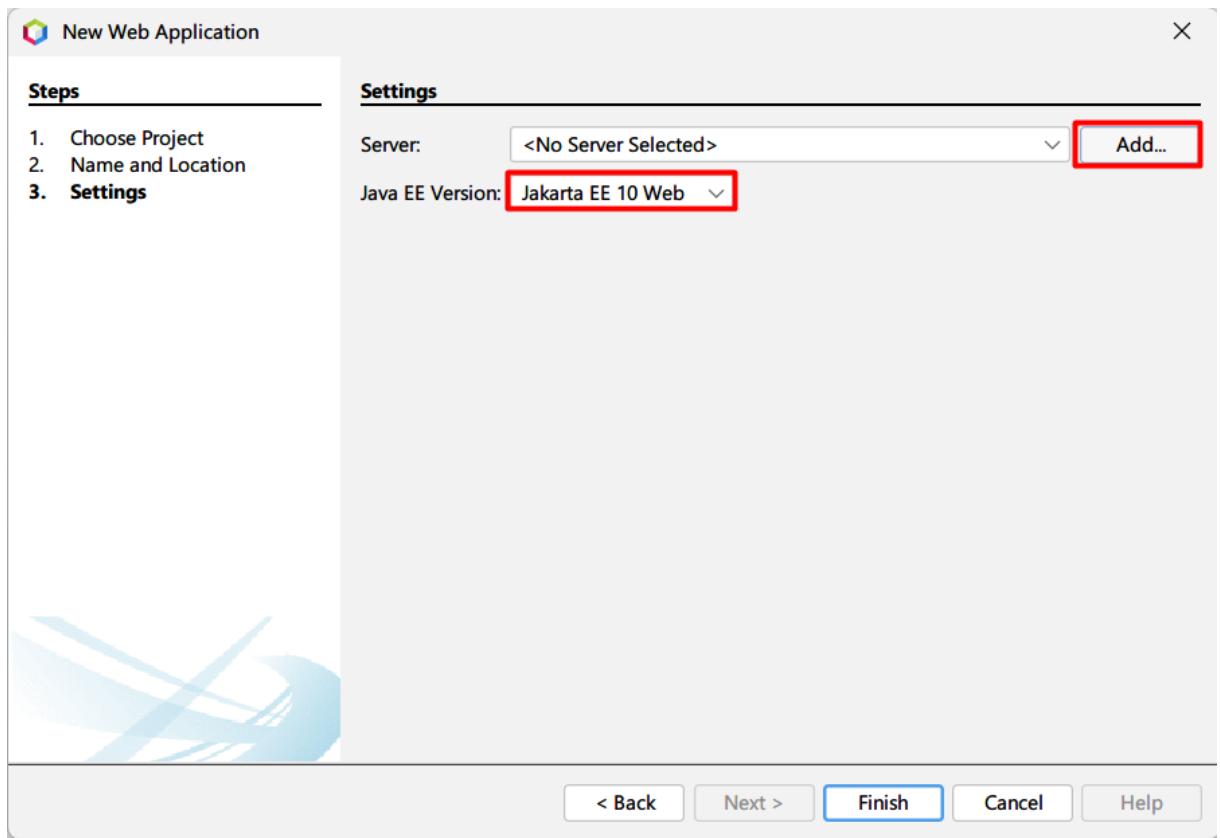
Screen of plugin installation



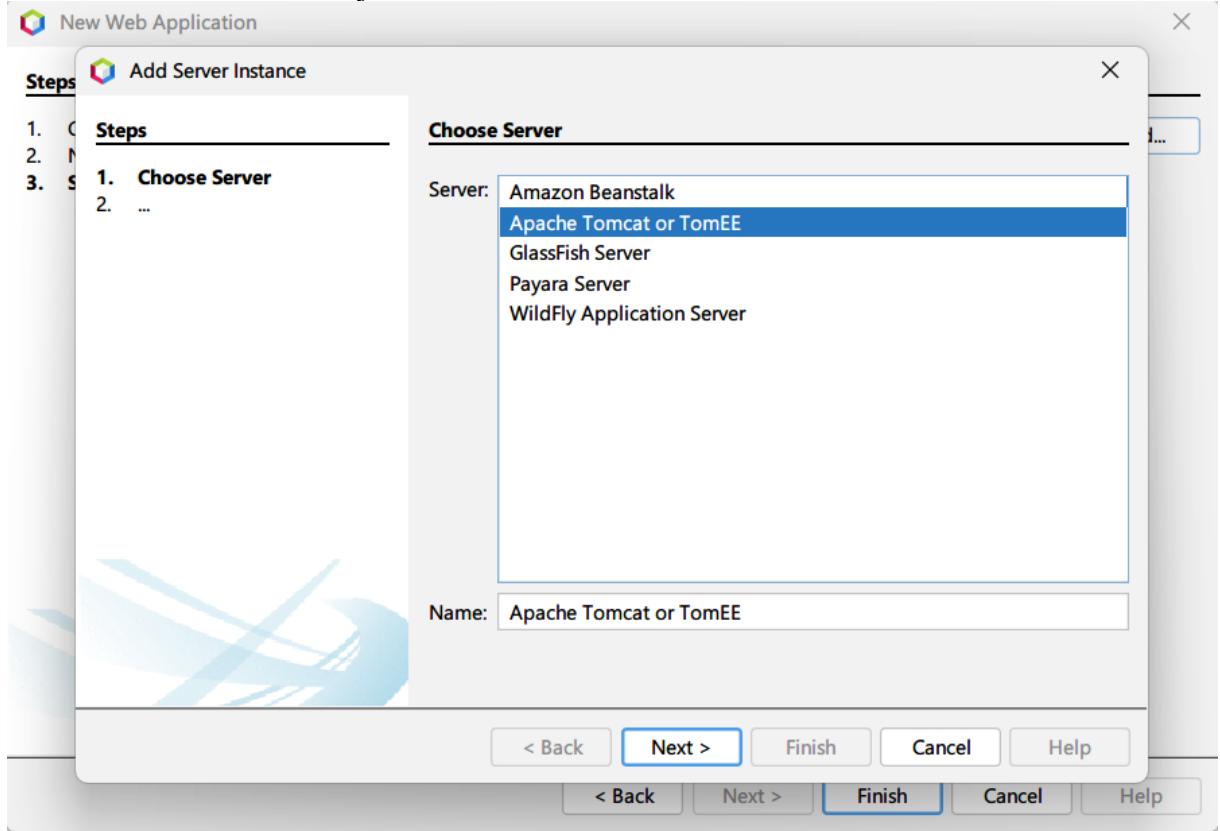
Click to “Next”, then fill in the Project Name; Name and Location →

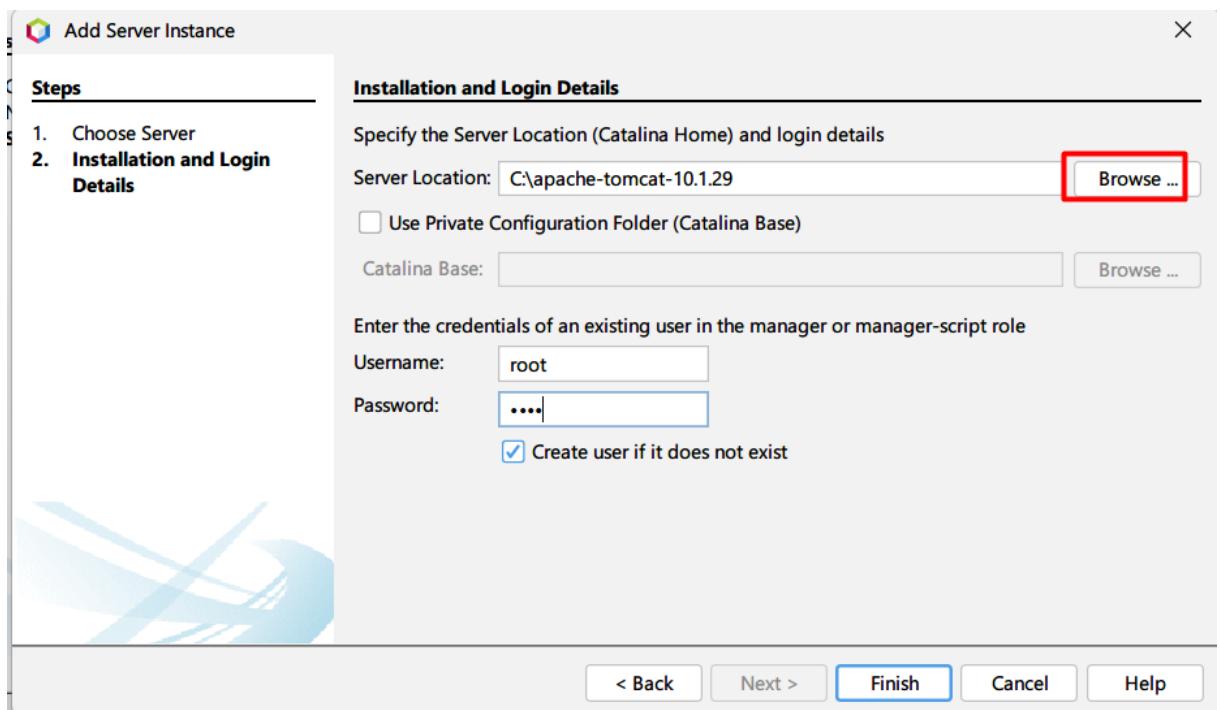


Choose the web server (there are two web server: Apache Tomcat & GlassFishV2)



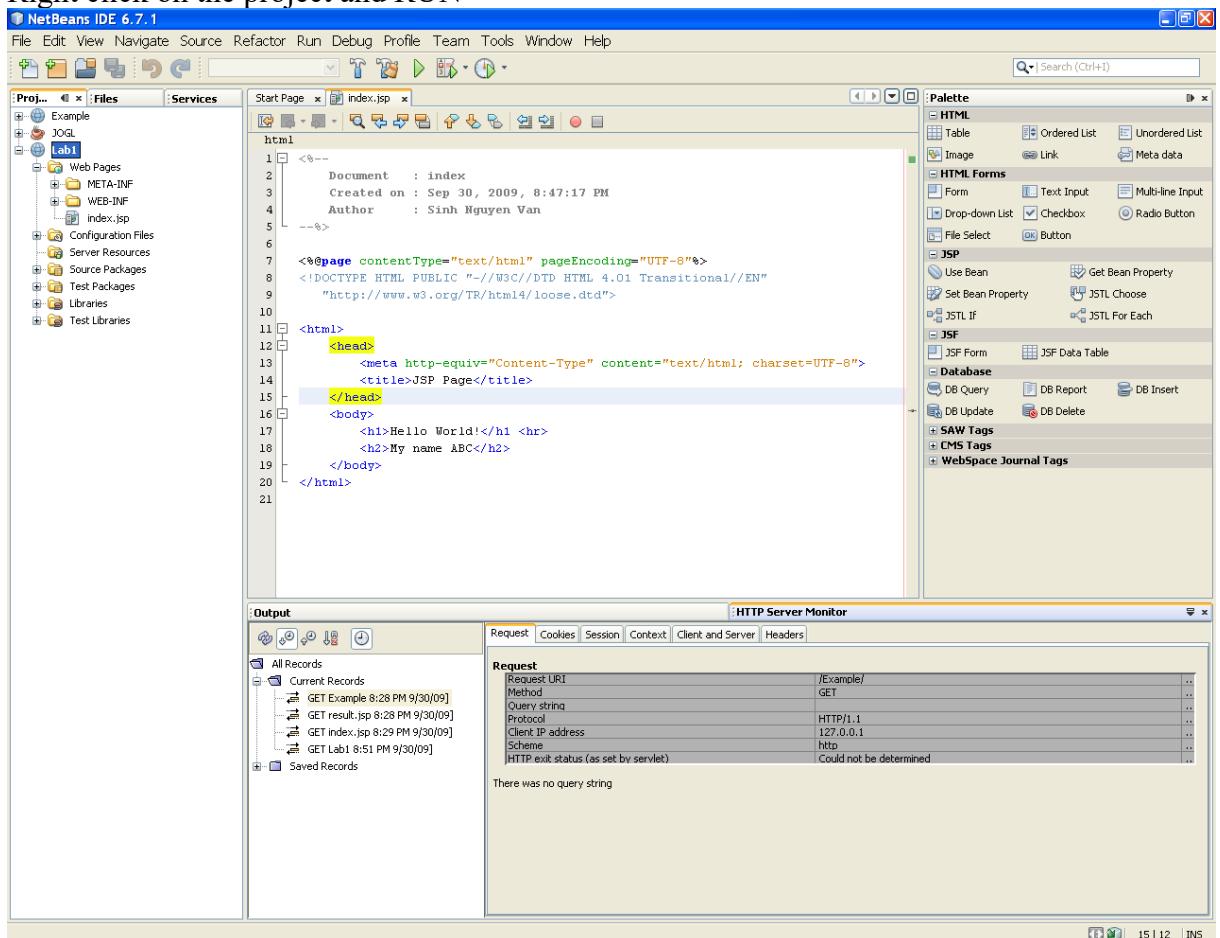
Choose the web server and java EE version

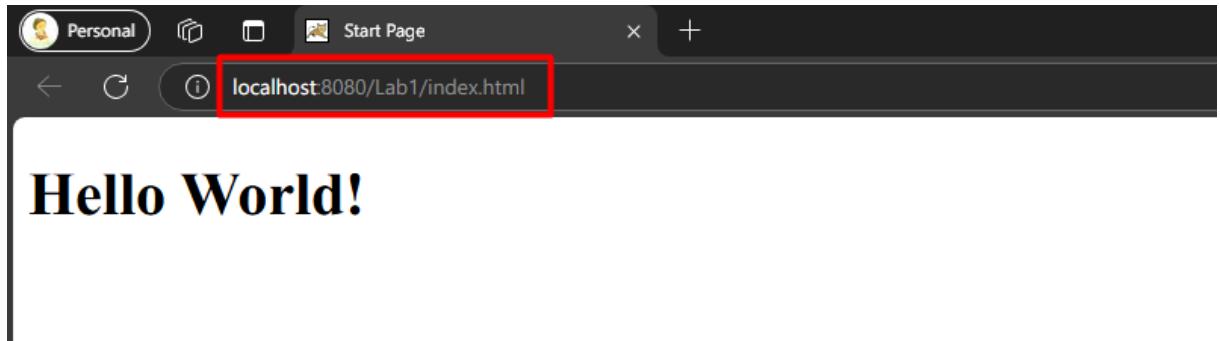




Browse to Tomcat folder you just download (in my case *C:\apache-tomcat-10.1.29*) the create username and password.

Now click on Finish button to complete an example of web application.
Right click on the project and RUN





Part 3: Setup MySQL (Database System) & Workbench (workplace)

Flow video to install MySQL and workbench:

[How to install MySQL on Windows 10/11 \[2024 Update \] MySQL Server & MySQL Workbench Complete guide \(youtube.com\)](#)

Download: [MySQL :: Download MySQL Installer](#)

MySQL can be controlled by two administration interfaces:

- Console (built-in console)
- Graphic User Interface (Third-Party Tools)

Third-party tools are softwares provided by many vendors, such as MySQL GUI, Navicat,... You can install Navicat Lite for MySQL. In this section, you will learn console and Navicat

- a. MySQL console

Steps to launch console:

- Open window console by run “cmd” command on “Start” menu
- Locate directory contained file “mysql” (it is usually located in bin folder of installed folder). Do not forget your username and password of mysql when you was installing.
- Run mysql as figure bellow:
`mysql -u root -p`

```
C:\WINDOWS\system32\cmd.exe - mysql -u root -p
C:\>Program Files\MySQL\MySQL Server 6.0\bin>mysql root -p
Enter password:
ERROR 1044 (42000): Access denied for user ''@'localhost' to database 'root'

C:\>Program Files\MySQL\MySQL Server 6.0\bin>mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 6.0.3-alpha-community MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> shows databases;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'shows
databases' at line 1
mysql> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| funtasybook    |
| mysql          |
| student        |
| test           |
| weblab5        |
| webtest        |
+-----+
7 rows in set (0.24 sec)

mysql> -
```

- After connecting to the database, you can test MySQL feature by typing something. The syntax and purposes of command can be found on the internet.