Web app for railway reservation

Short Description
The app mainly focuses on reserving tickets by user and adding trains by admin.For doing these task first they have to sign up in the database where they will signup for new username and password , then they will be taken to the login page where they will enter the signed up username and password which is stored in the database and will be checked entered properly without error.From here user and admin will be taken to their respective option pages from where they can choose whichever they want.

All the code is written in java (servlet) for backend connectivity with mysql database and front end where client enters the input is written in HTML and JSP .The connection is maintained by a deployment descriptor which is written in xml named web.xml

Environment used : VS code IDE
Server used : Apache Tomcat 9.0.54
Database used : mysql 8.0.27
Brower user : firefox version94(Linux)

CODE:
Index.html

```html
<html>

    <body>
        <form action = "check">
            <h2>Welcome to railway reservation platform</h2><br>
            have you signed up (yes or no) : <input type = "text" name =
"checking"><br>
            mention of type (admin or user) : <input type = "text" name =
"type"><br>
            <input type = "submit"><br>
            Note : you will redirected to the same page if you entered an
invalid input<br>
        </form>

    </body>
```

```
</html>
```

Java code:

```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;


public class start extends HttpServlet{
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws ServletException,IOException{
        res.setContentType("text/html");
        PrintWriter out = res.getWriter();
        String s = req.getParameter("checking");
        String s1 = req.getParameter("type");
        if(s.equals("no") && s1.equals("user")){
            res.sendRedirect("signup.html");
        }

        else if(s.equals("no") && s1.equals("admin")){
            res.sendRedirect("signup_admin.html");
        }

        else if(s.equals("yes") && s1.equals("user")){
            res.sendRedirect("login.html");
        }
        else if(s.equals("yes") && s1.equals("admin")){
            res.sendRedirect("login_admin.html");
        }
        else{
            res.sendRedirect("index.html");
        }

    }
}
```
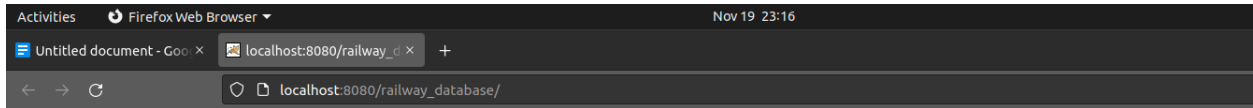
Output:

Welcome to railway reservation platform

have you signed up (yes or no) : `no`
mention of type (admin or user) : `admin`
Submit Query
Note : you will redirected to the same page if you entered an invalid input

Code:

```html
<html>

<body>
    <form action = "signup_admin">
        Enter the admin password : <input type = "text" name =
"check_login"><br>
        Enter username : <input type = "text" name = "username"><br>
        Enter password : <input type = "text" name = "password"><br>
        <input type = "submit"><br>
        Note : you will redirected to the same page if you entered an
invalid admin password<br>
        Note : you will be redirected to login page after sign up process
if entered correct i/p<br>
    </form>
</body>
</html>
```

Since user cannot create an admin account we have a secret password for admin

Showing tables in mysql database

```
mysql> use railway_database;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----------------------------+
| Tables_in_railway_database  |
+-----------------------------+
| admin                       |
| reservation                 |
| train_details               |
| trains                      |
| user                        |
+-----------------------------+
5 rows in set (0.00 sec)

mysql>
```

Admin table(empty):

```
Database changed
mysql> show tables;
+-----------------------------+
| Tables_in_railway_database  |
+-----------------------------+
| admin                       |
| reservation                 |
| train_details               |
| trains                      |
| user                        |
+-----------------------------+
5 rows in set (0.00 sec)

mysql> select * from admin;
Empty set (0.00 sec)

mysql>
```
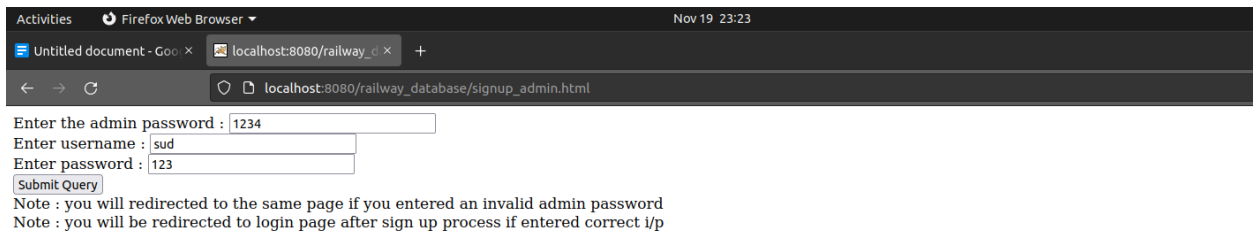
Output:

Database update(before 0 now one entry):

```
mysql> select * from admin;
Empty set (0.00 sec)

mysql> select * from admin;
+----------+----------+
| username | password |
+----------+----------+
| sud      | 123      |
+----------+----------+
1 row in set (0.00 sec)
```

Java code:

```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;


public class create_admin extends HttpServlet{
    public void doGet(HttpServletRequest req , HttpServletResponse res)throws IOException , ServletException{

        String s1 = req.getParameter("password");
        String s = req.getParameter("username");
        String s2 = req.getParameter("check_login");
        String url =  "jdbc:mysql://localhost:3306/railway_database";
```

```java
        String username = "root";
        String password = "sUd2808#";
        PrintWriter out = res.getWriter();


        if(s2.equals("1234")){
            try{


                Class.forName("com.mysql.jdbc.Driver");
                Connection myConnection = DriverManager.getConnection(url,
username, password);
                //System.out.println("connected Successfully");
                //create a statement object
                Statement myStatement = myConnection.createStatement();
                //execute query
                PreparedStatement st =
myConnection.prepareStatement("insert into admin values(?, ?)");
                st.setString(1, s);
                st.setString(2, s1);
                st.executeUpdate();

                res.sendRedirect("login_admin.html");
            }
            catch(Exception e){}
        }
        else{
            res.sendRedirect("signup_admin.html");
        }



    }
}
```

```html
<html>

<body>
    <form action = "login_admin">
        Enter username : <input type = "text" name = "username"><br>
        Enter password : <input type = "text" name = "password"><br>
```

```
        <input type = "submit"><br>
        Note : you will redirected to the same page if you entered wrong
input<br>
    </form>
</body>
</html>
```

Java Code:

```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;


public class login_admin extends HttpServlet{
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{

        String s1 = req.getParameter("password");
        String s = req.getParameter("username");
        String url =  "jdbc:mysql://localhost:3306/railway_database";
        String username = "root";
        String password = "sUd2808#";
        PrintWriter out = res.getWriter();

        try{

            Class.forName("com.mysql.jdbc.Driver");
            Connection myConnection = DriverManager.getConnection(url,
username, password);
            //System.out.println("connected Successfully");
            //create a statement object
            Statement myStatement = myConnection.createStatement();
            //execute query
            String sql_query = "select * from admin where username = " +
'"' + s + '"' + " and password = " + '"' + s1 + '"';
            ResultSet myResultSet = myStatement.executeQuery(sql_query);

            if(!myResultSet.next()){
```

```java
                res.sendRedirect("login_admin.html");
            }
            else{
                res.sendRedirect("admin_options.html");
            }



        }
        catch(Exception e){}



    }
}
```

Output:

Html code

```html
<html>

    <body>
        <form action = "admin_options">
            <h2>Welcome to railway reservation platform</h2><br>
            please enter your choice in the text box<br>
            1.Add train information<br>
            2.modify train information<br>
            3.Delete train information<br>
            Enter the choice number : <input type = "text" name =
"choice"><br>
            <input type = "submit"><br>
```

```
            Note : you will redirected to the same page if you entered an
invalid input<br>
        </form>

    </body>

</html>
```

Java code:
```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;


public class admin_navigation extends HttpServlet{
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{

        int choice = Integer.parseInt(req.getParameter("choice"));
        PrintWriter out = res.getWriter();
        if(choice == 1){
            res.sendRedirect("add_trains.html");


        }
        else{
            res.sendRedirect("admin_options.html");
        }


    }
}
```

Output:

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localhost:8080/railway_database/admin_options.html

Welcome to railway reservation platform

please enter your choice in the text box
1.Add train information
2.modify train information
3.Delete train information
Enter the choice number : [1]
[Submit Query]
Note : you will redirected to the same page if you entered an invalid input

Html code:

```html
<html>

    <body>
        <form action = "add_trains">

            Enter the train number : <input type = "text" name = "tno"><br>
            Enter the train name : <input type = "text" name = "tname"><br>
            Enter the source : <input type = "text" name = "source"><br>
            Enter the destination : <input type = "text" name =
"destination"><br>
            Enter the no of seats in 3AC coach : <input type = "text" name
= "no_3AC"><br>
            Enter the fare in 3AC coach : <input type = "text" name =
"fare_3AC"><br>
            Enter the no of seats in 2AC coach : <input type = "text" name
= "no_2AC"><br>
            Enter the fare in 2AC coach : <input type = "text" name =
"fare_2AC"><br>
            Enter the no of seats in SL coach : <input type = "text" name =
"no_SL"><br>
            Enter the fare in SL coach : <input type = "text" name =
"fare_SL"><br>


            <input type = "submit"><br>
        </form>
```

```html
    </body>

</html>
```

Java Code:
```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;
import java.util.*;

public class add_trains extends HttpServlet{
    public void doGet(HttpServletRequest request , HttpServletResponse
response)throws IOException , ServletException{

        String url =  "jdbc:mysql://localhost:3306/railway_database";
        String username = "root";
        String password = "sUd2808#";
        try{
            Class.forName("com.mysql.jdbc.Driver");
            Connection myConnection = DriverManager.getConnection(url,
username, password);
            //System.out.println("connected Successfully");
            //create a statement object
            Statement myStatement = myConnection.createStatement();
            //execute query
            PreparedStatement st = myConnection.prepareStatement("insert
into trains values (? , ? , ? , ?)");
            PreparedStatement st2 = myConnection.prepareStatement("insert
into train_details values(? , ? , ? , ?)");
            PreparedStatement st3 = myConnection.prepareStatement("insert
into train_details values(? , ? , ? , ?)");
            PreparedStatement st4 = myConnection.prepareStatement("insert
into train_details values(? , ? , ? , ?)");
            PrintWriter out = response.getWriter();

            String t_name = request.getParameter("tname");
```

```java
            int t_no = Integer.parseInt(request.getParameter("tno"));

            String source = request.getParameter("source");
            String destination = request.getParameter("destination");
            int no_3ac = Integer.parseInt(request.getParameter("no_3AC"));
            float fare_3AC =
Float.parseFloat(request.getParameter("fare_3AC"));
            int no_2ac = Integer.parseInt(request.getParameter("no_2AC"));
            float fare_2AC =
Float.parseFloat(request.getParameter("fare_2AC"));
            int no_sl = Integer.parseInt(request.getParameter("no_SL"));
            float fare_sl =
Float.parseFloat(request.getParameter("fare_SL"));

            st.setString(1, t_name);
            st.setInt(2, t_no);
            st.setString(3, source);
            st.setString(4, destination);

            st2.setString(1, "3AC");
            st2.setInt(2, no_3ac);
            st2.setFloat(3, fare_3AC);
            st2.setString(4, t_name);


            st3.setString(1, "2AC");
            st3.setInt(2, no_2ac);
            st3.setFloat(3, fare_2AC);
            st3.setString(4, t_name);

            st4.setString(1, "sl");
            st4.setInt(2, no_sl);
            st4.setFloat(3, fare_sl);
            st4.setString(4, t_name);

            st.executeUpdate();
            st2.executeUpdate();
            st3.executeUpdate();
            st4.executeUpdate();
            response.setContentType("text/html");
```

```
            out.println("successfully added" + "<br>");
            out.println("<form action = admin_termination>");
            out.println("do you want to add more trains : <input type = " +
'"' + "text" + '"' + "name = " + '"' + "cont" + '"' + "<br>");
            out.println("<input type = submit>" );
            out.println("</form>");
            //ResultSet rs = myStatement.executeQuery(sql_query);



        }
        catch(Exception e){}
    }
}
```

Output:

Enter the train number : 1
Enter the train name : shatabti
Enter the source : chennai
Enter the destination : bangalore
Enter the no of seats in 3AC coach : 3
Enter the fare in 3AC coach : 112.6
Enter the no of seats in 2AC coach : 2
Enter the fare in 2AC coach : 119.7
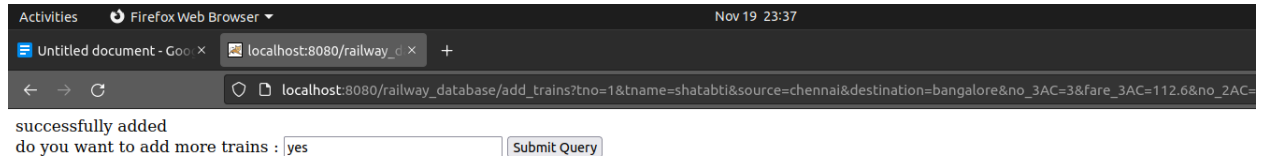Enter the no of seats in SL coach : 5
Enter the fare in SL coach : 100.99
Submit Query

Database updation:

```
mysql> select * from trains;
+------------+----------+---------+-------------+
| train_name | train_no | source  | destination |
+------------+----------+---------+-------------+
| shatabti   |        1 | chennai | bangalore   |
+------------+----------+---------+-------------+
1 row in set (0.00 sec)

mysql> select * from train_details;
+-------+-------------+--------+------------+
| coach | no_of_seats | fare   | train_name |
+-------+-------------+--------+------------+
| 3AC   |           3 | 112.6  | shatabti   |
| 2AC   |           2 | 119.7  | shatabti   |
| sl    |           5 | 100.99 | shatabti   |
+-------+-------------+--------+------------+
3 rows in set (0.00 sec)
```

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← → C   ○ ▢ localhost:8080/railway_database/add_trains?tno=1&tname=shatabti&source=chennai&destination=bangalore&no_3AC=3&fare_3AC=112.6&no_2AC=

successfully added
do you want to add more trains : [yes   ] [Submit Query]

Java code:
```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;



public class admin_termination extends HttpServlet{
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{

        String str = req.getParameter("cont");
```

```
        PrintWriter out = res.getWriter();
        if(str.equals("yes")){
            res.sendRedirect("add_trains.html");


        }
        else{
            res.sendRedirect("index.html");

        }


    }
}
```

Output(redirected to add train info page):

Enter the train number : 2
Enter the train name : duronto
Enter the source : chennai
Enter the destination : bangalore
Enter the no of seats in 3AC coach : 3
Enter the fare in 3AC coach : 112.6
Enter the no of seats in 2AC coach : 2
Enter the fare in 2AC coach : 119.7
Enter the no of seats in SL coach : 5
Enter the fare in SL coach : 100.99
Submit Query

Database updation:

```
mysql> select * from train_details;
+--------+--------------+---------+--------------+
| coach  | no_of_seats  | fare    | train_name   |
+--------+--------------+---------+--------------+
| 3AC    |           3  | 112.6   | shatabti     |
| 2AC    |           2  | 119.7   | shatabti     |
| sl     |           5  | 100.99  | shatabti     |
| 3AC    |           3  | 112.6   | duronto      |
| 2AC    |           2  | 119.7   | duronto      |
| sl     |           5  | 100.99  | duronto      |
+--------+--------------+---------+--------------+
6 rows in set (0.00 sec)

mysql> select * from trains;
+--------------+-----------+----------+---------------+
| train_name   | train_no  | source   | destination   |
+--------------+-----------+----------+---------------+
| shatabti     |        1  | chennai  | bangalore     |
| duronto      |        2  | chennai  | bangalore     |
+--------------+-----------+----------+---------------+
2 rows in set (0.00 sec)
```

Activities   Firefox Web Browser ▼   Nov 19 23:40
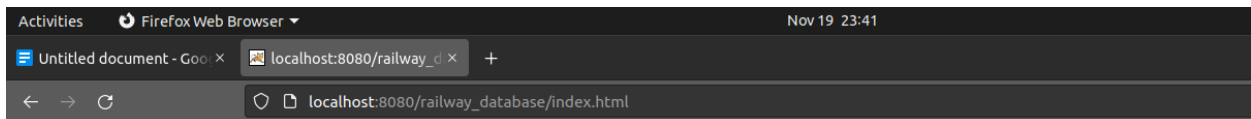
Untitled document - Goo ×   localhost:8080/railway_d ×   +

← → C   ○ ⌂ localhost:8080/railway_database/add_trains?tno=2&tname=duronto&source=chennai&destination=b

successfully added
do you want to add more trains : [no   ] [Submit Query]

Redirected to index page:

Welcome to railway reservation platform

have you signed up (yes or no) : [no]
mention of type (admin or user) : [user]
[Submit Query]
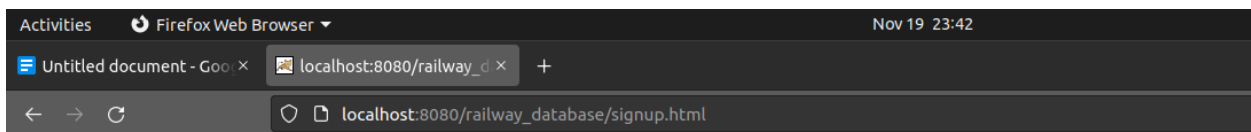Note : you will redirected to the same page if you entered an invalid input

Code:

```html
<html>

<body>
    <form action = "signup">
        Enter username : <input type = "text" name = "username"><br>
        Enter password : <input type = "text" name = "password"><br>
        <input type = "submit"><br>
        Note : you will be redirected to login page after sign up process
    </form>
</body>
</html>
```


Enter username : [sud]
Enter password : [123]
[Submit Query]
Note : you will be redirected to login page after sign up process

Java code:

```java
import javax.servlet.*;
import javax.servlet.http.*;


import java.io.*;
import java.sql.*;
```

```java
public class create_user extends HttpServlet{
   public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{


       String s1 = req.getParameter("password");
       String s = req.getParameter("username");
       String url =  "jdbc:mysql://localhost:3306/railway_database";
       String username = "root";
       String password = "sUd2808#";
       PrintWriter out = res.getWriter();


       try{

           Class.forName("com.mysql.jdbc.Driver");
           Connection myConnection = DriverManager.getConnection(url,
username, password);
           //System.out.println("connected Successfully");
           //create a statement object
           Statement myStatement = myConnection.createStatement();
           //execute query
           PreparedStatement st = myConnection.prepareStatement("insert
into user values(?, ?)");
           st.setString(1, s);
           st.setString(2, s1);
           st.executeUpdate();



           res.sendRedirect("login.html");
       }
       catch(Exception e){}



   }
}
```

Database updation(before after):

```
mysql> select * from user;
Empty set (0.00 sec)
```
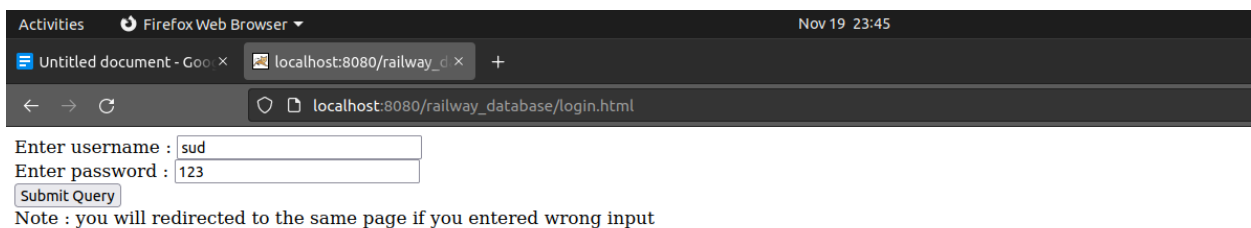
```
mysql> select * from user;
Empty set (0.00 sec)

mysql> select * from user;
+----------+----------+
| username | password |
+----------+----------+
| sud      | 123      |
+----------+----------+
1 row in set (0.00 sec)
```

Html code:

```html
<html>

<body>
    <form action = "login">
        Enter username : <input type = "text" name = "username"><br>
        Enter password : <input type = "text" name = "password"><br>
        <input type = "submit"><br>
        Note : you will redirected to the same page if you entered wrong
input<br>
    </form>
</body>
</html>
```

Activities   Firefox Web Browser ▾   Nov 19 23:45
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← → C   localhost:8080/railway_database/login.html

Enter username : [sud]
Enter password : [123]
[Submit Query]
Note : you will redirected to the same page if you entered wrong input

Java code:

```java
import javax.servlet.*;
import javax.servlet.http.*;


import java.io.*;
import java.sql.*;



public class login_user extends HttpServlet{
```

```java
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{

        String s1 = req.getParameter("password");
        String s = req.getParameter("username");
        String url =  "jdbc:mysql://localhost:3306/railway_database";
        String username = "root";
        String password = "sUd2808#";
        PrintWriter out = res.getWriter();

        try{

            Class.forName("com.mysql.jdbc.Driver");
            Connection myConnection = DriverManager.getConnection(url,
username, password);
            //System.out.println("connected Successfully");
            //create a statement object
            Statement myStatement = myConnection.createStatement();
            //execute query
            String sql_query = "select * from user where username = " + '"'
+ s + '"' + " and password = " + '"' + s1 + '"';
            ResultSet myResultSet = myStatement.executeQuery(sql_query);

            if(!myResultSet.next()){
                res.sendRedirect("login.html");
            }
            else{
                res.sendRedirect("user_options.html");
            }



        }
        catch(Exception e){}



    }
}
```

Html code:

```html
<html>


   <body>
       <form action = "user_options">
           <h2>Welcome to railway reservation platform</h2><br>
           please enter your choice in the text box<br>
           1.Ticket Reservation<br>
           2.Ticket cancellation<br>
           3.Ticket Status<br>
           Enter the choice number : <input type = "text" name =
"choice"><br>
           <input type = "submit"><br>
           Note : you will redirected to the same page if you entered an
invalid input<br>
       </form>


   </body>

</html>
```

Output:

Welcome to railway reservation platform
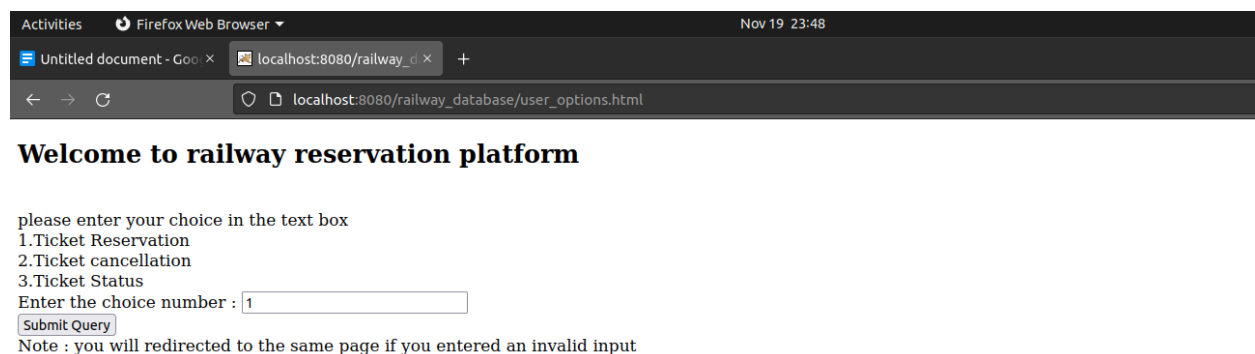
please enter your choice in the text box
1.Ticket Reservation
2.Ticket cancellation
3.Ticket Status
Enter the choice number : [1]
Submit Query
Note : you will redirected to the same page if you entered an invalid input

Java code:
```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;


public class user_navigation extends HttpServlet{
```

```java
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{

        int choice = Integer.parseInt(req.getParameter("choice"));
        PrintWriter out = res.getWriter();
        if(choice == 1){
            res.sendRedirect("source_destination.html");
        }
        else if(choice == 2){
            out.println("ticket_cancellation.html");
        }
        else if(choice == 3){
            out.println("ticket_status.html");
        }
        else{
            res.sendRedirect("user_options.html");
        }


    }
}
```

Html code:

```html
<html>

    <body>
        <form action = "ticket_reservation.jsp">
            Enter the source : <input type = "text" name = "source"><br>
            Enter the destination : <input type = "text" name =
"destination"><br>
            <input type = "submit"><br>
            Note : you will redirected to the same page if you entered an
invalid input<br>
        </form>

    </body>

</html>
```
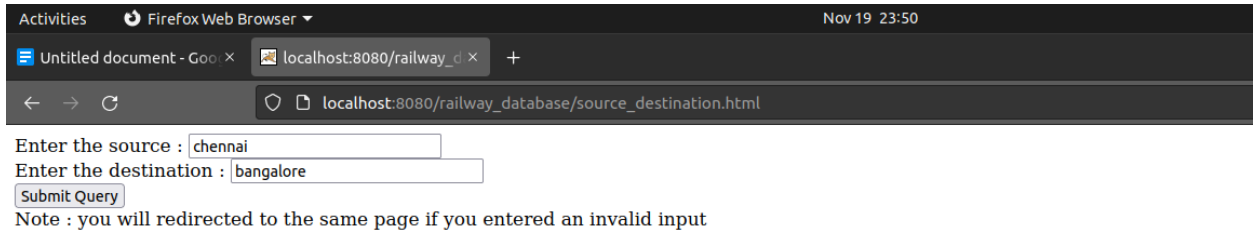
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←   →   C   ○   🗋   localhost:8080/railway_database/source_destination.html

Enter the source : `chennai`
Enter the destination : `bangalore`
Submit Query
Note : you will redirected to the same page if you entered an invalid input

Java Code(JSP):

```jsp
<%@ page language = "java" contentType="text/html; charset = UTF-8"
pageEncoding="UTF-8"%>
<%@ page import = "java.sql.*"%>
<%@ page import ="java.util.*"%>
<html>

    <body>
        <%

            String s1 = request.getParameter("destination");
            String s = request.getParameter("source");

            String url =  "jdbc:mysql://localhost:3306/railway_database";
            String username = "root";
            String password = "sUd2808#";

            try{
                Class.forName("com.mysql.jdbc.Driver");
                Connection myConnection = DriverManager.getConnection(url,
username, password);
                //System.out.println("connected Successfully");
                //create a statement object
                Statement myStatement = myConnection.createStatement();
                //execute query
                String sql_query = "select * from trains where source = " +
"'" + s + "'" + " and destination = " + "'" + s1 + "'";
                ResultSet rs = myStatement.executeQuery(sql_query);
                int flag = 0;
```

```java
                ArrayList<String> train_names = new ArrayList<String>();
                while(rs.next()){
                    flag = 1;

                    String str = rs.getString("train_name");
                    train_names.add(str);


                }
                if(flag == 0){
                    response.sendRedirect("source_destination.html");
                }

                for(String t_name : train_names){


                    out.println("train name : " + t_name );
                    String sql_query_2 = "select * from train_details where
train_name = " +  "'" + t_name + "'";
                    ResultSet rs2 = myStatement.executeQuery(sql_query_2);
                    out.println("<table border = '1' width=20% , height=20%
>");
                    out.println("<tr><th>coach</th><th>number of
seats</th><th>fare</th></tr>");
                    while (rs2.next()){

                        String n = rs2.getString("coach");
                        String nm = rs2.getString("no_of_seats");
                        String st = rs2.getString("fare");
                        out.println("<tr><td>" + n + "</td><td>" + nm +
"</td><td>" + st + "</td></tr>");
                    }
                    out.println("</table><br><br>");


                }


            }
            catch(Exception e){}
            request.getSession().setAttribute("source", s);
            request.getSession().setAttribute("destination", s1);
```

```
        %>
        <form action = "ticket_details">
            1.Enter the train name : <input type = "text" name =
"t_name"><br>
            2.Enter the coach : <input type = "text" name = "coach"><br>
            3.Enter passenger name : <input type = "text" name =
"p_name"><br>
            <input type = "submit"><br>
            Note : you will redirected to the same page if you entered an
invalid input<br>
        </form>

    </body>

</html>
```

Output:

train name : shatabti

coach	number of seats	fare
3AC	3	112.6
2AC	2	119.7
sl	5	100.99

train name : duronto

coach	number of seats	fare
3AC	3	112.6
2AC	2	119.7
sl	5	100.99

1.Enter the train name : shatabti
2.Enter the coach : 2AC
3.Enter passenger name : sud
Submit Query
Note : you will redirected to the same page if you entered an invalid input

Reservation table(updated):

```
mysql> select * from reservation;
+--------+------------+---------+-------------+------+-------+---------+---------+
| pnr_no | train_name | source  | destination | name | coach | seat_no | type    |
+--------+------------+---------+-------------+------+-------+---------+---------+
|      4 | shatabti   | chennai | bangalore   | sud  | 2AC   |       2 | confirm |
+--------+------------+---------+-------------+------+-------+---------+---------+
1 row in set (0.00 sec)
```

No of seats need to be updated in the train_details(it should decrease by 1):

```
mysql> select * from train_details;
+-------+-------------+--------+------------+
| coach | no_of_seats | fare   | train_name |
+-------+-------------+--------+------------+
| 3AC   |           3 | 112.6  | shatabti   |
| 2AC   |           1 | 119.7  | shatabti   |
| sl    |           5 | 100.99 | shatabti   |
| 3AC   |           3 | 112.6  | duronto    |
| 2AC   |           2 | 119.7  | duronto    |
| sl    |           5 | 100.99 | duronto    |
+-------+-------------+--------+------------+
6 rows in set (0.00 sec)
```

Clearly in 2AC coach which was 2 earlier is reduced to 1

HTML code:

```html
<html>

<body>
    Successfully booked<br>
    <form action = "print_ticket">

        Do you want to add more passengers (yes or no) : <input type =
"text"  name = "checking" ><br>
        <input type = "submit"><br>

    </form>

</body>
```
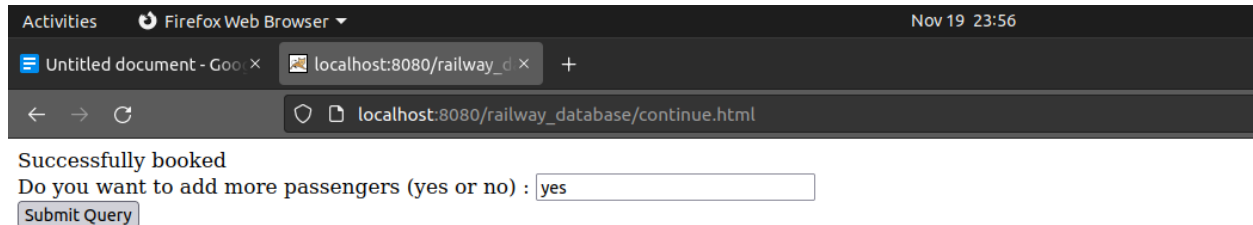
```
</html>
```

Adding one more ticket:

Successfully booked
Do you want to add more passengers (yes or no) : yes
Submit Query

Java code:

```java
import javax.servlet.*;
import javax.servlet.http.*;

import java.io.*;
import java.sql.*;
import java.util.*;



public class print_ticket extends HttpServlet{
    public void doGet(HttpServletRequest req , HttpServletResponse
res)throws IOException , ServletException{

        String s = req.getParameter("checking");
        String url =  "jdbc:mysql://localhost:3306/railway_database";
        String username = "root";
        String password = "sUd2808#";
        PrintWriter out = res.getWriter();
        res.setContentType("text/html");
        if(s.equals("yes")){
            res.sendRedirect("ticket_reservation.jsp");
        }

        else{
            res.sendRedirect("print_ticket.jsp");
```
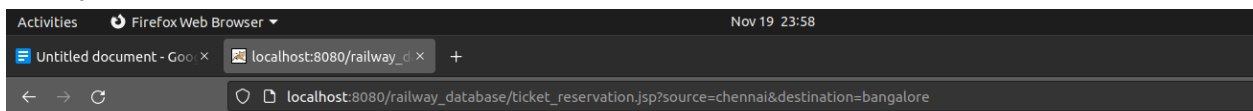
```
                    }



            }

}
```

Clearly the number of tickets of the 2AC coach of shatabti have decreased since one booked

Untitled document - Goo ×   localhost:8080/railway_d ×   +

← → C   localhost:8080/railway_database/ticket_reservation.jsp?source=chennai&destination=bangalore

train name : shatabti

coach	number of seats	fare
3AC	3	112.6
2AC	1	119.7
sl	5	100.99

train name : duronto

coach	number of seats	fare
3AC	3	112.6
2AC	2	119.7
sl	5	100.99

1.Enter the train name : [shatabti]
2.Enter the coach : [2AC]
3.Enter passenger name : [sud1]
Submit Query
Note : you will redirected to the same page if you entered an invalid input

Reservation table updation:

```
mysql> select * from reservation;
+--------+------------+---------+-------------+------+-------+---------+---------+
| pnr_no | train_name | source  | destination | name | coach | seat_no | type    |
+--------+------------+---------+-------------+------+-------+---------+---------+
|      4 | shatabti   | chennai | bangalore   | sud  | 2AC   |       2 | confirm |
|     72 | shatabti   | chennai | bangalore   | sud1 | 2AC   |       1 | confirm |
+--------+------------+---------+-------------+------+-------+---------+---------+
2 rows in set (0.01 sec)
```

Train_detail table updation:

```
mysql> select * from train_details;
+--------+--------------+--------+------------+
| coach  | no_of_seats  | fare   | train_name |
+--------+--------------+--------+------------+
| 3AC    |            3 | 112.6  | shatabti   |
| 2AC    |            0 | 119.7  | shatabti   |
| sl     |            5 | 100.99 | shatabti   |
| 3AC    |            3 | 112.6  | duronto    |
| 2AC    |            2 | 119.7  | duronto    |
| sl     |            5 | 100.99 | duronto    |
+--------+--------------+--------+------------+
6 rows in set (0.00 sec)
```

Clearly reduced to 0 from 1(2AC coach of shatabti);

Adding one more ticked this time we should have wait list ticket in 2AC coach of shatabti since no of seats is 0

Untitled document - Goo ×   localhost:8080/railway_d ×   +

← → C   localhost:8080/railway_database/ticket_reservation.jsp?source=chennai&destination=bangalore

train name : shatabti

coach	number of seats	fare
3AC	3	112.6
2AC	0	119.7
sl	5	100.99

train name : duronto

coach	number of seats	fare
3AC	3	112.6
2AC	2	119.7
sl	5	100.99

1.Enter the train name : shatabti
2.Enter the coach : 2AC
3.Enter passenger name : sud2
Submit Query
Note : you will redirected to the same page if you entered an invalid input

Reservation table updation:

```
mysql> select * from reservation;
+--------+------------+---------+-------------+------+-------+---------+-----------+
| pnr_no | train_name | source  | destination | name | coach | seat_no | type      |
+--------+------------+---------+-------------+------+-------+---------+-----------+
|      4 | shatabti   | chennai | bangalore   | sud  | 2AC   |       2 | confirm   |
|     72 | shatabti   | chennai | bangalore   | sud1 | 2AC   |       1 | confirm   |
|     66 | shatabti   | chennai | bangalore   | sud2 | 2AC   |      -1 | Wait List |
+--------+------------+---------+-------------+------+-------+---------+-----------+
3 rows in set (0.00 sec)
```

Clearly the type of ticket is wait list for sud2(seat no is -1 indicating wait list)

Printing ticket:
Java code(JSP):

```jsp
<%@ page language = "java" contentType="text/html; charset = UTF-8"
pageEncoding="UTF-8"%>
<%@ page import = "java.sql.*"%>
<%@ page import ="java.util.*"%>
<html>

    <body>
        <%
            String url =  "jdbc:mysql://localhost:3306/railway_database";
            String username = "root";
            String password = "sUd2808#";
            try{
                Class.forName("com.mysql.jdbc.Driver");
                Connection myConnection = DriverManager.getConnection(url,
username, password);
                //System.out.println("connected Successfully");
                //create a statement object
                Statement myStatement = myConnection.createStatement();
                //execute query
                String sql_query = "select * from reservation";
                ResultSet rs = myStatement.executeQuery(sql_query);
                int flag = 0;
                out.println("your ticket details are : " + "<br>");
                while(rs.next()){

                    if(flag == 0){
```

```
                        String train_name = rs.getString("train_name");
                        String source = rs.getString("source");
                        String destination = rs.getString("destination");
                        out.println("train name : " + train_name + "<br>");
                        out.println("source : " + source + "<br>");
                        out.println("destination : " + destination +
"<br>");

                        out.println("<table border = '1' width=20% ,
height=10% >");


out.println("<tr><th>pnr</th><th>name</th><th>coach</th><th>seat
no</th><th>type</th></tr>");
                        flag = 1;
                    }

                int pnr = rs.getInt("pnr_no");

                String coach = rs.getString("coach");
                int seat_no = rs.getInt("seat_no");
                String type = rs.getString("type");
                String name = rs.getString("name");
                out.println("<tr><td>" + pnr + "</td><td>" + name +
"</td><td>" + coach + "</td><td>" + seat_no + "</td><td>" + type +
"</td></tr>");



                }

            }
        catch(Exception e){}

        %>


    </body>

</html>
```
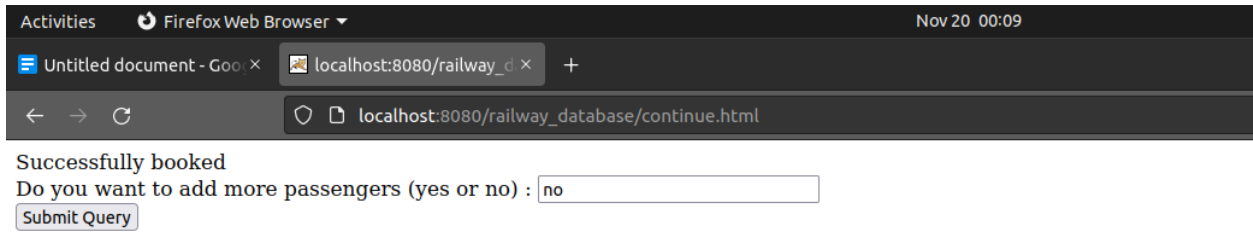
Untitled document - Goo ×   localhost:8080/railway_d ×   +

← → C   localhost:8080/railway_database/continue.html

Successfully booked
Do you want to add more passengers (yes or no) : no

Submit Query

Output:

Untitled document - Goo ×   localhost:8080/railway_d ×   +

← → C   localhost:8080/railway_database/print_ticket.jsp

your ticket details are :
train name : shatabti
source : chennai
destination : bangalore

pnr	name	coach	seat no	type
4	sud	2AC	2	confirm
72	sud1	2AC	1	confirm
66	sud2	2AC	-1	Wait List