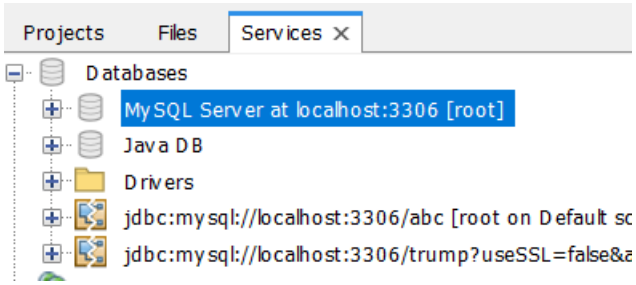
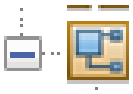
Secure Programming Assignment 2 Checklist

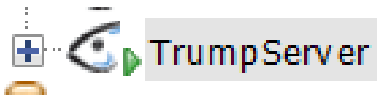
1. **MySQL**
    a. Check no other version of MySQL is running on your system. You can use existing installs but ensure the **root password** is also **root**.
    b. Use the default port (**3306**) when installing and only install the server only – no need for Workbench. Be sure to set up the root account with root as password.
    c. Check that no other instances of MySQL are running from previous modules/ labs.
    d. Check that MySQL is running as a service on your OS.
    e. In Netbeans, in the Services tab, ensure that MySQL connected. You should see [root] as in the image below:



    f. Check the parameters of the JDBC driver are correct – useSSL=false and allowPublicKeyRetrieval=True will allow you to send requests in plain text.
    g. Ensure the driver is connected. In the image above, the driver is disconnected because there is a break-line in the icon. The image below denotes the driver is connected.



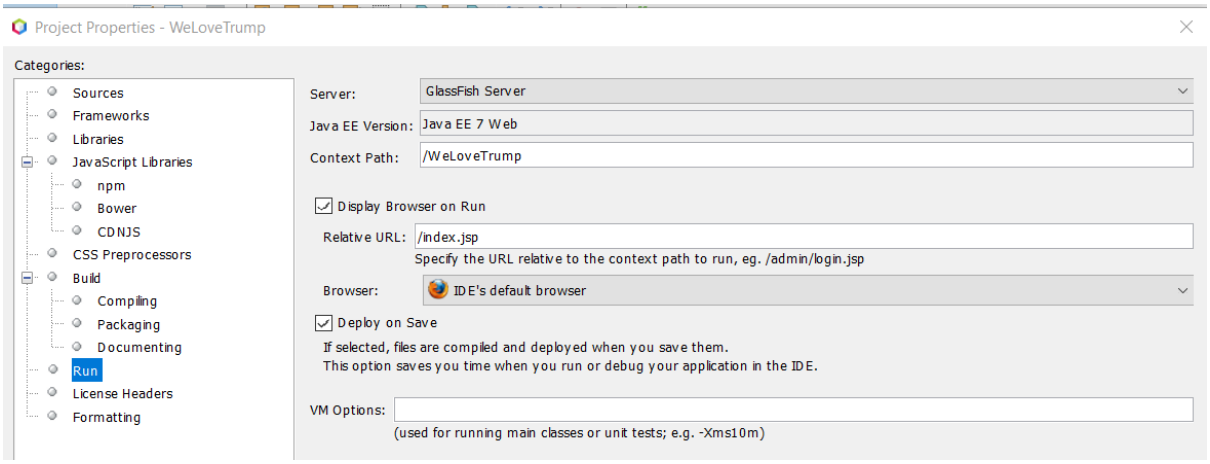
2. **Glassfish**
    a. If Glassfish does not run with JDK 11, you can download JDK version 8. You may have to set up a free account on Oracle to do so.
    b. Use the default settings when adding the Glassfish server to Netbeans.
    c. Make sure your Glasshfish server is started. There should be a green icon beside the name as in the image below:



3. General Errors:

a. *Javax.servlet does not exist*: In your project pane (Netbeans), right-click on the "libraries" node and choose "Add Library". Choose the Java EE 8 API Library. This should fix this bug.

b. If the application fails to open when you run it, make sure the application is set to display in browser on execution. This is set by default, but in case you've turned it off inadvertently, check the following: Right-click on the project, go to properties > run. Your settings should look like the screenshot below ("Display Browser on Run" checkbox needs to be checked):



c. Debugging: If you have checked your configuration settings and you are still getting errors (particularly 404 or 500 error pages), then you may have to debug your code. Please see below a couple of useful tutorials on debugging below.

You will have to set breakpoints in the code where you want to code to debug from. For example, if you are having problems when sending a request from the running application (e.g., trying to login or sending a message), then you could check the connection to the DB. You would set breakpoints in the **DBConnect.java** file just before the connection is made (see tutorials on how to do this). You would then step through the code in Netbeans and check the values of the parameters at each step (bottom window). You will be looking for problems with the connection to the MySQL connection (e.g., null values returning). If you reach an SQLException, look up what it means as this will give you a clue as to where the problem is.

Some Tutorials on debugging:

- https://medium.com/@teguhteja/how-to-debugging-in-netbeans-java-c3087d9e2f6c
- https://www.youtube.com/watch?v=IzUwQcAKvkY