**Ex No:9** **Three-Tier Application**

**Date : 17.03.2023**

**Aim:**

To write Three-Tier Application program for the give programs.

**9.**Create a database schema that contains a table called "orders" with the following columns:
1. order_id (int, primary key)
2.customer_name (varchar)
3.product_name (varchar)
4.quantity (int)
unit_price (double)

Write a JSP program that connects to the database using JDBC and retrieves the following information:
1. The total number of orders in the database.
2. The total revenue generated by all orders.
3. The average order value (total revenue divided by total number of orders).

Once you have retrieved this information, create a JSP page that displays this information in a table format

**Algorithm:**

Step1:Begin by creating a new database with a suitable name.

Step2:Create a new table called "orders" using the CREATE TABLE statement.

Step3:Define the columns of the "orders" table

Step4:Save the table in the database.

Step5:Load the JDBC driver using the Class.forName() method.

Step6:Use HTML and JSP tags to create a table..

Step7:Display the retrieved data in the table using the ResultSet.getString() and out.print()methods.

Step8:Close the ResultSet, Statement, and Connection objects.

**Program:**

```
<%@ page import="java.sql.*" %>

<%@ page contentType="text/html;charset=UTF-8" language="java" %>

<%

   Class.forName("com.mysql.jdbc.Driver");

   String url = "jdbc:mysql://localhost:3306/testjsp";

   String user = "root";
```

```
    String password = "";
    Connection conn = DriverManager.getConnection(url, user, password);
    Statement stmt = conn.createStatement();
    ResultSet rs = stmt.executeQuery("SELECT COUNT(*) AS total_orders, SUM(quantity *
unit_price) AS total_revenue FROM orders");
    rs.next();
    int total_orders = rs.getInt("total_orders");
    double total_revenue = rs.getDouble("total_revenue");
    double average_order_value = total_revenue / total_orders;
%>
<table>
    <tr>
        <th>Total number of orders</th>
        <td><%= total_orders %></td>
    </tr>
    <tr>
        <th>Total revenue generated by all orders</th>
        <td><%= total_revenue %></td>
    </tr>
    <tr>
        <th>Average order value</th>
        <td><%= average_order_value %></td>
    </tr>
</table>
```

**Output:**

| | |
|---|---|
| Total number of orders | 10 |
| Total revenue generated | 12000 |
| Average order value | 1200 |

| | |
|---|---|
| **Observation(20)** | |
| **Record(5)** | |
| **Total(25)** | |
| **Initial** | |

**Result :**

The algorithm internet programming and output for the given programs have been created successfully.