

# REST API Security

## Software Installation Instructions

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# Installation Remarks (i)

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- There are several software alternatives for the creation of Rest services, as well as the software recommended in the course itself can be used in both Windows and Linux (in MAC it may cause some problems).
- The course will support the software recommended in these slides under Windows, but the student is free to use another operating system if desired.

# Installation Remarks(ii)

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- If you have a 64-bit operating system, it is recommended to install the 64-bit jdk and the 64-bit Eclipse.
- If you have a 32-bit operating system, install the 32-bit jdk and the 32-bit Eclipse.
- If when you try to start Eclipse for the first time you get an error saying "Failed to load the JNI shared library", it means that you have not followed the above instructions properly.
- **Pre-installation recommendations (DO NOT INSTALL UNTIL READING VERSIONS IN SLIDE 5**
- About the installation of Tomcat and Eclipse:
  - It is preferable that the **path is short and without spaces or special symbols**.
  - Create in the root directory of your hard disk a folder called, for example, Development.
  - Create inside the Development folder a folder named EclipseJ2EE2020 (in case you have or will have several Eclipses installed).
  - Unzip Eclipse in the EclipseJ2EE2020 folder.

# Installation Remarks(iii)

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- **Post-installation recommendations**
- About the workspace:
  - Create inside the Development folder a folder named Workspaces.
  - Create inside the Workspace folder a folder named Ws\_EclipseJ2EE2020
- About the Eclipse executable
  - Create a shortcut to the Eclipse executable you just installed and put it on the desktop. Rename the shortcut as EclipseJ2EE2020
  - The first time you start Eclipse select the WS\_EclipseJ2EE2020 folder as the default workspace folder.

# Mandatory Downloads and Installations(i)

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- **The latest release of Eclipse requires a 64-bit JVM, and does not support a 32-bit JVM.**
- **Current releases of Eclipse require Java 11 JDK or newer. I suggest installing the latest. **JRE is not enough, you need JDK.****
- Download and install **JDK 15 (or at least 11)**: Java SE Development Kit 15 (see slide 6)
  - <https://www.oracle.com/es/java/technologies/javase-jdk15-downloads.html>
- Download **Eclipse 2020 for Java EE Developers** and unzip it in the folder Development/EclipseJ2EE2020.
  - <https://www.eclipse.org/downloads/packages/release/2020-12/r/eclipse-ide-enterprise-java-developers> (download from the links under “Download link”).
  - The name of the file downloaded should be **eclipse-jee-2020-12-R-win32-x86\_64.zip** or similar for other OS
- Download Apache Tomcat 9 → Binary Distribution → core (zip) and unzip it in the folder Development
  - <https://tomcat.apache.org/download-90.cgi>
- Download Postman API Client app and install it:
  - <https://www.postman.com/product/api-client/>

# Mandatory Downloads and Installations(ii)

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- Next we will update the **system environment variables**:
- In the **system variables (not user variables)** add to the **path variable** the **directory where the jdk bin is located followed by ;** (in my case, that I have jdk 14.0.2, C:\Program Files\Java\jdk-14.0.2\bin).
- In the **system variables** we look for if there is any variable called **JAVA\_HOME**, if there is one we edit it and replace the path with the **path where we have installed the last version of the jdk without the bin** (in my case C:\Program Files\Java\jdk-14.0.2). If it doesn't exist, create a new JAVA\_HOME variable with that value.
- **CAUTION, do not confuse the jdk route with the jre.**

# Optional Downloads and Installations

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- In the slides an exercise with the mysql database will be developed; alternatively other databases, or, if necessary, static variables or files, can be used.
- You may find the SOAP UI program (<https://www.soapui.org/open-source.html>) useful to see more details of the messages exchanged by the API.
- The Fiddler tool (<https://www.telerik.com/fiddler>) may be useful to view messages exchanged over the web.