Online Exam Management System

Installation Manual

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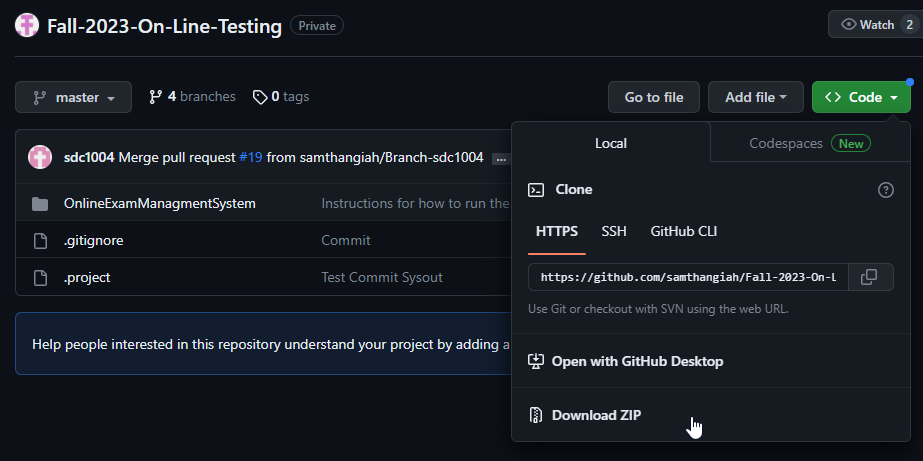
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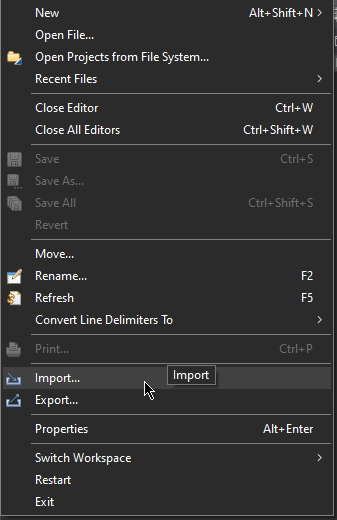
# Installing the Program for Users

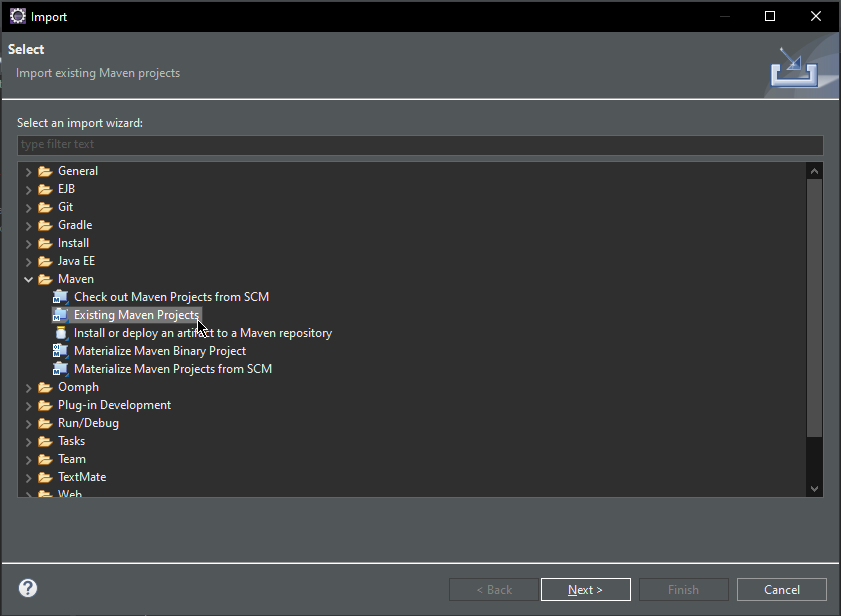
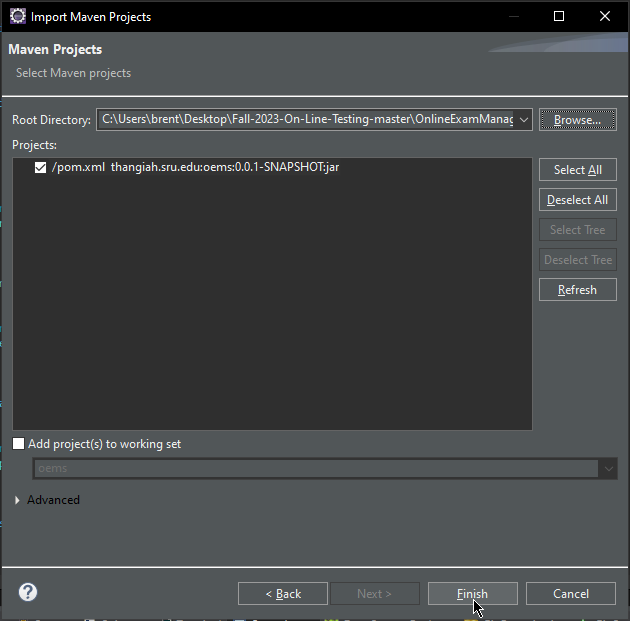
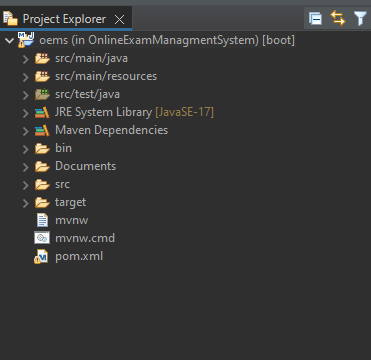
This section of the manual shows how to install and run the program by downloading it from the GitHub repository. This section should **not** be used by programmers, as it does not demonstrate how to set up the local repository for adding to the source code.

## Importing the Project from GitHub

The following steps will outline how to import the project into Eclipse for running the program:

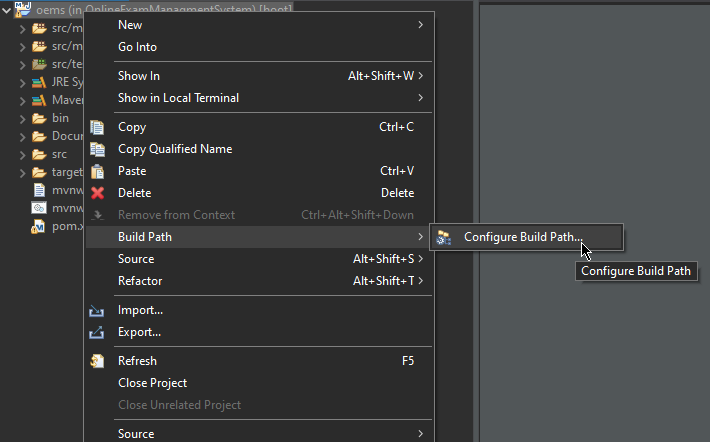
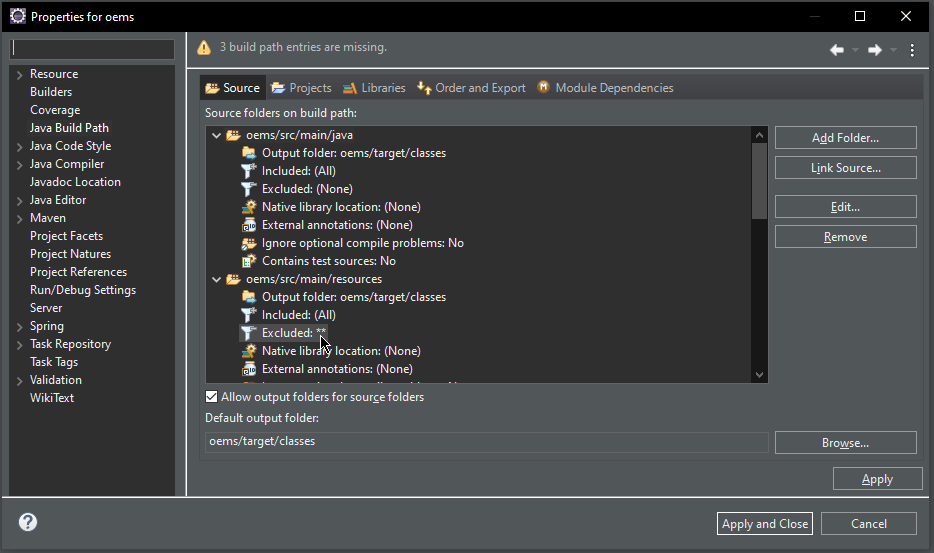
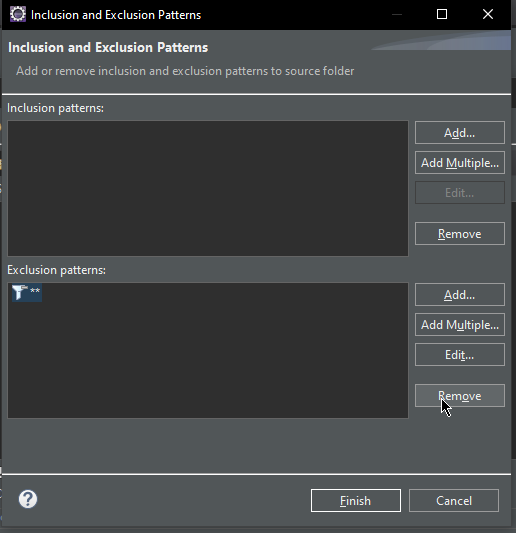
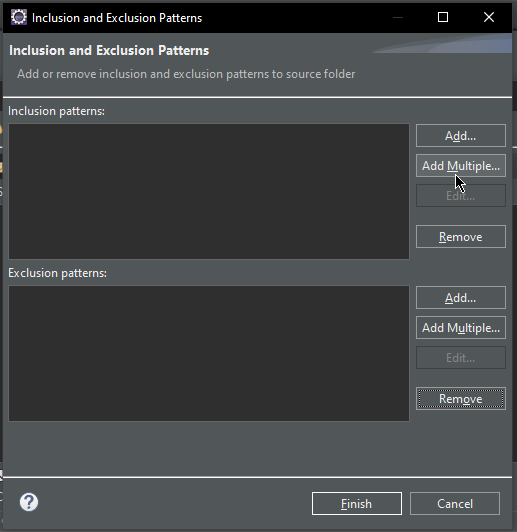
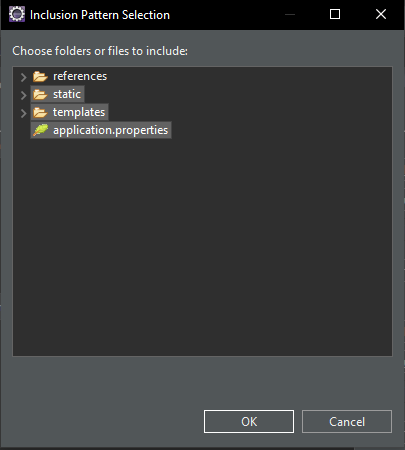
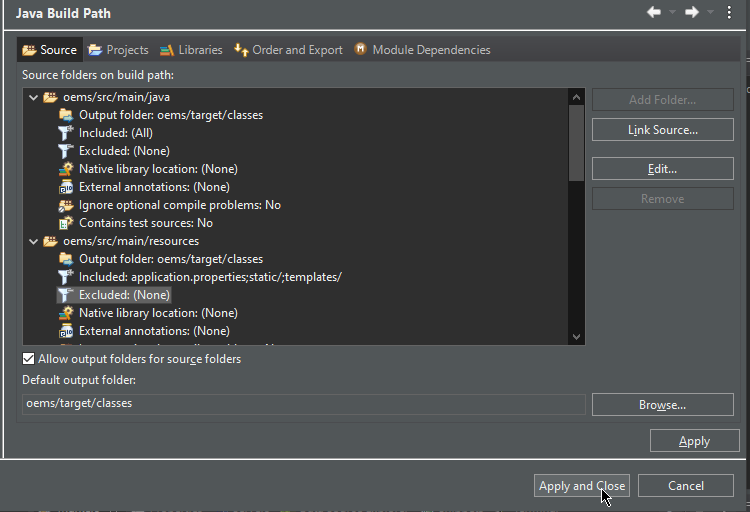
1. From the GitHub repository page, click on **Code** and then **Download ZIP.** Extract the folder to a desired location.
2. While in Eclipse, you’ll need to import the project by choosing **File > Import**



1. After selecting import, choose **Maven > Existing Maven Projects** and then hit **Next**  
   
2. Locate the directory of where you extracted the program by clicking on **Browse**. Once you find it, open the folder that is named **WebBasedEvaluations** for the import. Then click **Finish**.  
     
   
3. The project is now imported into the Eclipse workspace.  
   

## Configuring the Build Path

Eclipse is unable to find the folder that contains all of the HTML pages of the program by default. In order to fix this, the build path needs to be configured using the following steps:

1. After Importing the Maven project into Eclipse, right click on the main folder and choose **Build Path > Configure Build Path**  
     
   
2. Once in the configuration menu, double click on “Excluded” under the oems/src/main/resources folder  
     
   
3. Click on the item in the Exclusion patterns box, and then click “Remove”  
     
   
4. In the Inclusion Patterns section, select “Add Multiple”  
     
   
5. Select the templates folder, static folder, and application.properties and then click “OK”  
   
6. Click “Finish”
7. Click “Apply and Close”.  
   

# 

# 

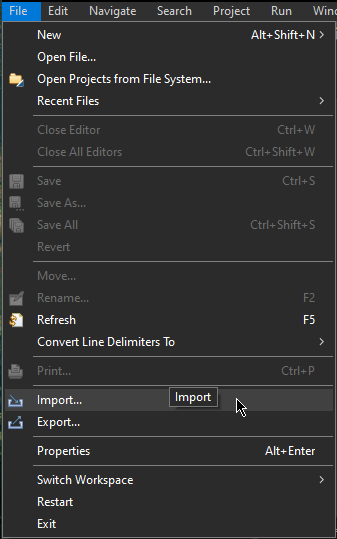
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# Installing the Program in Eclipse as a Programmer

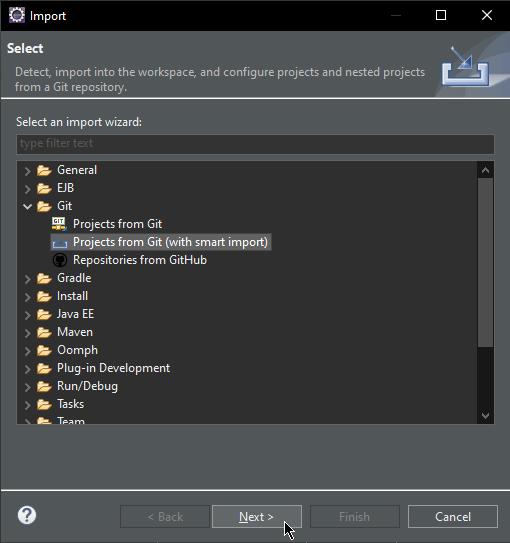
This section should only be referred to when attempting to set up a local git repository to work on and use the program. Otherwise, for normal use and just running the program, the prior method of installing the program should be used.

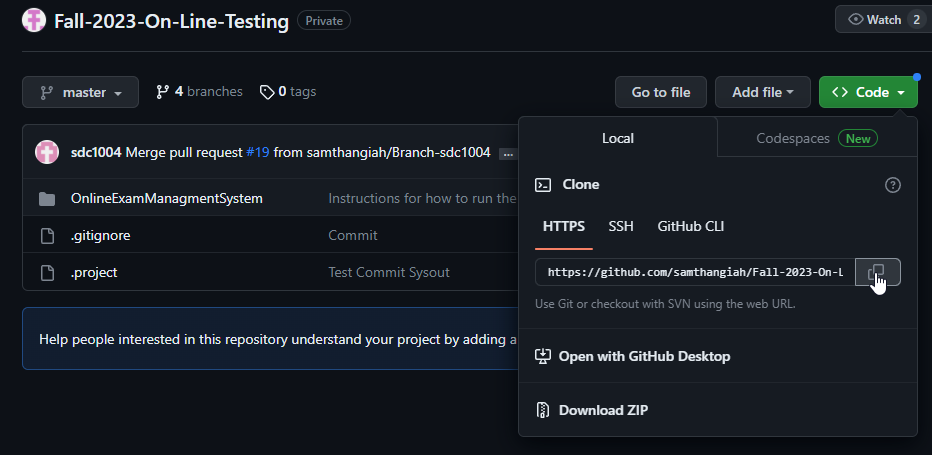
## Importing the Project with Projects from Git (smart import)

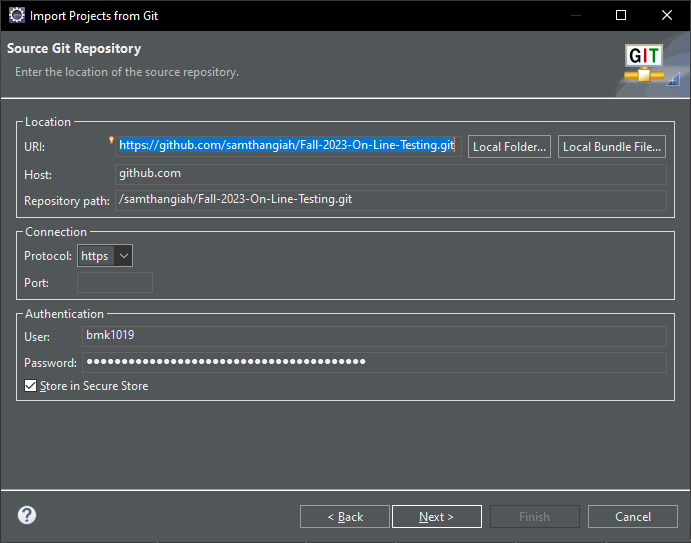
1. After installing the program requirements, launch the Eclipse IDE and select/create a location for your workspace to be stored with the **Browse...** option and then select **Launch** when the workspace has been set.
2. Navigate to the top toolbar to the **File** option and select **Import…** as shown below.

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1. Once you’re in the import window, click the **Git** folder arrow to expand what’s inside and select **Projects from Git (with smart import)** as seen below.



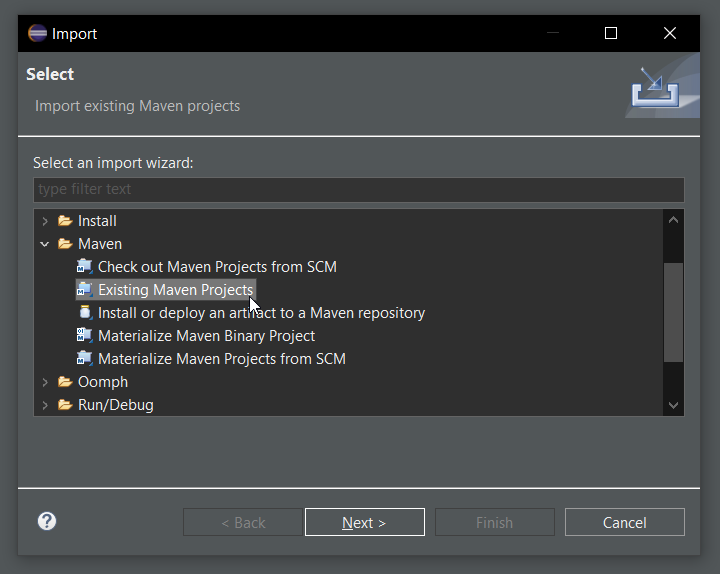
1. In the **Import Projects from Git** windows, select **Clone URI** and press next
2. In the next section, navigate to the GitHub, login, generate a code, and go to the project’s specific page and press on the green **Code** button and copy the URI from there. A visual of what to see is shown below
3. Next, take that URI and paste it into the URI text box and the rest will automatically fill in, an example of what it should look like is displayed below.



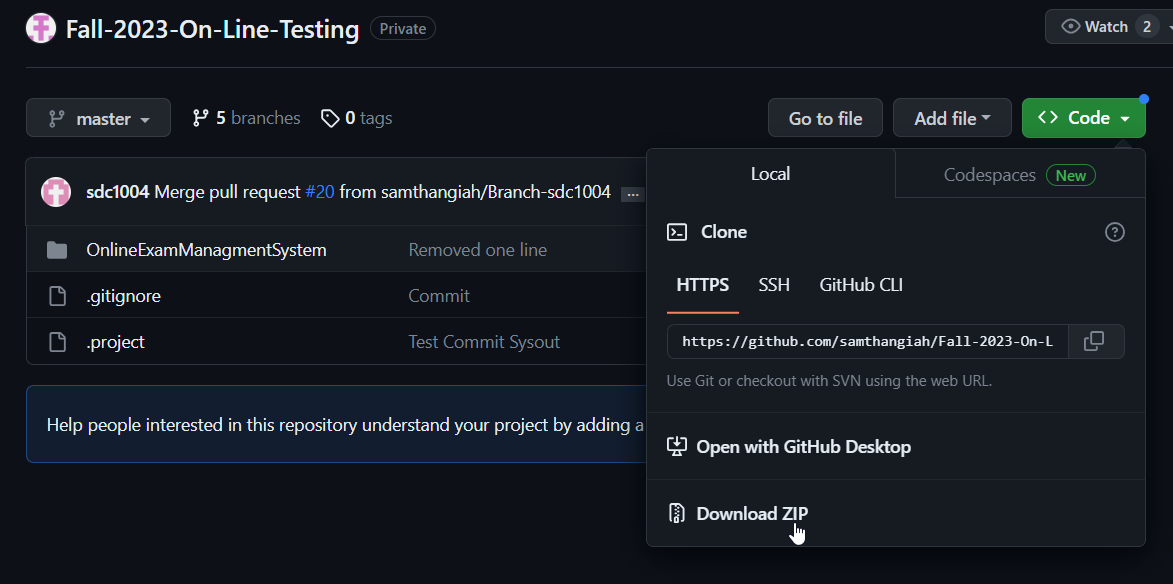
1. Select **Next** and on the new page, search for the branch **master** and select **Next** once more. You’ll be taken to a page where you must select the directory of the destination of the GitHub files. Either leave it as the default location or user **Browse** to manually choose where to place the files.
2. After having a directory for the GitHub files selected, continue with the **Next** button and wait for everything to be downloaded. Select **Finish** once you have the opportunity to do so.

## Importing the Project Manually

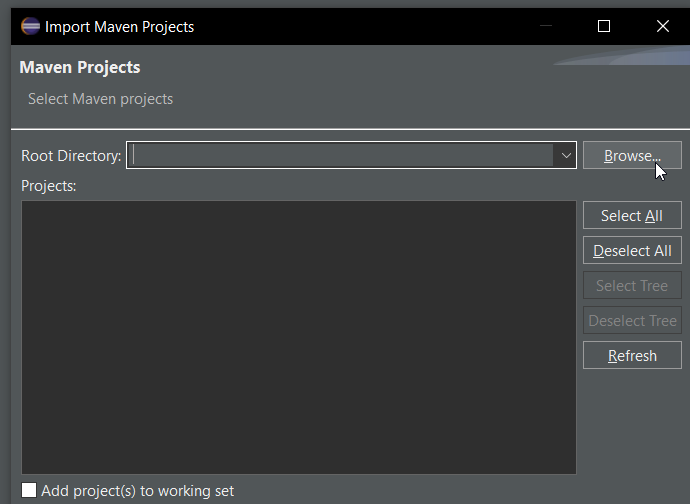
1. Once you’re in the import window, click the **Maven** folder arrow to expand what’s inside and select **Existing Maven Projects** and press **Next** as seen below.

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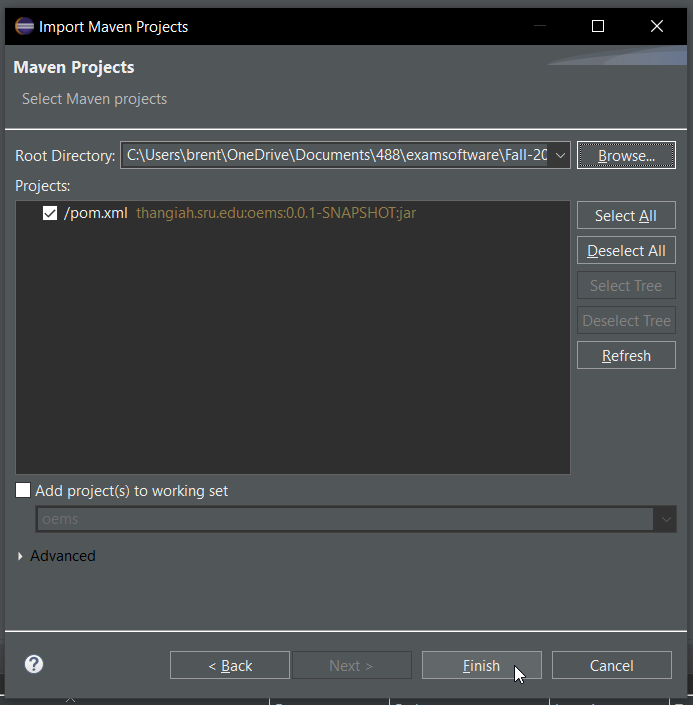
1. You must download the zip file of the master branch of the project by going to the GitHub page for the project and clicking on the green **Code** button and pressing **Download ZIP** button. Once the download is complete, you must unzip the file into a folder with your decompressing program of choice (Winrar, 7zip, etc). There is a built-in unzipping ability Windows has, but look elsewhere for more information on how to unzip a file on the internet.



1. On the next page, you’ll need to press the **Browse…** next, navigate to the unzipped folder that you previously downloaded from the GitHub.



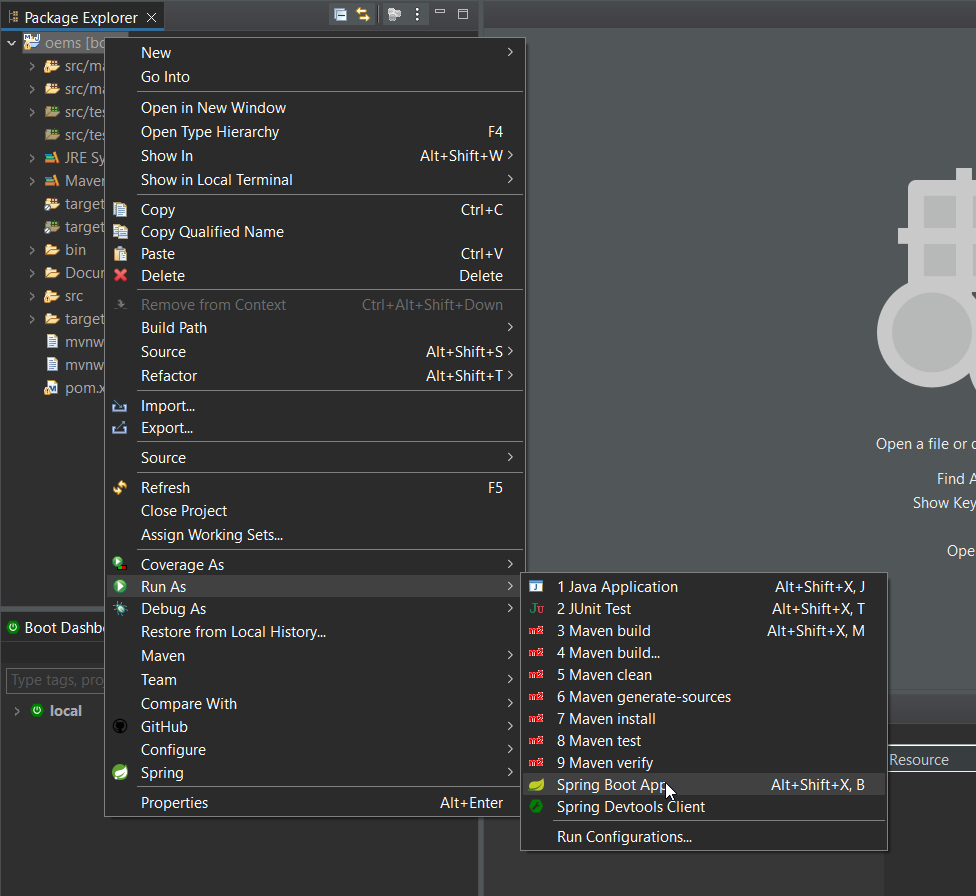
1. You will then select the pom.xml file that is displayed in Projects, then click finish.



## Running the Program after Setup

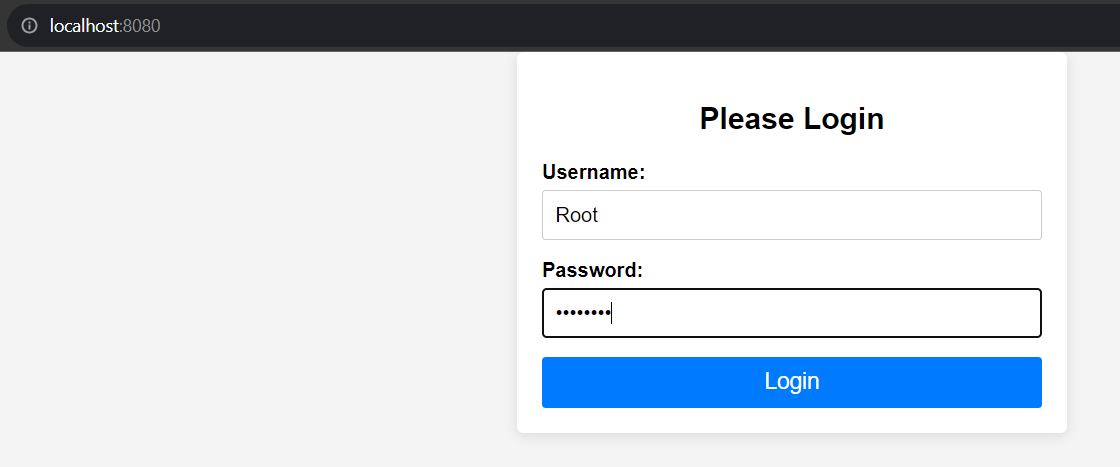
After getting all the program files open in Eclipse you’ll want to run the program.

1. You’ll need to right click on the top of the files tree, hover over **Run As**, then click Spring Boot Apps

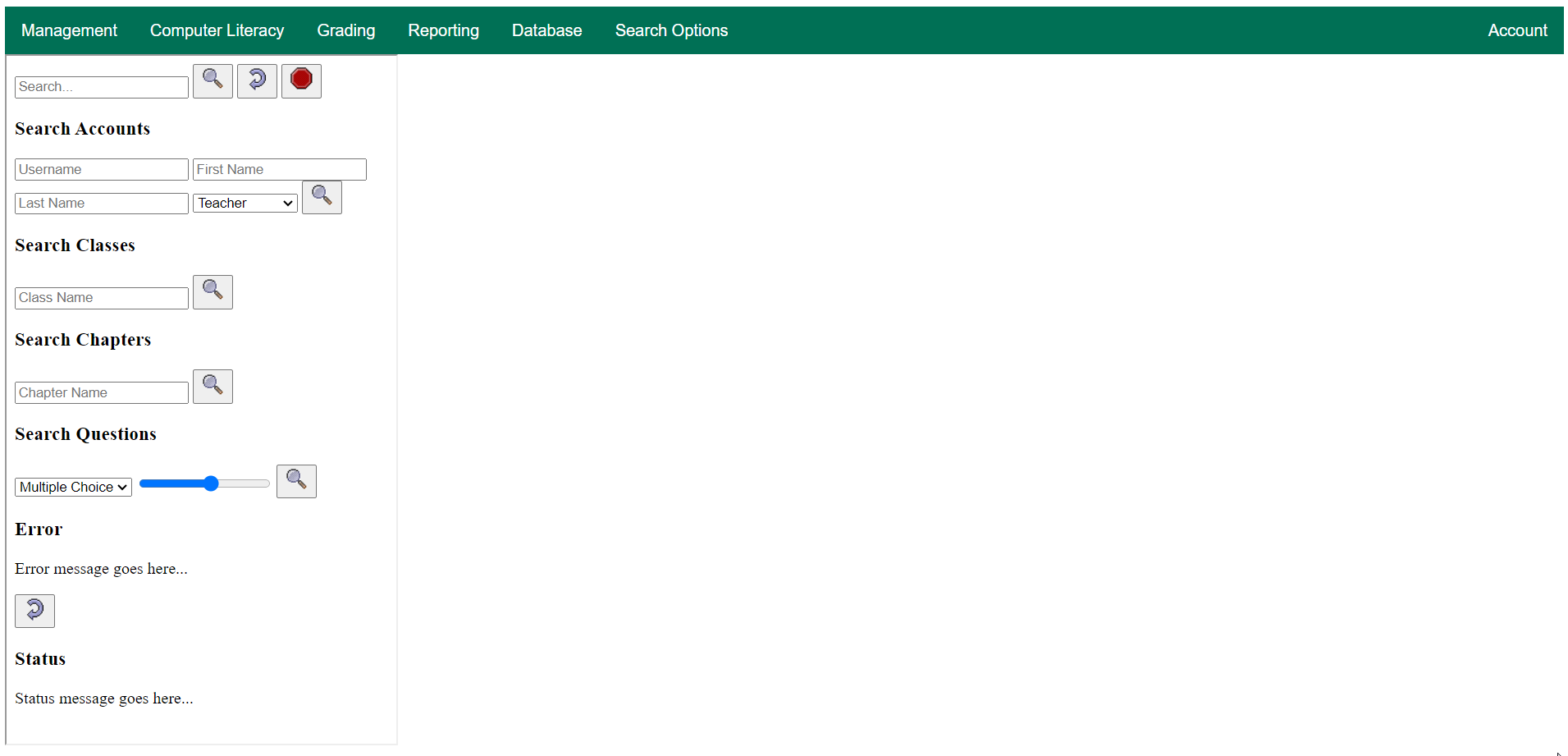


1. You will then need to navigate to your browser of choice and type *localhost:8080* into the url bar. The login page will be displayed.

*user: Root, pass: software*



1. After Logging in you will be presented with the Main Screen for an instructor.



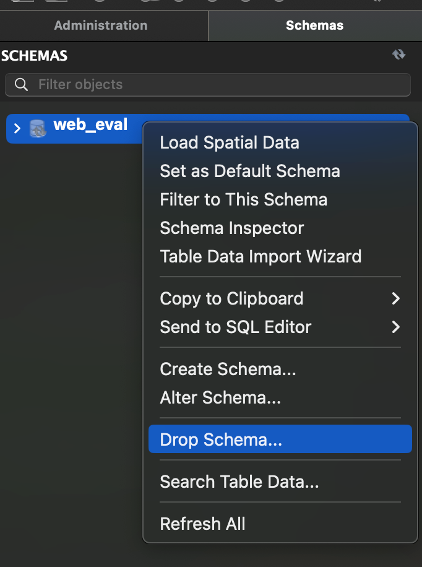
1. You have a navigation bar that has multiple options, the current options that are available are Management, Computer Literacy, Grading, Reporting, Database, Search, Options.
   1. Management has 5 options under it
      1. Accounts - ***Currently Not Functioning***
      2. Create Account - This option will take you to the Registration Form page. You are able to enter user information and click finish to register that user to the database.
      3. Classes - Dropdown menu with classes will appear. The chosen class will be redirected to an examination page. This is still ***under development***
      4. Chapters - This lets the user choose between chapters and different examination forms. This is ***under Development***
      5. Exams - ***Currently Not Functioning***
   2. Computer Literacy
      1. Exam Generator - ***Currently Not Functioning***
   3. Grading
      1. Exam Grading - ***Currently Not Functioning***
   4. Reporting
      1. Exam information - ***Currently Not Functioning***
      2. IP Address - ***Currently Not Functioning***
   5. Database
      1. View All Students - Routes to an HTML page that shows all students in the database.
      2. Add Students - Routes to an HTML page that allows the admin to add students to the database.
      3. Export to Excel - Exports the students from the database to your local drive as an excel file. **By default, it should be downloaded to your ‘Downloads’ folder**
      4. Import with Excel - ***under Development***
   6. Search Options
      1. View Details - ***Currently Not Functioning***
   7. Account
      1. Change Password - ***Currently Not Functioning***
      2. Logout - This option will take you back to the login page.

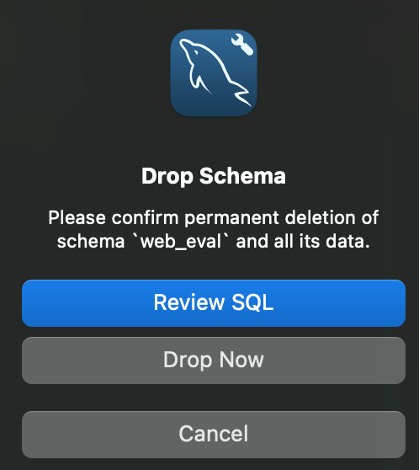
## Running the Program with Data Persistence

By default, the program does not save any of the data uploaded or entered. This can be changed to preserve data after program termination using these outlined steps.

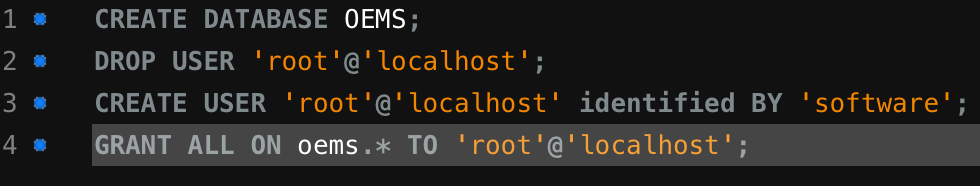
### Drop Old SQL Schema

Before using Data Persistence mode for the first time, you must drop any existing schemas in MySQL Workbench. Do this by right clicking on the **web\_eval** schema, and selecting **Drop Schema**. Then in the dialog click on **Drop Now**.



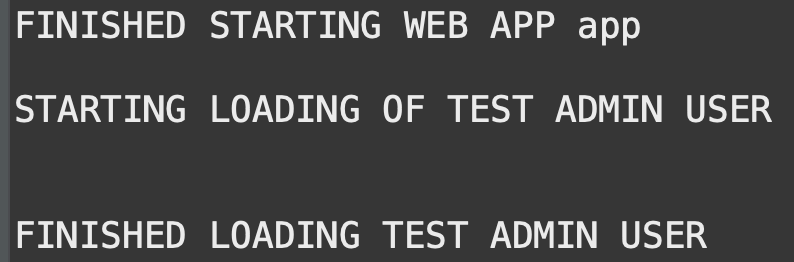


### Create New SQL Schema

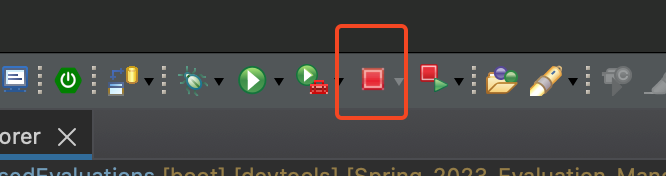
This can be done by a few simple commands, when logged in your SQL Workbench enter:  
  


### Running the Program Once Using the Create Schema

After ensuring the old SQL schema does not exist, run the program ONCE to ensure that the tables are created. This can be verified by the logins created, which are logged in the console.



At this point, you can terminate the program in Eclipse and proceed.



### Changes to Code

Now that the tables have been created, some further changes will be necessary in order to make the database save new data.

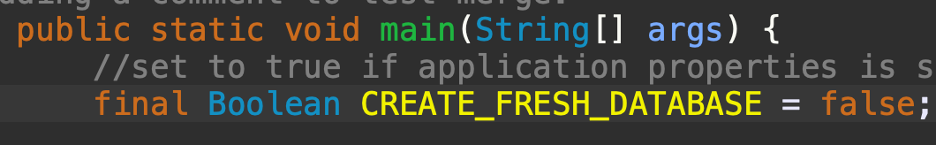
### 

#### WebBasedEvaluationsApplication.java

This file can be located in the following path:

**src/main/java/edu/sru/WebBasedEvaluations/WebBasedEvaluationsApplication.java**

Inside the main method, you will need to set the Boolean value CREATE\_FRESH\_DATABASE to be equal to **false**.

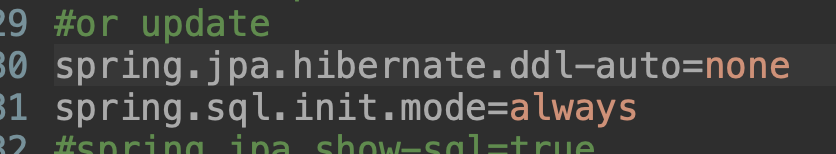


#### application.properties

This file can be located in the following path:

**src/main/resources/application.properties**

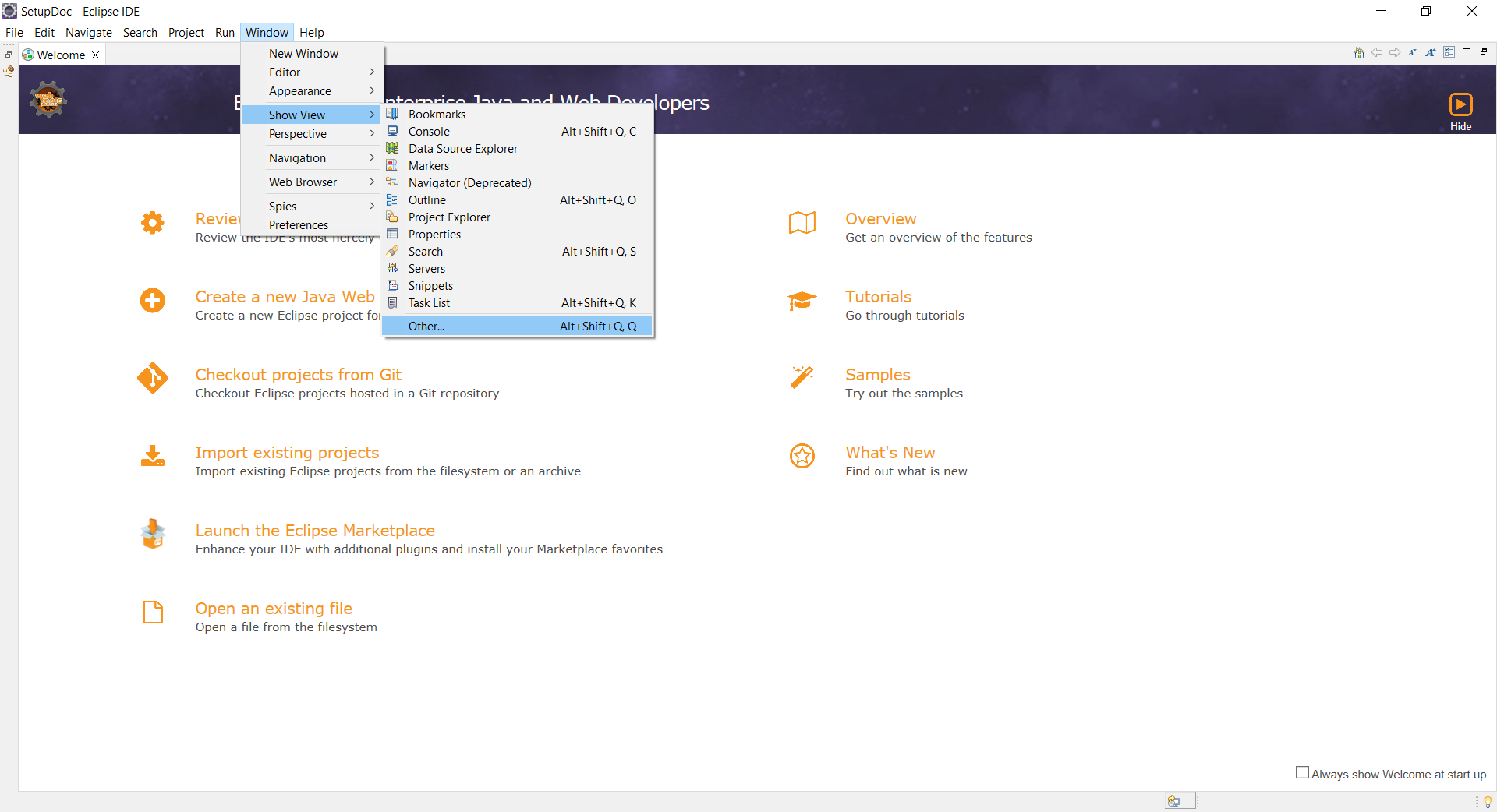
Locate the line that says “spring.jpa.hibernate.ddl-auto” and set it to be equal to **none**.



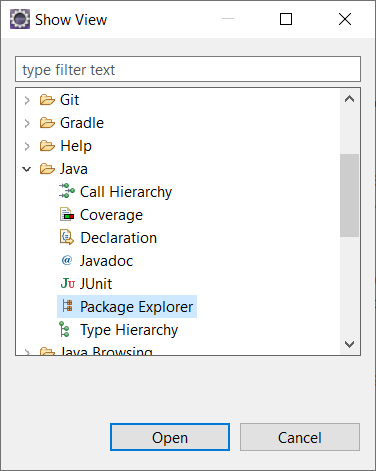
Now, when you upload files while running the program, they will stay in the database after the program is terminated.

## Viewing the Packages

1. In order to view the project’s packages, press the **X** right next to the **Welcome** tab in the top left corner or go to the top tool bar and press **Window** then **Show View** then **Other** in order to bring up a window.



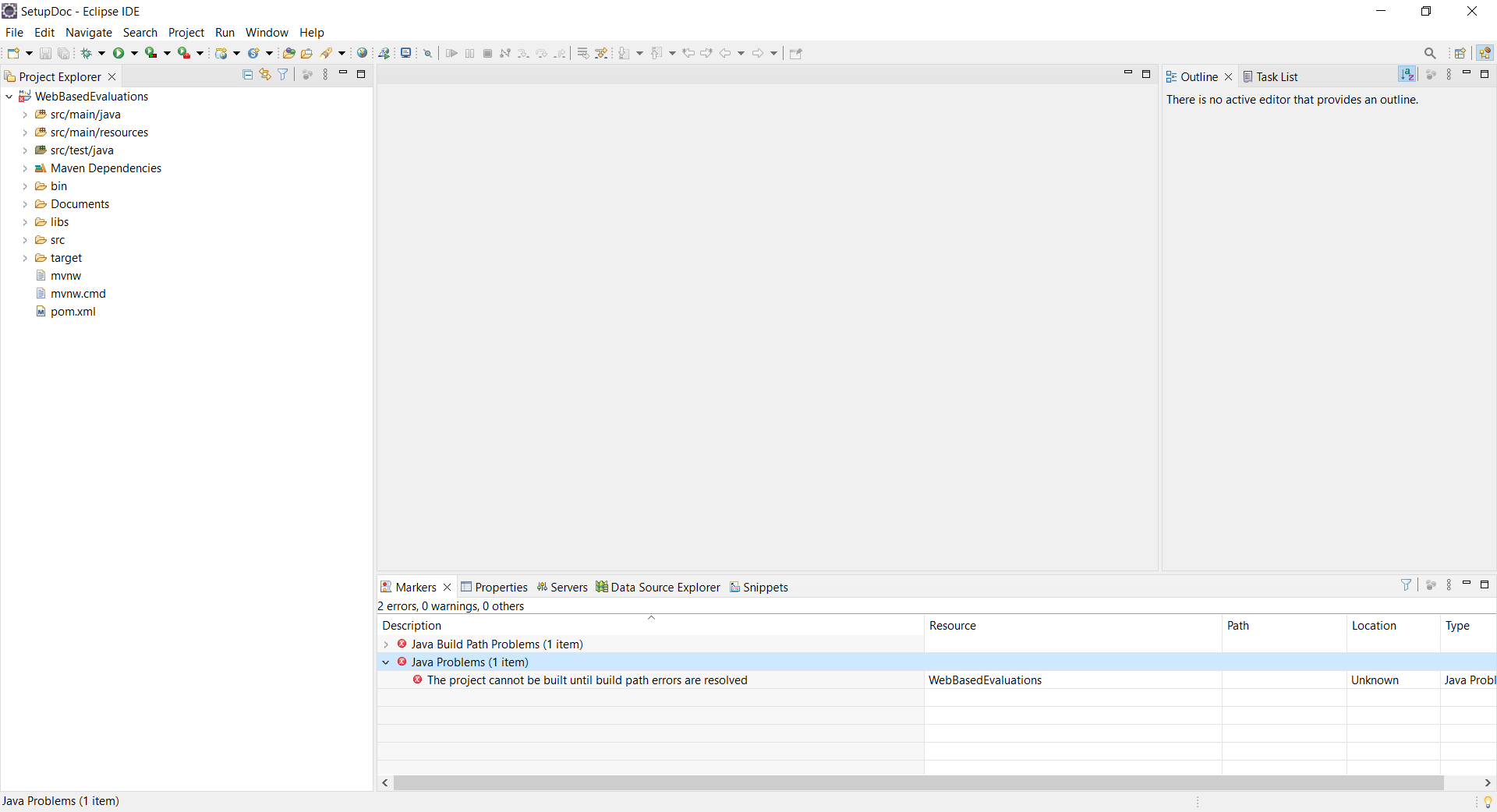
1. A **Show View** window will display, and you must search for a folder named **Java** and expand it with the arrow right next to it to display the folder’s contents. Select **Package Explorer** and press the **Open** button.



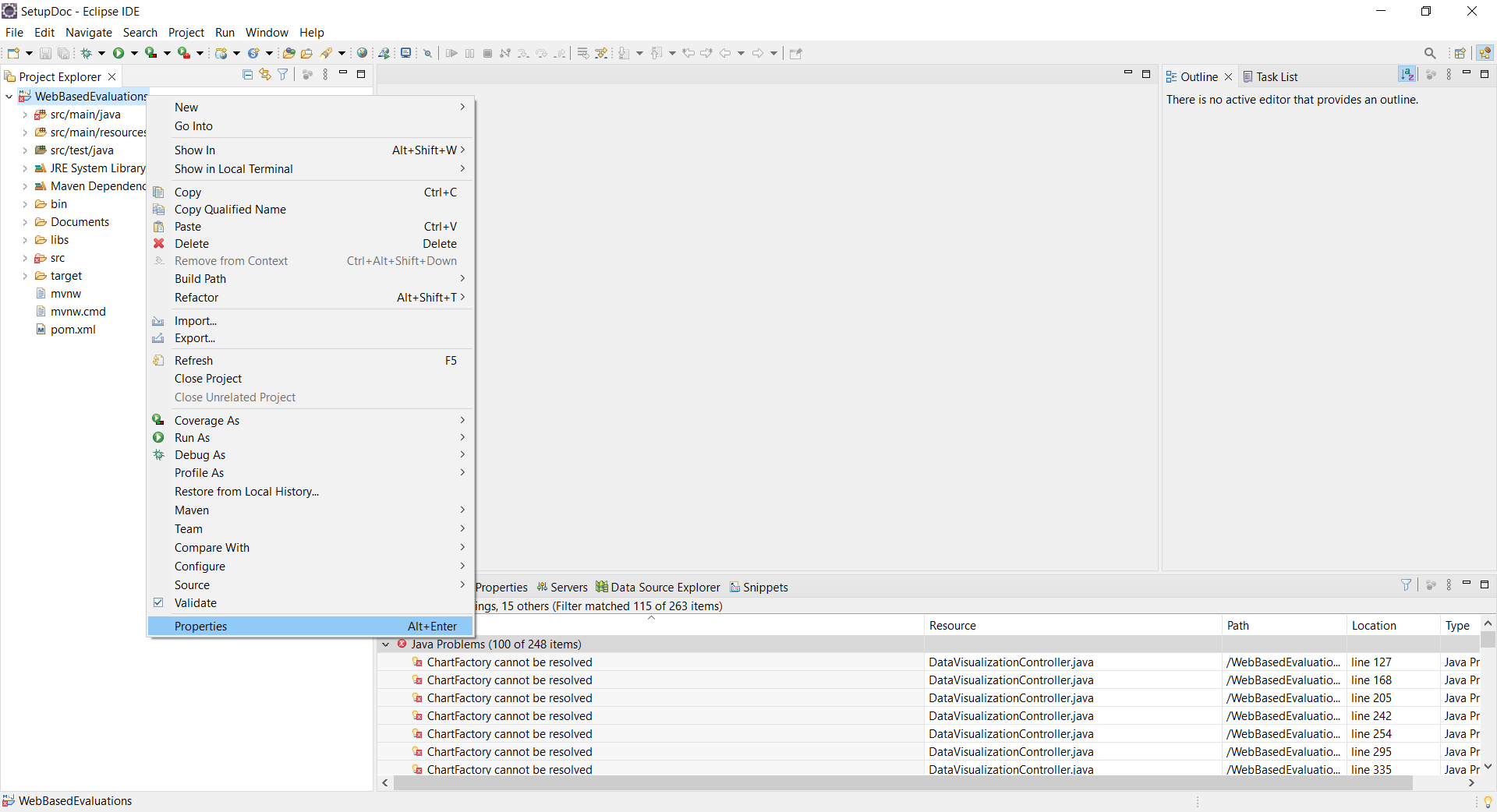
## 

## Resolving Build Errors

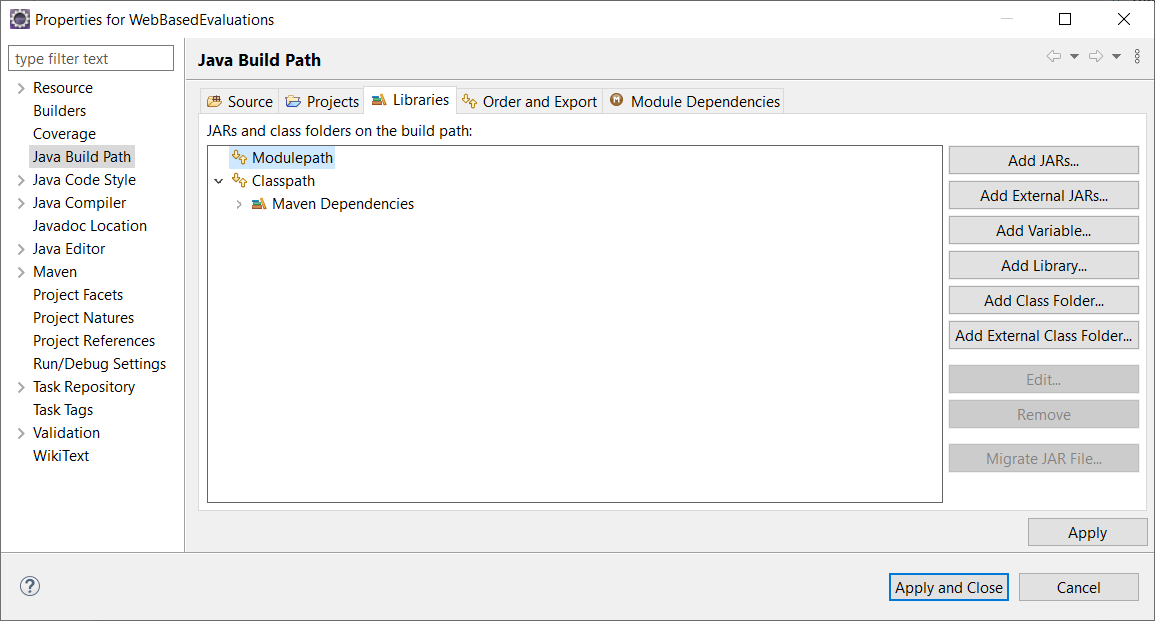
If you come across errors in the **Markers** tab located near the bottom of the program, that’s like due to the fact that Java SE 17 wasn’t selected as the default version.



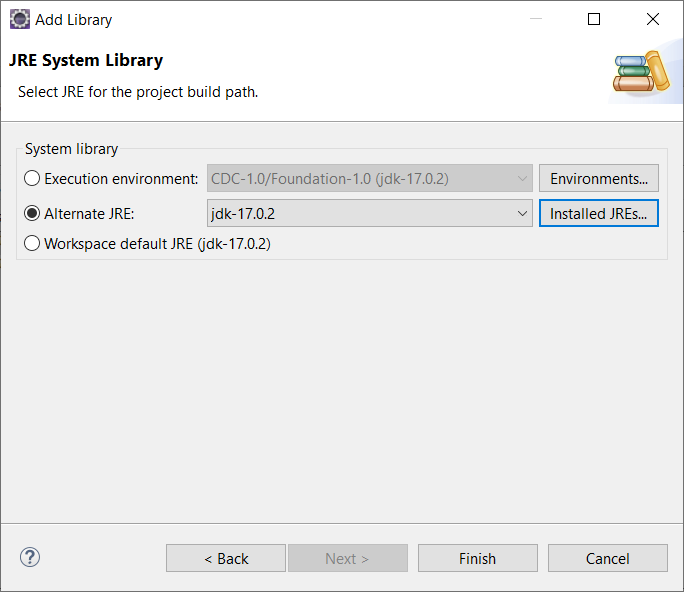
1. Right click on the project in either the **Project Explorer** or **Package Explorer** and select **Properties.**



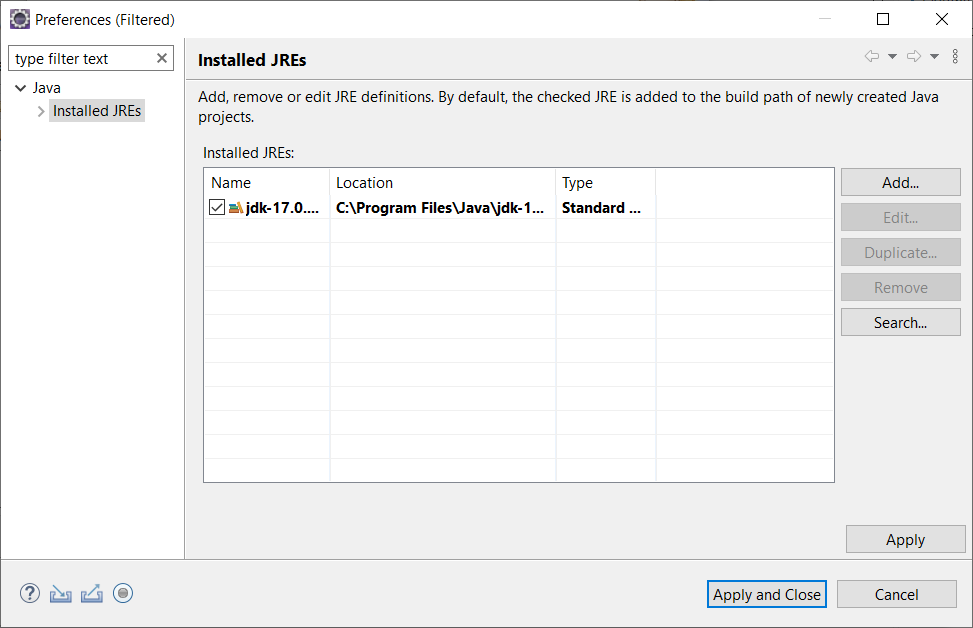
1. Then on the right side, select **Java Build Path** and from within that newly opened area press **Libraries.**



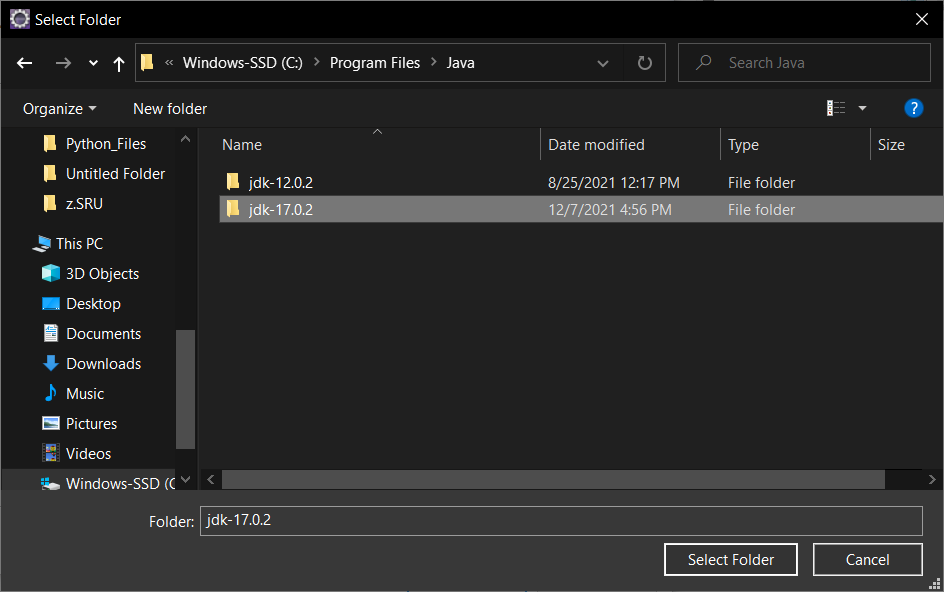
1. From with the **Libraries** tab, select **Modulepath** and press **Add Library…** located to the left to bring up a new window.
2. From the **Add Library** window, select **JRE System Library** and press **Next.**



1. Once you’re on the **JRE System Library** part, select **Alternate JRE:** and press the **Installed JREs…** button to the right of it. That will bring up a new window.



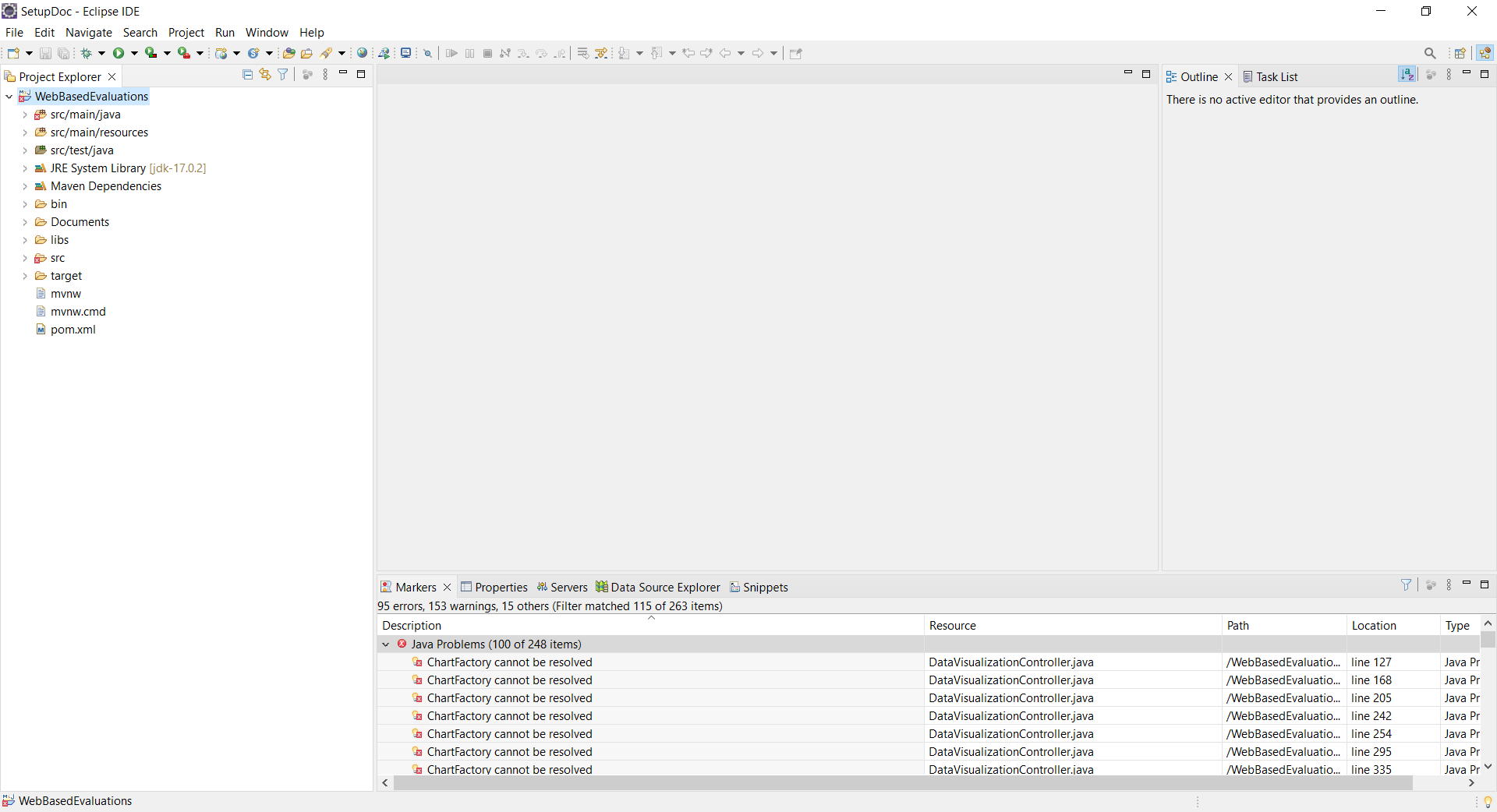
1. From this new window, press the **Add…** button located on the right. A new window will pop up, named **Add JRE** where you will select **Standard VM** and press N**ext.**
2. After pressing the next button, a you’ll see a **JRE home** box with a **Directory…** button to the right of it, press the **Directory…** button and select the folder that contains jdk-17. The location of it can vary, but if the jdk is installed from an installer, then it will like be in C:\Program Files\Java.



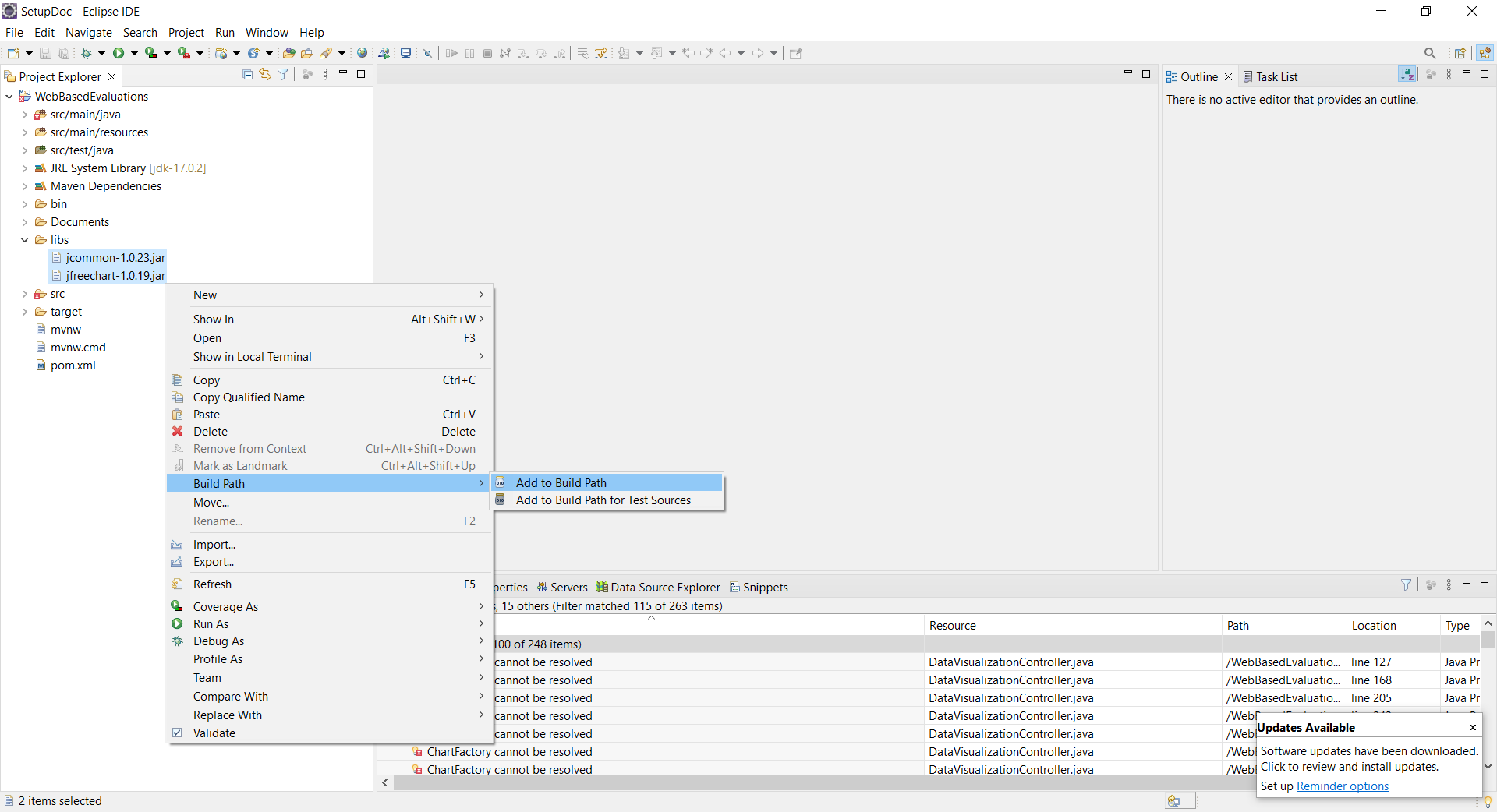
1. After selecting the folder with the **Select Folder** button, you should be able to close out of everything with a series of **Finish** and **Apply and close** buttons.

## Missing Libraries Problems

You’ll likely see errors relating to “ChartFactory cannot be resolved” in the **Markers** window located near the bottom which come from missing links to additional libraries required.

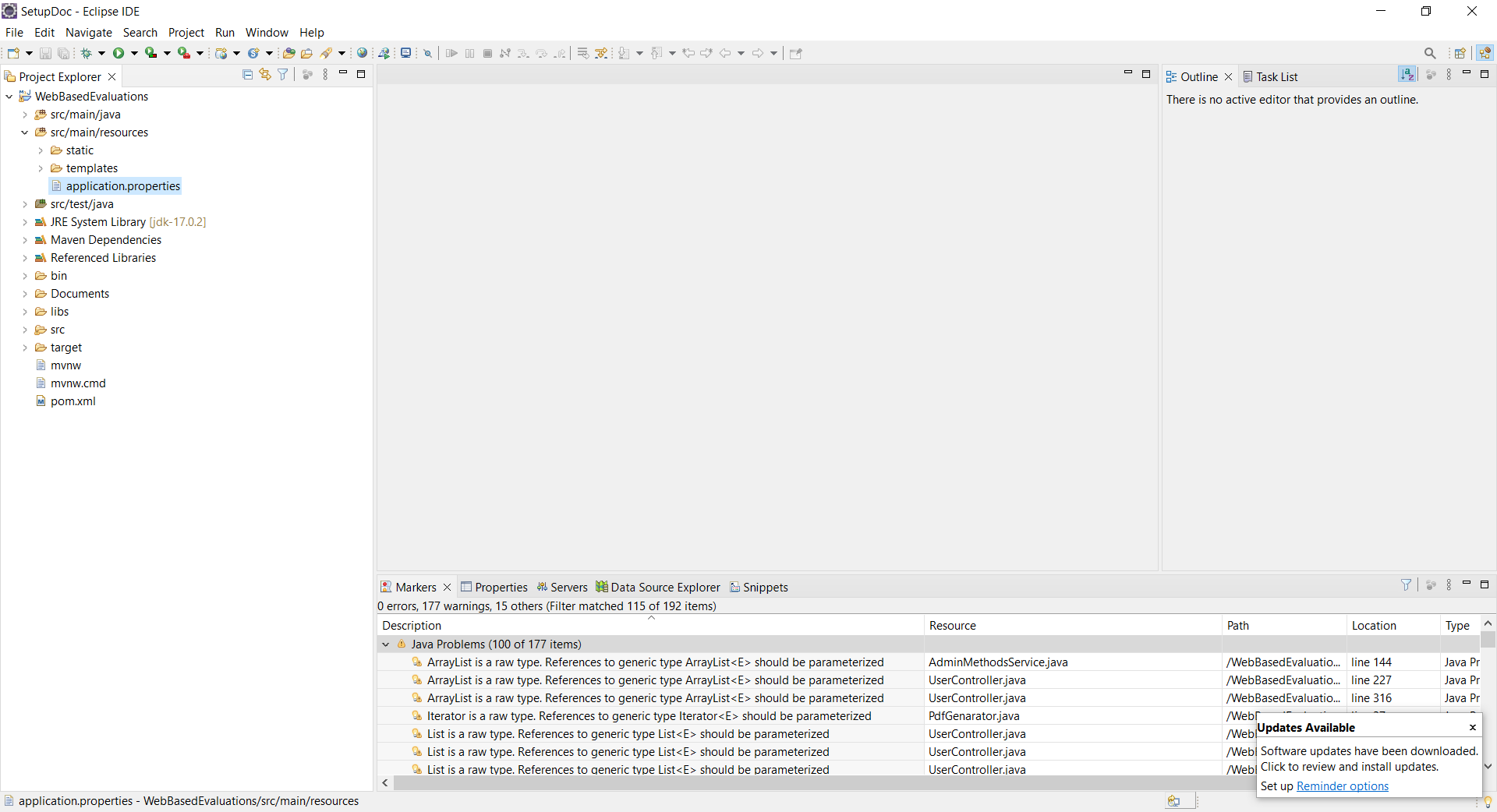


1. Under the Project folder, find the **libs** folder and select both **jcommon-1.0.23.jar** and **jfreechart-1.0.19.jar** and right click them. From there, go to **Build Path** and then **Add to Build Path** to resolve the issues.



## The Program’s Database

1. After setting up the MySQL database, you need to go into the Java project and go to **src/main/resources** folder (or into **src** then **main** then **resources)** to edit the **applications.properties** file.



1. Upon opening the file, which can be done by double clicking it the following lines must be changed:

Text

Description automatically generated

1. Set the spring.datasource.username and spring.datasource.password to your respected MySQL server’s username and password and save the changes by pressing “ctrl” and “s” at the same time or holding “ctrl” down and pressing “s”.
2. Set the spring.jpa.hibernate.ddl-auto setting to = create, =create-drop or =update

## Login Information

Use the following default usernames and passwords to traverse through the program:

The first has access to the Thangiah Manufacturing LLC company and the other to Test Company 2

The permissions can be shown as only the Thangiah LLC user can upload company1 users or groups and the Test co2 user can upload company2 users/groups. Both should be working.

[admin@gmail.com](mailto:admin@gmail.com) test

[admin2@gmail.com](mailto:admin2@gmail.com) test

The database will only contain a single super-superuser. The user has the email [admin@gmail.com](mailto:admin@gmail.com), and admin has “ADMIN” privileges. The “ADMIN” privilege is one that grants the ability to add all sorts of users with a variation of five types of roles to choose from: “ADMIN”, “EVAL\_ADMIN”, “EVALUATOR”, “EVALUATOR\_EVEL”, and “USER”. The five privilege types have access to different things as noted in the User Manual. In order to take full advantage of the program, the administrative user will need to provide other users, beginning with an admin for each department. Such details are also covered in the user manual.

If this does not work make sure that you drop the old schema and have the spring.jpa.hibernate.ddl-auto set to update as sometimes the automatic dropping of tables with create/create-drop will not work correctly after changes have been made to the tables in the java code.

If several “errors” pop up says XX tables doesn’t exist they can be ignored as this happens when create-drop is enabled, the “errors” do not have any effect.

## Continued Maintenance

Ensure files are uploaded to the system in this order:

Company > Roles > Users