

I had pushed the Code to git below is the URL link

<https://github.com/R-NandaKumar/Java-Fsd>

PRODUCTLOOKUPSERVLET.JAVA

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/ProductLookupServlet")
public class ProductLookupServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    // JDBC connection parameters
    private static final String jdbcUrl =
"jdbc:mysql://localhost:3306/MPHASISNEWDB1";
    private static final String dbUsername = "root";
```

```
private static final String dbPassword = "root123";

protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();

    // Get the product ID entered by the user
    String productId = request.getParameter("productId");

    // Initialize the JDBC connection
    Connection connection = null;

    try {
        // Establish a connection to the database
        connection = DriverManager.getConnection(jdbcUrl,
            dbUsername, dbPassword);

        // Prepare a SQL query to retrieve product details
        String sql = "SELECT * FROM products WHERE id = ?";
        PreparedStatement preparedStatement =
            connection.prepareStatement(sql);
        preparedStatement.setString(1, productId);
```

```
// Execute the query
ResultSet resultSet = preparedStatement.executeQuery();

// Check if a product was found
if (resultSet.next()) {
    String productName = resultSet.getString("name");
    String productDescription =
resultSet.getString("description");
    double productPrice = resultSet.getDouble("price");

    // Display product details
    out.println("<html><head><title>Product
Details</title></head><body>");
    out.println("<h1>Product Details</h1>");
    out.println("<p>Product ID: " + productId + "</p>");
    out.println("<p>Product Name: " + productName + "</p>");
    out.println("<p>Description: " + productDescription +
"</p>");
    out.println("<p>Price: $" + productPrice + "</p>");
    out.println("</body></html>");
} else {
    // Product not found

    out.println("<html><head><title>Error</title></head><body>");
    out.println("<h1>Product Not Found</h1>");
}
```

```

        out.println("<p>No product found for ID: " + productId +
"</p>");
        out.println("</body></html>");
    }
} catch (SQLException e) {
    // Handle database errors
    out.println("<html><head><title>Error</title></head><body>");
    out.println("<h1>Database Error</h1>");
    out.println("<p>Error: " + e.getMessage() + "</p>");
    out.println("</body></html>");
} finally {
    // Close the database connection
    if (connection != null) {
        try {
            connection.close();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}
}
}

```

product_lookup.html

<!DOCTYPE html>

<html>

<head>

<title>Product Lookup</title>

</head>

<body>

<h1>Product Lookup</h1>

<form action="ProductLookupServlet" method="post">

<label for="productId">Enter Product ID:</label>

<input type="text" id="productId" name="productId" required>

<input type="submit" value="Lookup Product">

</form>

</body>

</html>

MySql Query

The screenshot displays the MySQL Workbench interface. The SQL Editor contains the following query:

```
price DECIMAL(10, 2);
);
INSERT INTO products (name, price) VALUES ('Chocolate', 200);
INSERT INTO products (name, description, price) VALUES ('Bags', 'Daily_Usage', 100);
INSERT INTO products (name, description, price) VALUES ('FairView', 'Beauty_products', 66);
INSERT INTO products (name, description, price) VALUES ('Medicine', 'Health_Related', 34);
select * from products
```

The Results Grid shows the output of the query:

id	name	description	price
1	Chocolate		200.00
2	Bags	Daily_Usage	100.00
3	FairView	Beauty_products	66.00
4	Medicine	Health_Related	34.00

The Action Output pane shows the execution log:

Time	Action	Message	Duration / Fetch
4 23:00:35	INSERT INTO products (name, price) VALUES ('Chocolate', 200);	1 row(s) affected	0.015 sec
5 23:04:08	INSERT INTO products (name, description, price) VALUES ('Bags', 'Daily_Usage', 100);	1 row(s) affected	0.016 sec
6 23:04:12	INSERT INTO products (name, description, price) VALUES ('FairView', 'Beauty_products', 66);	1 row(s) affected	0.000 sec
7 23:04:15	INSERT INTO products (name, description, price) VALUES ('Medicine', 'Health_Related', 34);	1 row(s) affected	0.000 sec
8 23:04:48	select * from products LIMIT 0, 5000	4 row(s) returned	0.000 sec / 0.000 sec