

A two-tier web app that accepts a product ID and fetches the information based on the product ID from a database.

Html form that accepts input from a user:

```
5 <!DOCTYPE HTML>
6 <html>
7 <head>
8 <title>Assignment #1 - Two-Tier Web DB Apps</title>
9 <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
10 </head>
11 <body>
12 <form name="productForm" action="Product.jsp" method="POST">
13 <table>
14 <tbody>
15 <tr>
16 <td>Enter Product ID:</td>
17 <td><input type="text" name="product_id" value="" size=25></td>
18 </tr>
19 </tbody>
20 </table>
21
22 <input type="reset" value="Clear" id="clear"> <input
23 type="submit" value="Submit" id="submit">
24 </form>
25 </body>
26 </html>
```

Code for the .jsp file that will connect to the database and return a query result based on the user's input and displays result in an html table:

```
6 <%@page language="java" contentType="text/html; charset=ISO-8859-1"
7     pageEncoding="ISO-8859-1"%>
8 <%@page import="java.sql.*"%>
9 <html>
10 <head>
11 <title>MySql JSP Demo</title>
12 <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
13 </head>
14 <body>
15 <%
16     String dbUrl = "jdbc:mysql://localhost:3306/northwind?useSSL=false";
17     String username = "root";
18     String password = "";
19     Connection connection;
20     try {
21         // try to load the JDBC MySQL driver
22         Class.forName("com.mysql.jdbc.Driver");
23         out.print("Trying to connect to " + dbUrl + "<br /><br />");
24         //try to connect to database using the above Strings
25         connection = DriverManager.getConnection(dbUrl, username, password);
26         out.print("Connected to DB successfully <br /><br />");
27     } catch (Exception e) {
28         out.print("Could not connect to target DB<br /><br />" + e.toString());
29     }
30
31     connection = DriverManager.getConnection(dbUrl, username, password);
32     Statement stmt = connection.createStatement();
33
34     String sql = "SELECT id, product_name, list_price FROM products WHERE id = "
35         + request.getParameter("product_id");
36     ResultSet rs = stmt.executeQuery(sql);
37
38     while (rs.next()) {
39         String id = rs.getString("id");
40         String productName = rs.getString("product_name");
41         String list_price = rs.getString("list_price");
42     }
43 %>
```

```
43 <table border="1">
44     <tbody>
45         <tr>
46             <td>Product ID</td>
47             <td>Product Name</td>
48             <td>Price</td>
49         </tr>
50         <tr>
51             <td><%=id%></td>
52             <td><%=productName%></td>
53             <td><%=list_price%></td>
54         </tr>
55     <%
56     }
57     %>
58 </tbody>
59 </table>
60 <%
61     rs.close();
62     stmt.close();
63     connection.close();
64 %>
65 </body>
66 </html>
67
```

Input/Output of a application running:

Input:

Assignment #1 - Two-Tier Web DB Apps

http://localhost:9080/Assignment\_1\_TwoTierWebApps/index.html

Enter Product ID:

Output:

MySql JSP Demo

http://localhost:9080/Assignment\_1\_TwoTierWebApps/Product.jsp

Trying to connect to jdbc:mysql://localhost:3306/northwind?useSSL=false

Connected to DB successfully

| Product ID | Product Name                | Price   |
|------------|-----------------------------|---------|
| 40         | Northwind Traders Crab Meat | 18.4000 |

Input:

Assignment #1 - Two-Tier Web DB Apps

http://localhost:9080/Assignment\_1\_TwoTierWebApps/index.html

Enter Product ID:

Output:

MySql JSP Demo

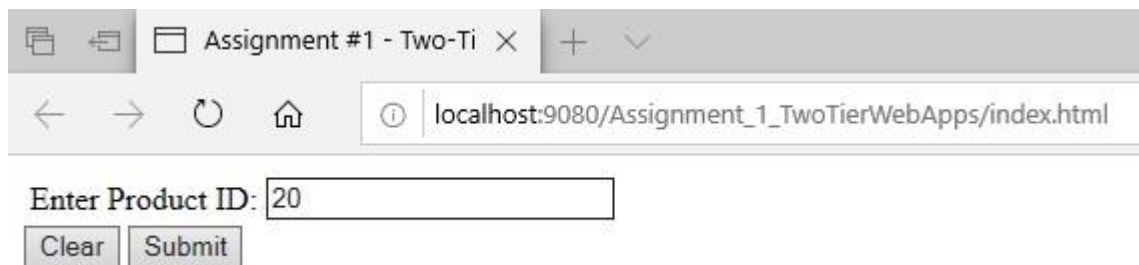
http://localhost:9080/Assignment\_1\_TwoTierWebApps/Product.jsp

Trying to connect to jdbc:mysql://localhost:3306/northwind?useSSL=false

Connected to DB successfully

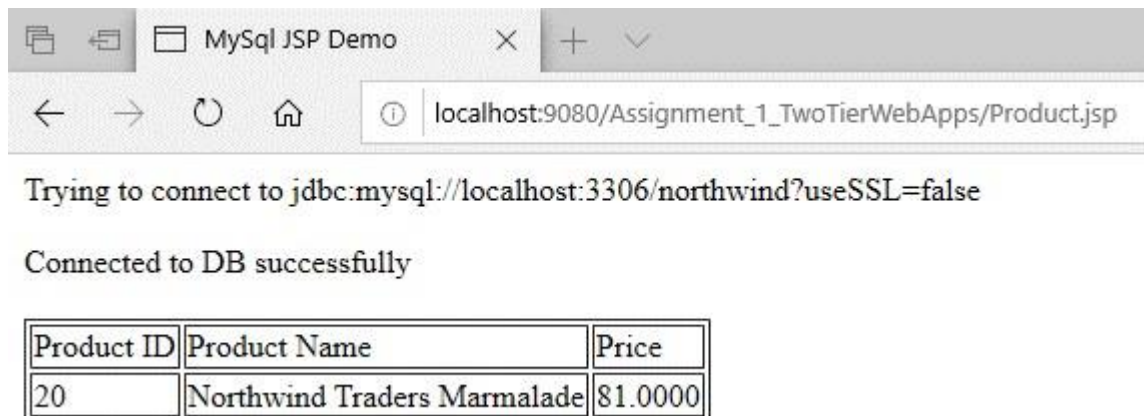
| Product ID | Product Name                      | Price   |
|------------|-----------------------------------|---------|
| 4          | Northwind Traders Cajun Seasoning | 22.0000 |

Input from IE:



The screenshot shows an Internet Explorer browser window with the title bar 'Assignment #1 - Two-Ti'. The address bar displays 'localhost:9080/Assignment\_1\_TwoTierWebApps/index.html'. Below the address bar, there is a form with the label 'Enter Product ID:' followed by a text input field containing the number '20'. At the bottom of the form are two buttons: 'Clear' and 'Submit'.

Output from IE:



The screenshot shows an Internet Explorer browser window with the title bar 'MySQL JSP Demo'. The address bar displays 'localhost:9080/Assignment\_1\_TwoTierWebApps/Product.jsp'. The main content area displays the following text:

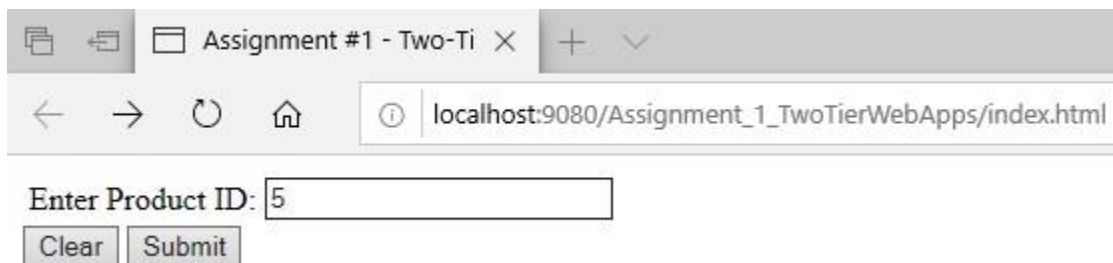
Trying to connect to jdbc:mysql://localhost:3306/northwind?useSSL=false

Connected to DB successfully

Below the text is a table with three columns: Product ID, Product Name, and Price. The table contains one data row.

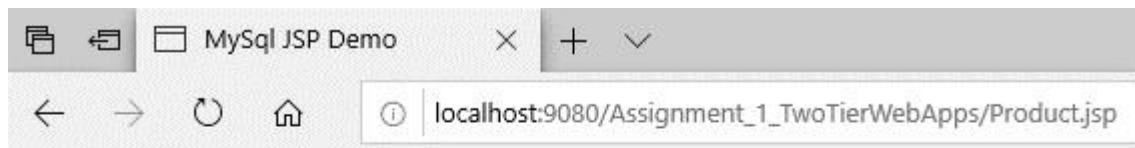
| Product ID | Product Name                | Price   |
|------------|-----------------------------|---------|
| 20         | Northwind Traders Marmalade | 81.0000 |

Input from IE:



The screenshot shows an Internet Explorer browser window with the title bar 'Assignment #1 - Two-Ti'. The address bar displays 'localhost:9080/Assignment\_1\_TwoTierWebApps/index.html'. Below the address bar, there is a form with the label 'Enter Product ID:' followed by a text input field containing the number '5'. At the bottom of the form are two buttons: 'Clear' and 'Submit'.

Output from IE:



Trying to connect to jdbc:mysql://localhost:3306/northwind?useSSL=false

Connected to DB successfully

| Product ID | Product Name                | Price   |
|------------|-----------------------------|---------|
| 5          | Northwind Traders Olive Oil | 21.3500 |