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Politecnico Di Milano

Computer Science

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Installation Guide

We followed Prof. Miglierina guide (can be found [here](#))

What you need to download:

- 1) We used JAVA 7 , downloadable [here](#)
- 2) Server used for The system is Glassfish 4.1 , downloadable [here](#)
- 3) For the Database , SQL is needed, downloadable [here](#)
- 4) jdbc connector , downloadable [here](#)

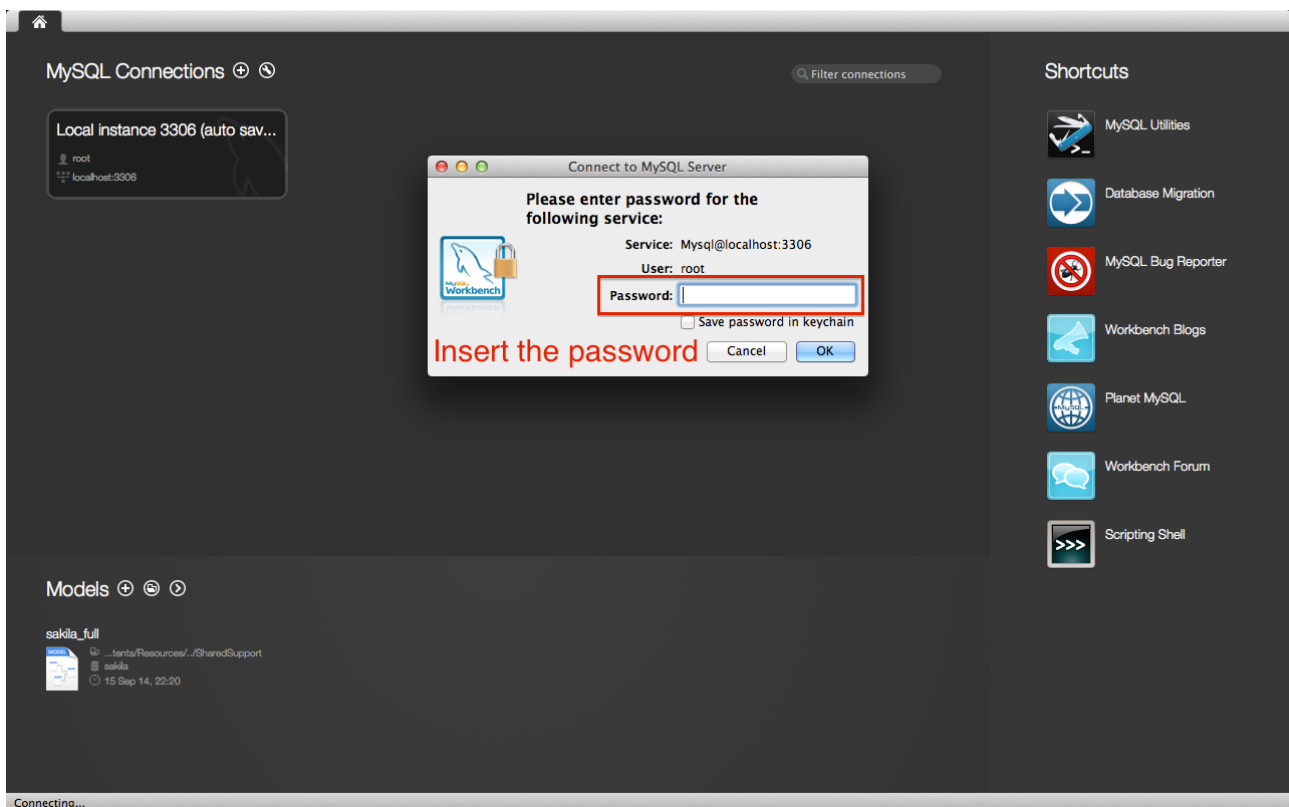
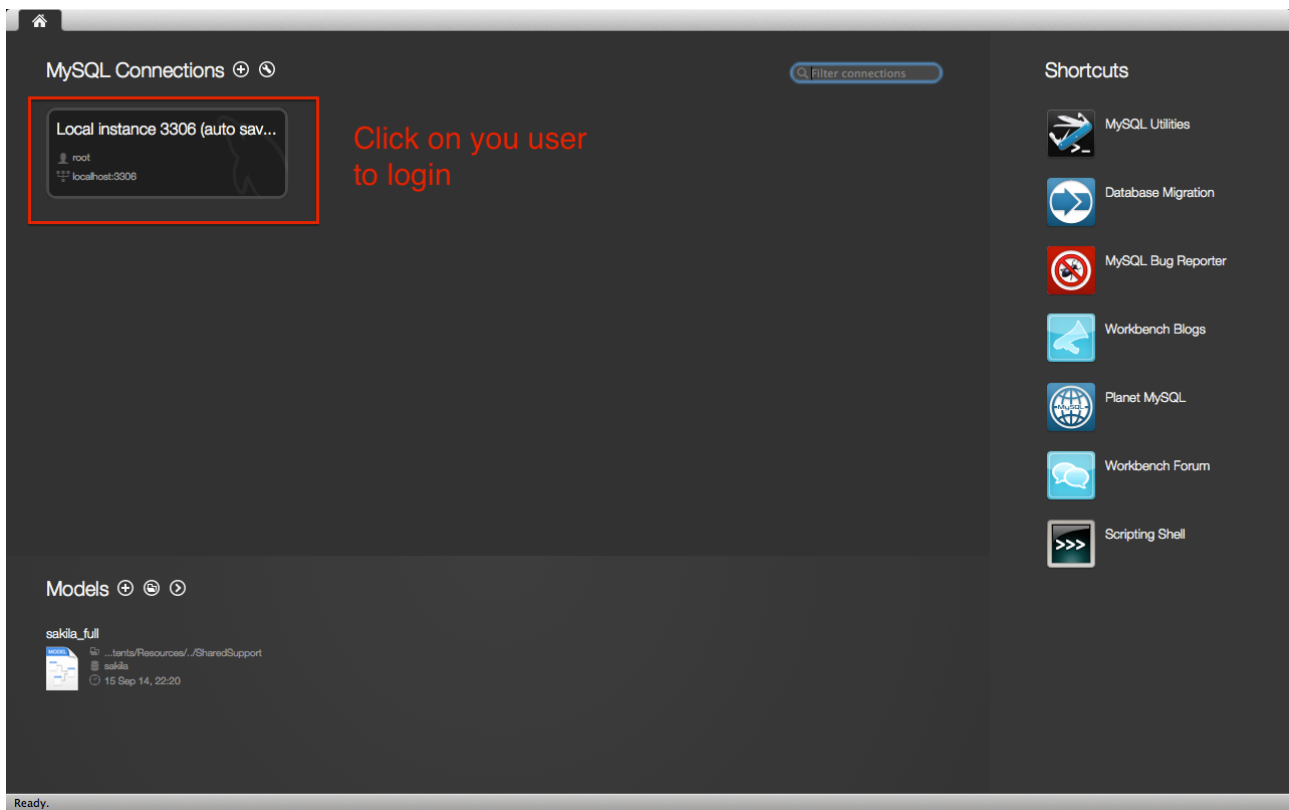
Instructions

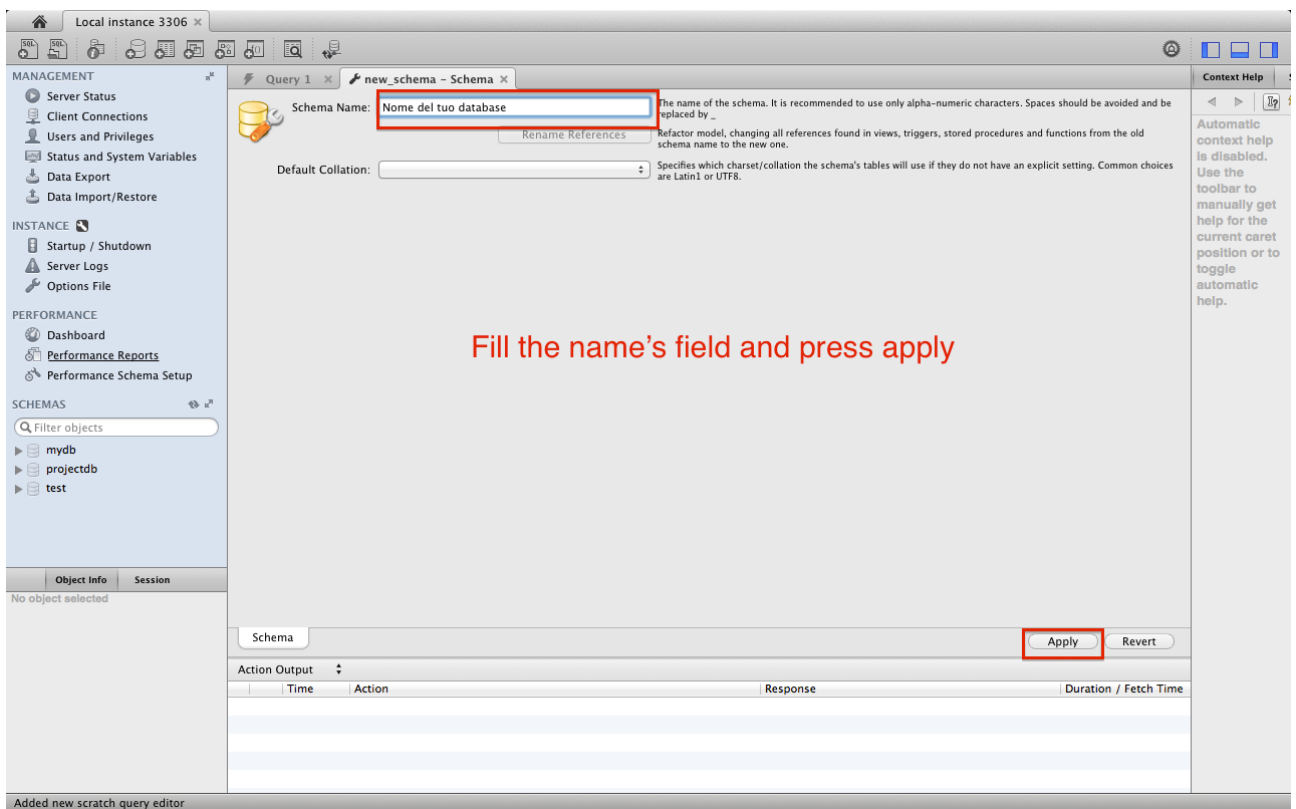
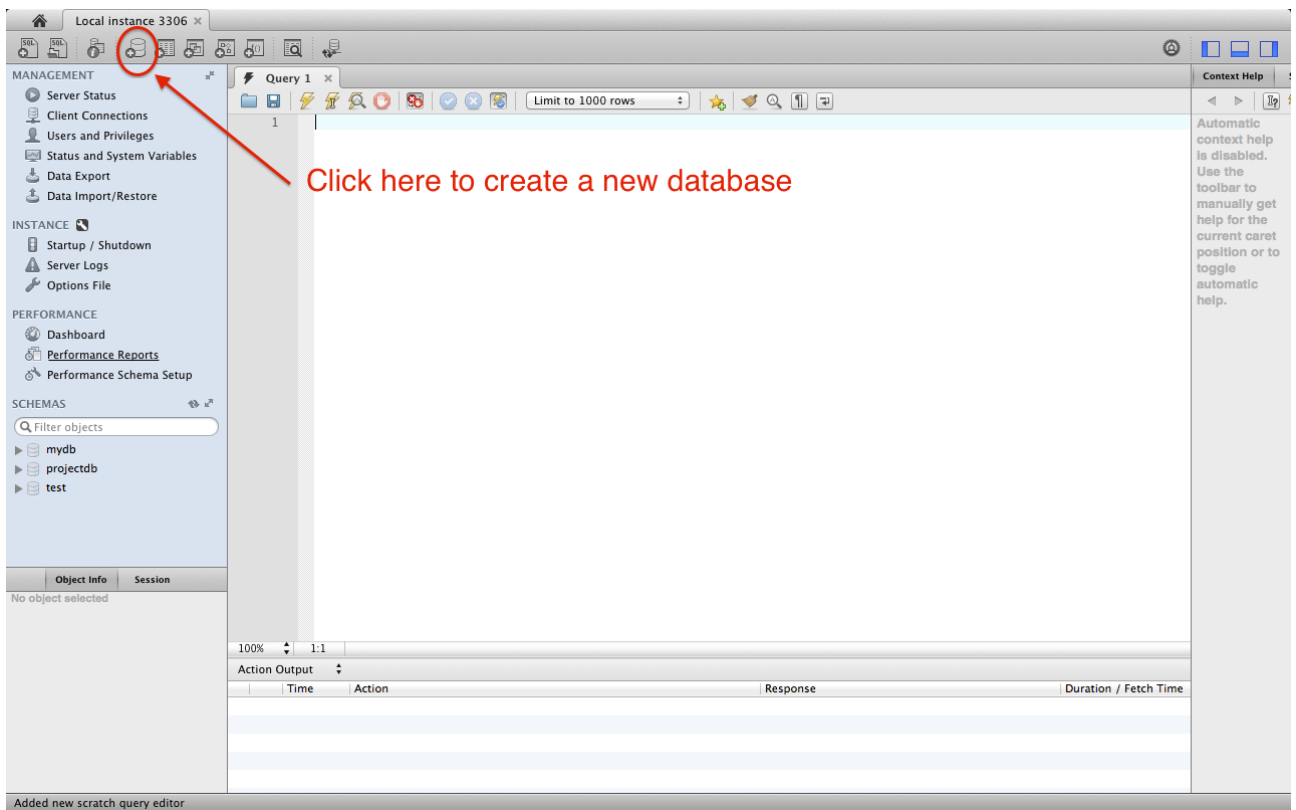
- **Db installation and creation**

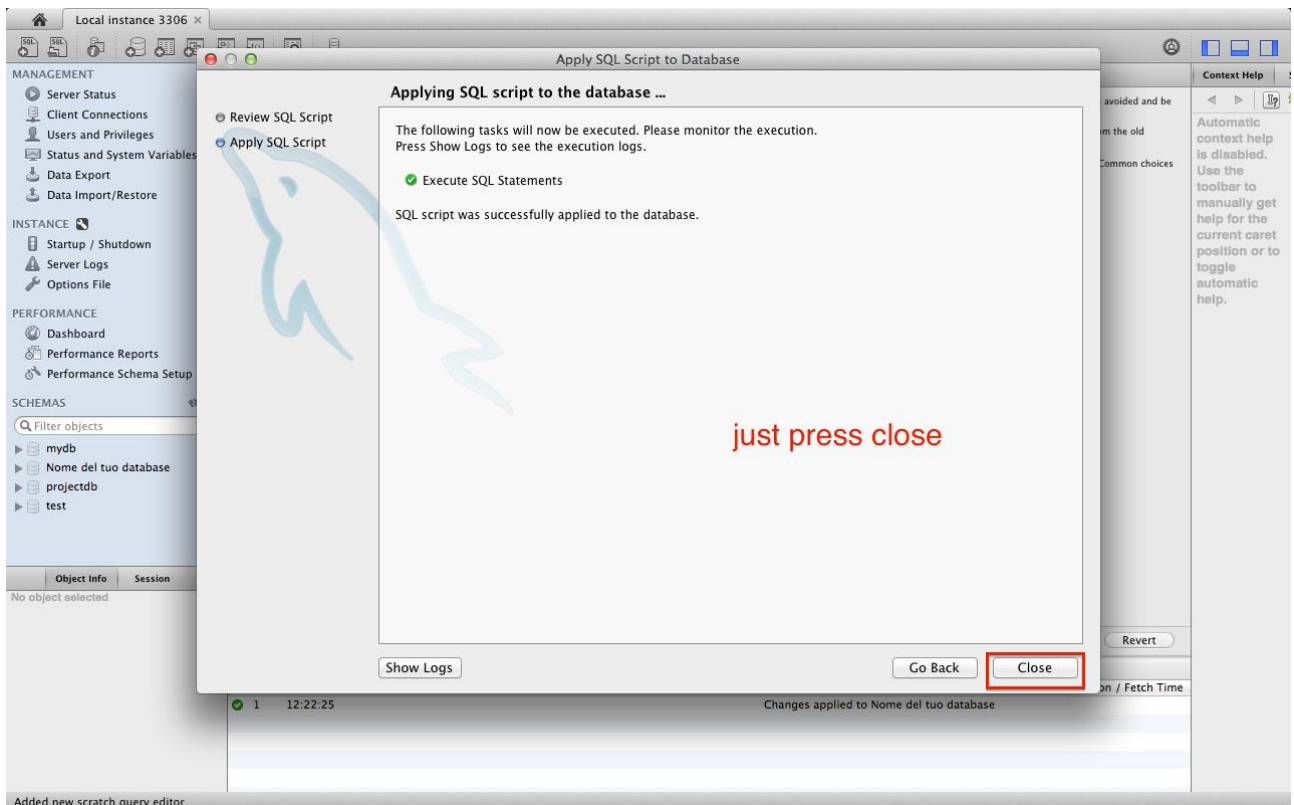
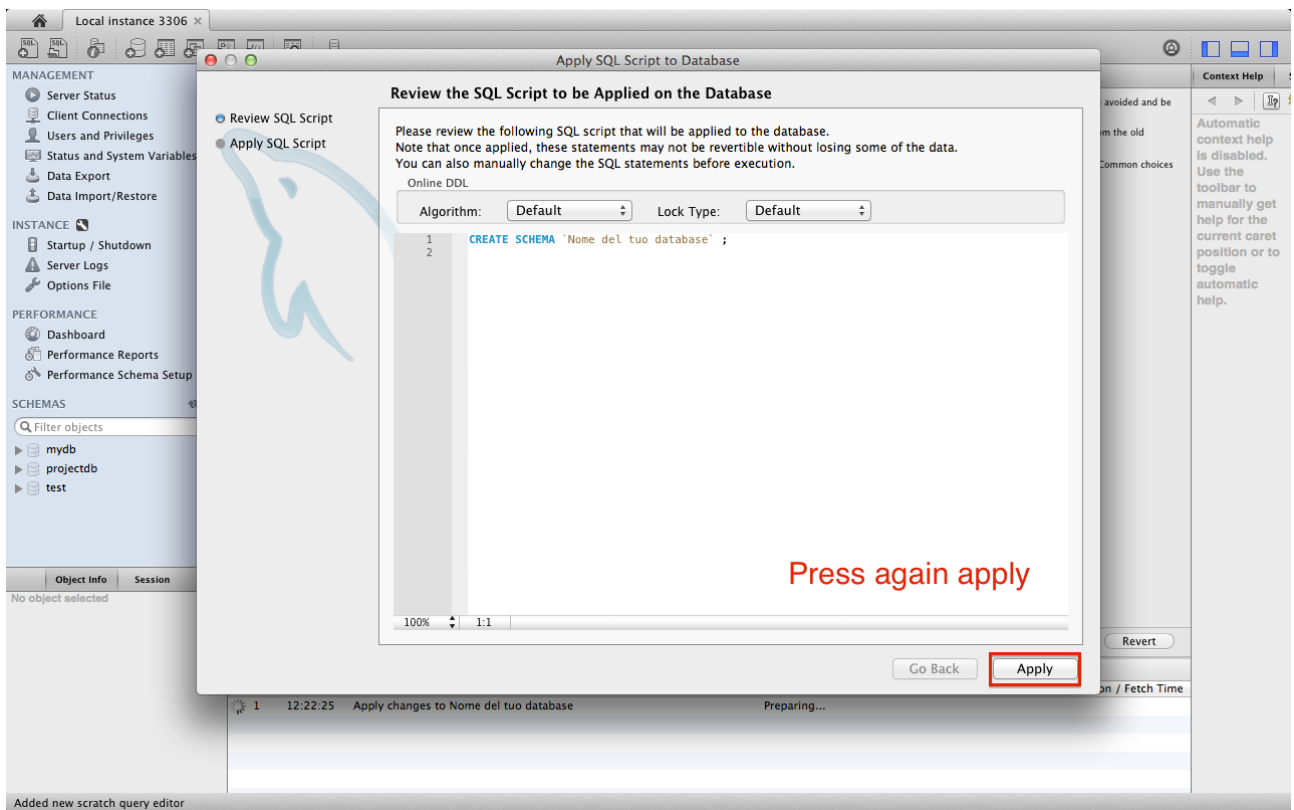
After the installation of SQL workbench open it. click on “+” and create new connection

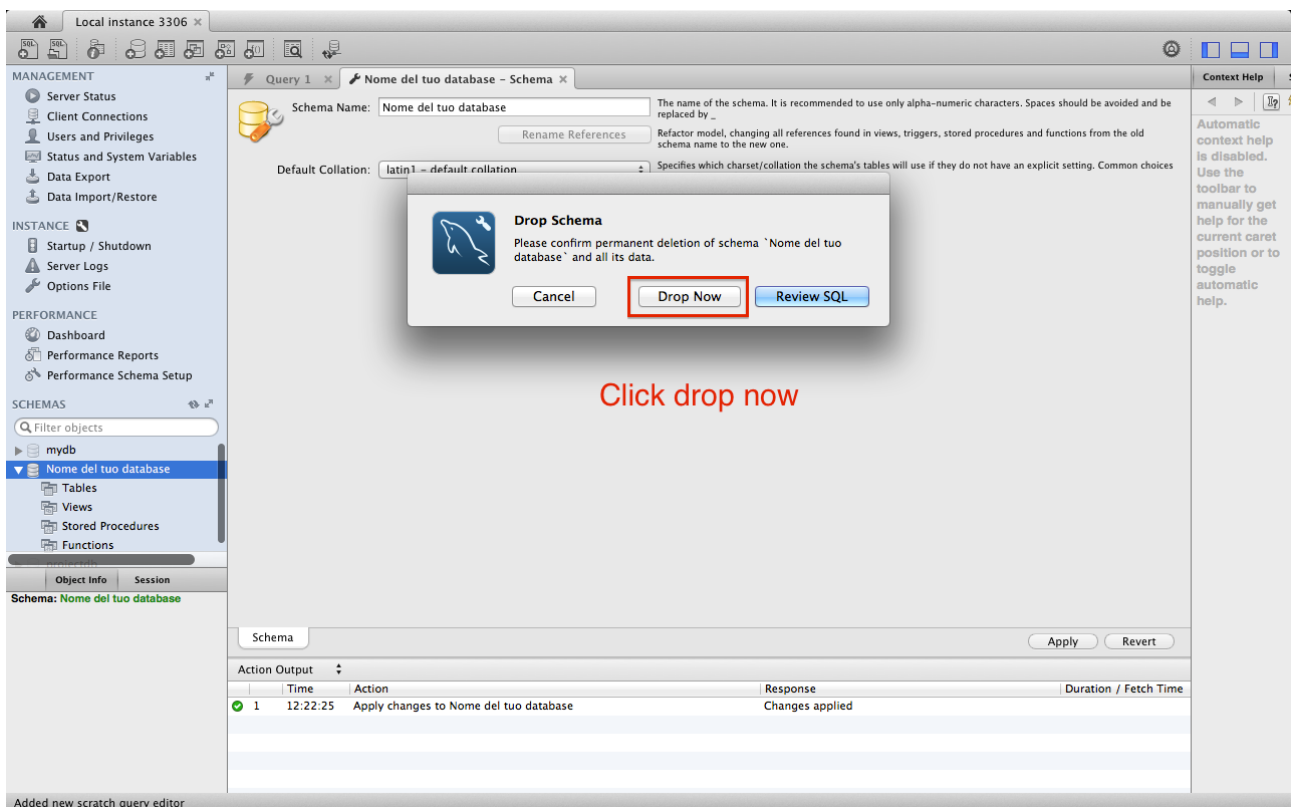
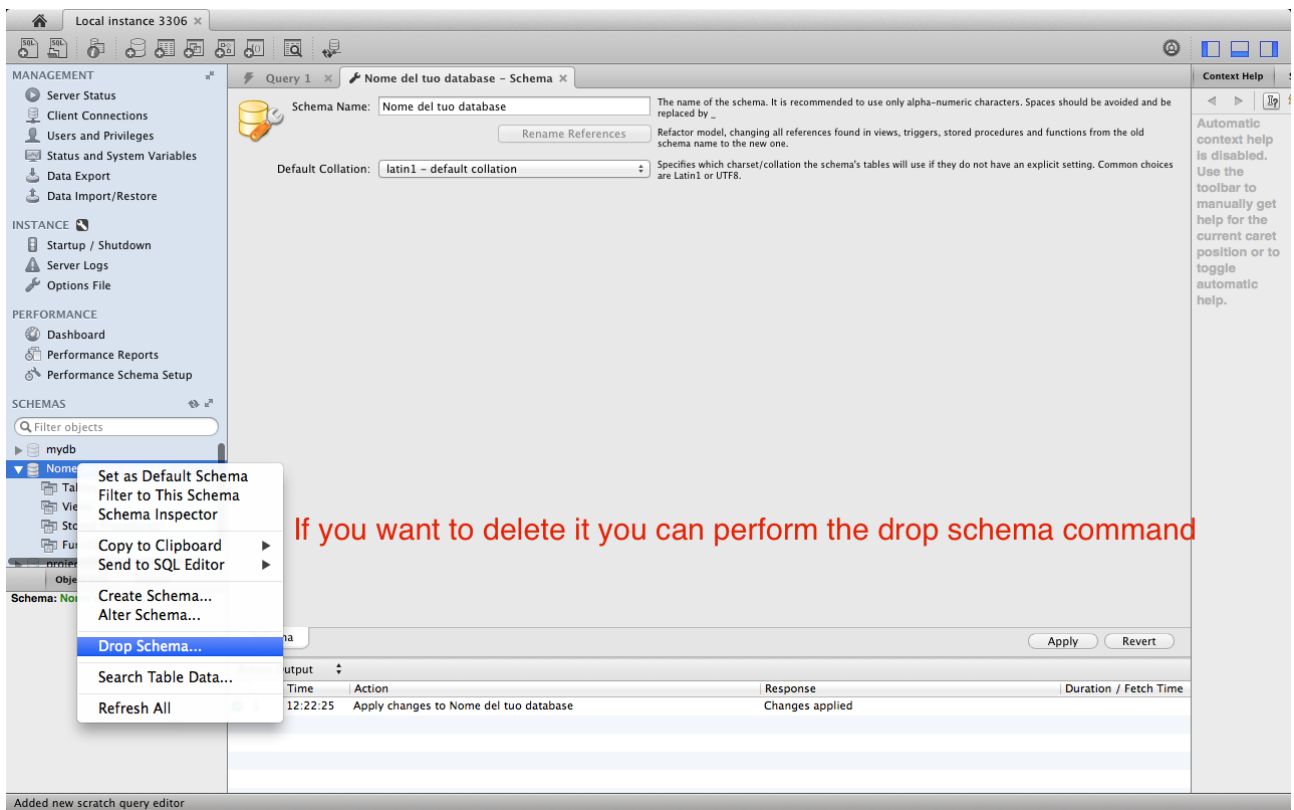
The screenshot shows the 'Setup New Connection' dialog box in SQL Workbench. The dialog has a title bar with a minus, maximize, and close button. Inside, there are several fields and buttons:

- Connection Name:** A text field with a placeholder 'Type a name for the connection'.
- Connection Method:** A dropdown menu showing 'Standard (TCP/IP)' with a placeholder 'Method to use to connect to the RDBMS'.
- Parameters:** A tabbed interface with 'Parameters', 'SSL', and 'Advanced' tabs. The 'Parameters' tab is active.
- Hostname:** A text field containing '127.0.0.1' with a placeholder 'Name or IP address of the server host. - TCP/IP port.'.
- Port:** A text field containing '3306'.
- Username:** A text field containing 'root' with a placeholder 'Name of the user to connect with.'.
- Password:** A text field with a placeholder 'The user's password. Will be requested later if it's not set.' and two buttons: 'Store in Vault ...' and 'Clear'.
- Default Schema:** A text field with a placeholder 'The schema to use as default schema. Leave blank to select it later.'.
- Buttons:** At the bottom, there are four buttons: 'Configure Server Management...', 'Test Connection', 'Cancel', and 'OK'.









• Glassfish Installation

Install downloaded glassfish 4.1 then go to “%Glassfish directory%/bin”, right click asadmin.bat file and select “run as administrator”. If you are using UNIX Based OS just execute the “asadmin.sh” file. Then type start-domain and press enter

• Install MySQL Java Connector

The MySQL Java Connector is needed to make the Glassfish Server communicate with the MySQL .copy provided connector into “%Glassfish Folder%/Glassfish/lib”.

• Connection Pool

Start your browser and go to <http://localhost:4848/>, then go to JDBC -> JDBC Connection pool
use this guide to create connection Pool:

You are now ready to create JDBC Connection Pools and JDBC Resources.

Creating a Connection Pool

1. In the GlassFish Administration Console, using the navigation tree navigate to **Resources**, **JDBC**, **Connection Pools**.
2. In the **JDBC Connection Pools** frame click **New**. You will enter a two step wizard.
3. In the **Name** field under **General Settings** enter the name for the connection pool, for example enter `MySQLConnPool`.
4. In the **Resource Type** field, select `javax.sql.DataSource` from the drop-down listbox.
5. In the **Database Vendor** field, select `MySQL` from the drop-down listbox. Click **Next** to go to the next page of the wizard.
6. You can accept the default settings for General Settings, Pool Settings and Transactions for this example. Scroll down to Additional Properties.
7. In Additional Properties you will need to ensure the following properties are set:
 - **ServerName** - The server to connect to. For local testing this will be `localhost`.
 - **User** - The user name with which to connect to MySQL.
 - **Password** - The corresponding password for the user.
 - **DatabaseName** - The database to connect to, for example the sample MySQL database `World`.
8. Click **Finish** to exit the wizard. You will be taken to the **JDBC Connection Pools** page where all current connection pools, including the one you just created, will be displayed.
9. In the **JDBC Connection Pools** frame click on the connection pool you just created. Here, you can review and edit information about the connection pool. Because Connector/J does not support optimized validation queries, go to the **Advanced** tab, and under Connection Validation, configure the following settings:
 - **Connection Validation** - select **Required**.
 - **Validation Method** - select **table** from the drop-down menu.
 - **Table Name** - enter `DUAL`.
10. To test your connection pool click the **Ping** button at the top of the frame. A message will be displayed confirming correct operation or otherwise. If an error message is received recheck the previous steps, and ensure that MySQL Connector/J has been correctly copied into the previously specified location.

!PLEASE READ: FOR RESOURCE NAME USE “jdbc/mydb”!

Now that you have created a connection pool you will also need to create a JDBC Resource (data source) for use by your application.

Creating a JDBC Resource

Your Java application will usually reference a data source object to establish a connection with the database. This needs to be created first using the following procedure.

- Using the navigation tree in the GlassFish Administration Console, navigate to **Resources, JDBC, JDBC Resources**. A list of resources will be displayed in the **JDBC Resources** frame.
- Click **New**. The **New JDBC Resource** frame will be displayed.
- In the **JNDI Name** field, enter the JNDI name that will be used to access this resource, for example enter `jdbc/MySQLDataSource`.
- In the **Pool Name** field, select a connection pool you want this resource to use from the drop-down listbox.
- Optionally, you can enter a description into the **Description** field.
- Additional properties can be added if required.
- Click **OK** to create the new JDBC resource. The **JDBC Resources** frame will list all available JDBC Resources.

• Jdbc Realm

In Glassfish go to Configuration -> server-config -> Security -> Realms -> NEW and copy this configuration

NOTICE: Use the realm name provided

Realm Name: jdbcRealmProject	
Class Name: com.sun.enterprise.security.auth.realm.jdbc.JDBCRealm	
Fill the fields as the slide	
Properties specific to this Class	
JAAS Context: *	<input type="text" value="jdbcRealm"/> Identifier for the login module to use for this realm
JNDI: *	<input type="text" value="jdbc/mydb"/> JNDI name of the JDBC resource used by this realm
User Table: *	<input type="text" value="users"/> Name of the database table that contains the list of authorized
User Name Column: *	<input type="text" value="email"/> Name of the column in the user table that contains the list of u
Password Column: *	<input type="text" value="password"/> Name of the column in the user table that contains the user p
Group Table: *	<input type="text" value="users"/> Name of the database table that contains the list of groups for
Group Table User Name Column:	<input type="text" value="email"/> Name of the column in the user group table that contains the l
Group Name Column: *	<input type="text" value="groupname"/> Name of the column in the group table that contains the list of
Password Encryption Algorithm: *	<input type="text" value="SHA-256"/> This denotes the algorithm for encrypting the passwords in the
Assign Groups:	<input type="text"/> Comma-separated list of group names
Database User:	<input type="text"/> Specify the database user name in the realm instead of the JD
Database Password:	<input type="text"/> Specify the database password in the realm instead of the JD
Digest Algorithm:	<input type="text"/> Digest algorithm (default is SHA-256); note that the default w
Encoding:	<input type="text"/> Encoding (allowed values are Hex and Base64)
Charset:	<input type="text" value="UTF-8"/> Character set for the digest algorithm

- RESTART GLASSFISH with “restart-domain” command
- Final Deployment

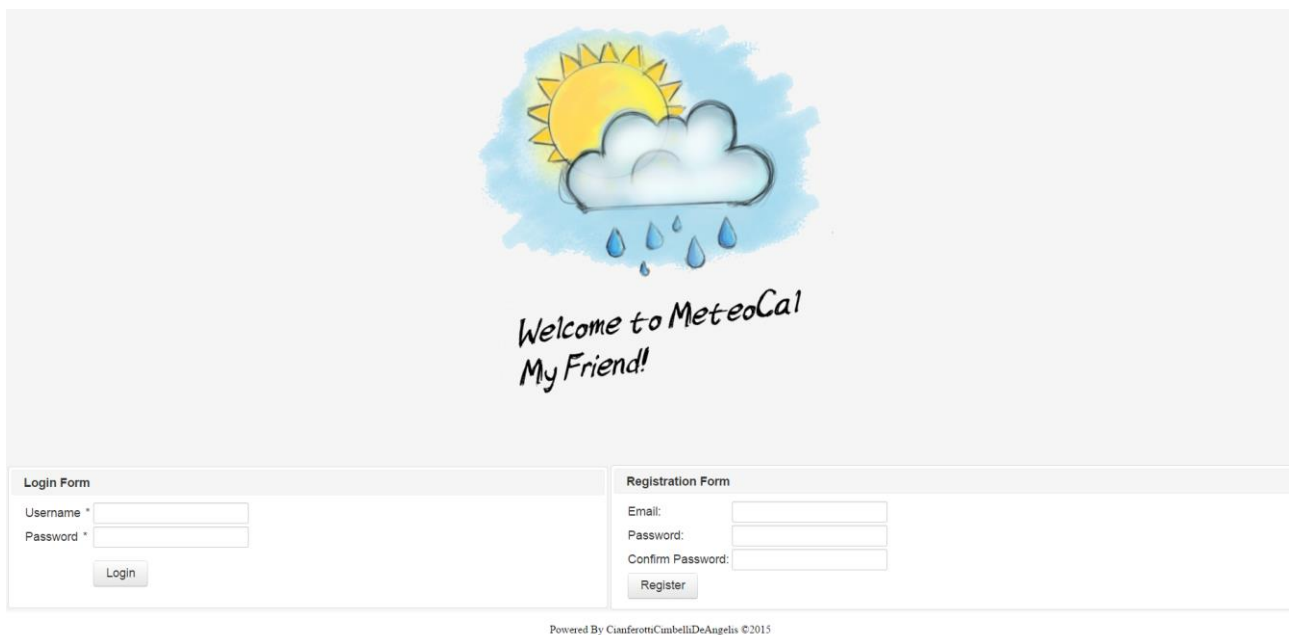
Download the “meteocal.war” file from [here](#) and go to <http://localhost:4848/> to access the Glassfish Server Admin Console and click on “Deploy an Application”, select the war file just downloaded

- RESTART GLASSFISH with “restart-domain” command
- Application Start

go to <http://localhost:4848/> , go to application , select the deployment then click “launch”.

In the address bar of your browser type <http://localhost:8080/MeteoCalv1>” and enjoy.

You can also use netbeans IDE and clone project from our Repository.



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FOR EVERY DOUBT OR PROBLEM WITH CONFIGURATION PLEASE CONTACT US

Thanks,

Alessandro De Angelis,Alessandro Cianferotti,Alessandro Cimbelli