

Task 4: Connect to MySQL Database and Design the Homepage in NetBeans IDE

1. Connect to MySQL Database

Step 1: Install MySQL JDBC Driver

1. Download MySQL Connector/J:

- Go to [MySQL Connector/J Download Page](#).
- Select the **Platform Independent** version and download the .jar file (e.g., mysql-connector-java-8.0.30.jar).

2. Add the Driver to NetBeans:

- In your NetBeans project, right-click the **Libraries** folder (under your project).
- Select **Add JAR/Folder** and browse to the downloaded .jar file.
- Click **Open** to add it to your project.

Step 2: Create a Database Connection Class

1. Create a Java Class:

- Right-click your project's source package > **New > Java Class**.
- Name it DatabaseConnection.java.

2. Add Connection Code:

```
java
```

```
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```

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class DatabaseConnection {
    private static final String URL = "jdbc:mysql://localhost:3306/your_database_name";
    private static final String USER = "your_mysql_username";
    private static final String PASSWORD = "your_mysql_password";

    public static Connection getConnection() {
        Connection connection = null;
        try {
            // Load the MySQL JDBC driver
            Class.forName("com.mysql.cj.jdbc.Driver");
            // Establish the connection
            connection = DriverManager.getConnection(URL, USER, PASSWORD);
            System.out.println("Connected to MySQL database!");
        } catch (ClassNotFoundException | SQLException e) {
            System.err.println("Connection error: " + e.getMessage());
        }
        return connection;
    }
}
```

```
// Optional: Test the connection  
public static void main(String[] args) {  
    getConnection();  
}
```

- Replace `your_database_name`, `your_mysql_username`, and `your_mysql_password` with your MySQL credentials.

Step 3: Test the Connection

- Run the `DatabaseConnection` class.
 - If successful, you'll see "Connected to MySQL database!" in the output. If not, check your MySQL server status and credentials.
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2. Design the Homepage

Step 1: Create a New JFrame Form

1. Right-click Source Packages > New > JFrame Form.
2. Name it Homepage and click **Finish**.

Step 2: Design the Interface

- **Title Label:**
 - Drag a **JLabel** to the top. Set text to "**Welcome to the Homepage**".
 - Customize font (e.g., **Arial, Bold, 20px**) and center alignment.
- **Navigation Buttons:**
 - Add **JButtons** for "View Profile", "Settings", and "Logout".
 - Name them `viewProfileButton`, `settingsButton`, and `logoutButton` in the *Properties* window.
 - Adjust button colors or fonts (optional).
- **User Greeting:**
 - Add a **JLabel** with text like "**Hello, User!**" below the title.

Step 3: Customize Layout

1. **Use GroupLayout:**
 - Select the form background and use **GroupLayout** for alignment.
 - Arrange components vertically:

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Title Label
User Greeting

Buttons (View Profile, Settings, Logout)

2. Adjust Sizing:

- Set button widths to **150px** for consistency.
- Add padding between components using the layout manager.

Step 4: Add Action Listeners (Optional)

- For example, to handle the **Logout** button:
 1. Double-click the logoutButton in Design View.
 2. Add code to close the homepage and return to the login form:

```
java
```

Copy

```
private void logoutButtonActionPerformed(java.awt.event.ActionEvent evt) {  
    this.dispose(); // Close the homepage  
    new LoginForm().setVisible(true); // Reopen the login form  
}
```

3. Test the Homepage

- Run the project (**Shift + F6**).
- Verify the homepage opens with all components aligned:

The image you are requesting does not exist or is no longer available.

imgur.com

4. Finalize & Save

- **Save** all files (**Ctrl + S**).
- **Document** your steps (e.g., how to connect to MySQL, button functionalities).

Troubleshooting Tips

- **MySQL Connection Fails:**
 - Ensure MySQL server is running (use XAMPP/WAMP/MAMP or MySQL Workbench).

- Verify the database name, username, and password in DatabaseConnection.java.
 - **Driver Not Found:**
 - Re-add the MySQL Connector/J .jar file to Libraries.
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Next Steps

- Add **database operations** (e.g., validate login credentials using SQL queries).
- Design more pages (e.g., Profile, Settings) and link them via buttons.