# **Installing Java related software's**

✷ Downloading and installing Java 16 software (Java Development Kit – 16)
✷ Downloading and installing Tomcat 10 software
✷ Downloading and installing Maven 3.8.1 software
✷ Setting the Path variables
✷ Writing and executing the Servlet 4.0 and Jakarta 5.0 programs
✷ Writing and executing the Spring 5 programs
✷ Issues with Tomcat 10 or Issues because of move from Java EE to Jakarta EE

**NOTE :** I am doing this on Windows 10 – 64 Bit Operating System. Please consider this point while doing on your PC.
In case, your operating system is Ubuntu 20 – 64 Bit then you have to download Ubuntu related software's.

# Download and install JDK 16

- Open the browser
- Type download jdk 16 → Open Oracle official website → Click on download JDK 16
- Double click on downloaded JDK exe file → Click on next → next → Finish
- Take the jdk installation folder
- Go to,
    - Type Env in the search bar → Click on Edit the system environment variables
    - Click on Environment variables → Click on New... under System variables
    - Enter JAVA_HOME as Variable name and JDK home directory as Variable value and click on Ok → click on Ok → click on Ok
    - Click on Environment variables again→ Select Path → Click on Edit...
    - Click on New → Add %JAVA_HOME% \bin → click on Ok → click on Ok → click on Ok

# Download and install Apache Tomcat 10

- Open the browser →

- Type download Apache Tomcat 10 → Open Apache official website

- Click on download on Tomcat 10

- Double click on downloaded file → Click on next → next → Finish

- Take the Tomcat installation folder

- Go to,

    - Type Env in the search bar → Click on Edit the system environment variables

    - Click on Environment variables → Click on New... under System variables

    - Enter TOMCAT_HOME as Variable name **and** Tomcat home directory as Variable value **and** click on Ok → click on Ok → click on Ok

    - Click on Environment variables again→ Select Path →  Click on Edit...

    - Click on New → Add %TOMCAT_HOME% \bin → **and** click on Ok → click on Ok → click on Ok

# <u>Download and install Apache Maven 3.8.1</u>

- Open the browser

- Type download Apache Maven 3.8.1 → Open Apache official website

- Click on download on Maven 3.8.1 → Extract Maven 3.8.1 ZIP File

- Go to,

  - Type Env in the search bar → Click on Edit the system environment variables

  - Click on Environment variables → Click on New... under System variables

  - Enter MAVEN_HOME as Variable name **and** Extracted folder of Maven home directory as Variable value and click on Ok → click on Ok → click on Ok

  - Click on Environment variables again→ Select Path →  Click on Edit...

  - Click on New → Add %MAVEN_HOME% \bin → click on Ok → click on Ok → click on Ok


  **NOTE** : Set the path for M2_HOME as well, like MAVEN_HOME

# Download the source code from GIT

**Please download the source code from below GIT repository URL :**

Enter this URL on browser - https://github.com/ChandraKodam5/jakartaservletEE5
Click on **Code** Drop-down → Click on **Download ZIP** → Open eclipse IDE

Goto **File** → **Import** → Existing projects into workspace → **Next** → click on **checkbox** (**select archive file**) → click on **Browse** → choose the downloaded **Spring5MVCExampleWithAnnotationConfig and JakartaServletEE5Project** ZIP files.
**OR**

Type the below command in git bash
$ git clone https://github.com/ChandraKodam5/jakartaservletEE5.git
Goto **File** → **Import** → Existing projects into workspace → **Next** → click on **checkbox** (**select archive file**) → click on **Browse** → choose the downloaded **JakartaServletEE5Project** ZIP file.

## Issues with Tomcat 10 & Spring 5

Spring MVC 5 does not run on Tomcat 10 because of the package renaming from javax.* to jakarta.*.

After further research, I was able to find the answer to my question. Spring MVC 5 does NOT currently work on Tomcat 10. This is because Tomcat 10 is based on Jakarta EE 9 where package names for APIs have changed from javax.* to jakarta.*. But, Spring has not changed the packages from javax.* to jakarta.* till the version of Spring 5.3.7.

Please **click here** or below for further confirmation,

**spring-mvc-5-on-tomcat-10-deployment-problems**

# Thank You

**GIT Repository URL**

https://github.com/ChandraKodam5/jakartaservletEE5

**References**

https://www.youtube.com/watch?v=Rx8uoPmaVvE