```
<%@ page language="java" contentType="text/html; charset=UTF-
     pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Admin Login</title>
<style>
body {
.panel label {
     display: block;
.panel input[type="text"], .panel input[type="password"] {
.panel button[type="submit"] {
```

```
.panel button[type="submit"]:hover {
     background-color: #45a049;
</style>
<body>
     <div class="panel">
          <h2>Railway Crossing</h2>
          <h4>Admin Login</h4>
          <form action="adminLogin" method="post">
               <label for="email">Email:</label> <input</pre>
type="text" id="email"
                     name="email" required><br> <label</pre>
for="password">Password:</label>
               <input type="password" id="password"</pre>
name="password" required><br>>
                <button type="submit">Login
          </form>
     </div>
</body>
</html>
```

adminHome.jsp

```
int crossingId = Integer.parseInt(searchId);
     RailwayCrossing searchedCrossing =
crossingDAO.getCrossingById(crossingId);
     request.setAttribute("crossing", searchedCrossing);
<!DOCTYPE html>
<html>
<meta charset="UTF-8">
<title>Admin Home Page</title>
<style>
.button-container input[type="text"] {
.button-container button[type="submit"] {
.button-container button[type="submit"]:hover {
```

```
table {
@media only screen and (max-width: 768px) {
     .button-container form {
</style>
</head>
     <h1>Admin Home Page</h1>
     <h3>
          Railway Crossing[<%=crossings.size()%>]
     </h3>
     <div class="button-container">
               <button type="submit">Home</button>
          <form action="addRailCrossingForm.jsp"</pre>
method="post">
```

```
<button type="submit">Add Railway
Crossing</button>
         </form>
         <form action="searchCrossing" method="post">
             <input type="text" name="searchId"</pre>
placeholder="Enter ID">
             <button type="submit">Search Crossing</button>
         <form action="adminHome.jsp" method="post">
             <button type="submit">Display All Railway
Crossings</button>
         </form>
         <form action="adminRegister.jsp" method="post">
             <button type="submit">Logout</button>
         </form>
    </div>
    <thead>
             <tr>
                 <th>>Sr.No</th>
                 Name
                 Address
                 Landmark
                 Train Schedule
                 Person In-Charge
                 Status
                 Action
             < %
             if (request.getAttribute("crossing") != null) {
                 RailwayCrossing crossing =
(RailwayCrossing) request.getAttribute("crossing");
                  <%=crossing.getId()%>
                 <%=crossing.getName()%>
                 <%=crossing.getAddress()%>
                 <%=crossing.getLandmark()%>
                 <%=crossing.getTrainSchedule()%>
                  <%=crossing.getPersonInCharge()%>
                  <%=crossing.getStatus()%>
             <%
```

```
for (RailwayCrossing anotherCrossing :
crossings) {
              응>
                   <%=anotherCrossing.getId()%>
                   <%=anotherCrossing.getName()%>
                   <\td><\\=anotherCrossing.getAddress()\\$></\td>
    <%=anotherCrossing.getLandmark()%>
    <%=anotherCrossing.getTrainSchedule()%>
    < = anotherCrossing.getPersonInCharge() % >
                   <%=anotherCrossing.getStatus()%>
                        <form
action="updateRailCrossingForm.jsp" method="post">
                             <input type="hidden" name="id"</pre>
    value="<%=anotherCrossing.getId()%>">
                             <br/>
button type="submit"
class="update-button">Update</button>
                        <form action="deleteCrossing"</pre>
method="post">
                             <input type="hidden" name="id"</pre>
    value="<%=anotherCrossing.getId()%>">
                             <button type="submit"</pre>
class="delete-button">Delete</button>
                        </form>
              응>
         </body>
```

addRailCrossingForm

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

```
<!DOCTYPE html>
<html>
<meta charset="UTF-8">
<title>Add Railway Crossing</title>
<style>
body {
.panel input[type="text"], .panel select {
.panel button[type="submit"] {
     background-color: #4CAF50;
.panel button[type="submit"]:hover {
     background-color: #45a049;
</style>
(/head>
```

```
<body>
     <div class="panel">
          <h2>Railway Crossings</h2>
          <h4>Add Railway Crossing Information</h4>
          <form action="addCrossing" method="post">
                <label for="name">Enter Name</label> <input</pre>
type="text" id="name"
                     name="name" required><br> <label</pre>
for="address">Address</label>
                <input type="text" id="address" name="address"</pre>
required><br>>
               <label for="landmark">Landmark</label> <input</pre>
type="text"
                     id="landmark" name="landmark"
required><br> <label
                     for="trainSchedules">Train
Schedules</label> <input type="text"</pre>
required><br>>
                <label for="personInCharge">Person in
Charge</label> <input
                     type="text" id="personInCharge"
name="personInCharge" required><br>
               <label for="status">Crossing Status</label>
<select id="status"</pre>
                     <option value="Open">Open</option>
                     <option value="Closed">Closed</option>
                </select><br>
                <button type="submit">Submit</button>
          </form>
     </div>
</body>
</html>
```

Homepage.jsp

```
rel="stylesheet"
     integrity="sha384-
     crossorigin="anonymous">
<style>
in");
     background-repeat: no-repeat;
     background-size: cover;
</style>
</head>
          class="navbar navbar-expand-lg bg-body-tertiary
          data-bs-theme="dark">
          <div class="container-fluid">
               <a class="navbar-brand" href="#">Railway
Crossing Status</a>
               <button class="navbar-toggler" type="button"</pre>
                     data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent"
aria-expanded="false"
                     aria-label="Toggle navigation">
                     <span class="navbar-toggler-icon"></span>
               </button>
               <div class="collapse navbar-collapse"</pre>
id="navbarSupportedContent">
```

```
<a class="nav-</pre>
                           aria-current="page"
href="#">Home</a>
                      class="nav-item"><a class="nav-</li>
link" href="adminLogin.jsp">Admin-Login/Signup</a>
                      <a class="nav-</pre>
link" href="userLogin.jsp">User-Login/Signup</a>
                      </div>
         </div>
    </nav>
    <script
         integrity="sha384-
        crossorigin="anonymous"></script>
</body>
</html>
```

searchCrossing.jsp

```
id="searchId" name="searchId" required> <input</pre>
type="submit"
           value="Search">
   </form>
   <c:if test="${not empty crossing}">
       <h2>Search Result</h2>
       ID
               Name
               Address
               Landmark
               Train Schedule
               Person in Charge
               Status
               ${crossing.id}
               ${crossing.name}
               ${crossing.address}
               ${crossing.landmark}
               ${crossing.trainSchedule}
               ${crossing.personInCharge}
               ${crossing.status}
       </c:if>
   <a href="adminHome.jsp">Back to Admin Homepage</a>
</body>
</html>
```

Update

```
text-align: center;
.panel label {
     display: block;
.panel input[type="text"], .panel select {
.panel button[type="submit"] {
.panel button[type="submit"]:hover {
</style>
<body>
     <div class="panel">
          <h2>Railway Crossings</h2>
          <h4>Update Railway Crossing Information</h4>
               <label for="crossingId">Crossing ID</label>
<input type="text"</pre>
value="${crossing.crossingId}"
```

```
required><br> <label for="name">Enter
Name</label> <input
                     type="text" id="name" name="name"
value="${crossing.name}" required><br>
               <label for="address">Address</label> <input</pre>
type="text" id="address"
                     name="address" value="${crossing.address}"
required><br>>
               <label for="landmark">Landmark</label> <input</pre>
type="text"
                     id="landmark" name="landmark"
value="${crossing.landmark}" required><br>
                <label for="trainSchedules">Train
Schedules</label> <input
                     type="text" id="trainSchedules"
name= "trainSchedules"
                     value="${crossing.trainSchedule}"
required><br> <label
                     for="personInCharge">Person in
Charge</label> <input type="text"</pre>
                     value="${crossing.personInCharge}"
required><br> <label
                     for="status">Crossing Status</label>
select id="status"
                     <option value="Open" ${crossing.status ==</pre>
'Open' ? 'selected' : ''}>Open</option>
                    <option value="Closed"</pre>
                          ${crossing.status == 'Closed' ?
'selected' : ''}>Closed</option>
               <button type="submit">Submit</button>
          </form>
     </div>
</body>
</html>
```

userHome

```
<%@ page language="java" contentType="text/html; charset=UTF-
8"
          pageEncoding="UTF-8"%>
<%@ page import="com.simpli.RailwayCrossing"%>
<%@ page import="com.simpli.RailwayCrossingDAO"%>
<%@ page import="java.util.List"%>
<%@ page import="java.util.List"%>
<!DOCTYPE html>
<html>
<head>
```

```
<meta charset="UTF-8">
<title>Railway Crossings - User Home Page</title>
<style>
body {
</style>
 /head>
```

```
<h1 style="font-weight: bold;">User Home Page</h1>
     <button onclick="location.href='HomePage.jsp'"</pre>
          style="border-radius: 10px; font-weight:
bold; ">Home</button>
          style="border-radius: 10px; margin-left: 50px; font-
weight: bold; ">All
          Crossings</button>
     <button
onclick="location.href='userHomeFavoriteCrossing.jsp'"
weight: bold;">Favorite
          Crossings</button>
     <button onclick="location.href='userSearchCrossing.jsp'"</pre>
weight: bold;">Search
          Crossings</button>
     <button onclick="location.href='userLogin.jsp'"</pre>
          style="border-radius: 10px; margin-left: 800px;
font-weight: bold;">Logout</button>
     RailwayCrossingDAO crossingDAO = new
RailwayCrossingDAO();
     List<RailwayCrossing> allCrossings =
crossingDAO.getAllCrossings();
     for (RailwayCrossing crossing : allCrossings) {
          String status = crossing.getStatus();
          String statusClass = status.equalsIgnoreCase("Open")
     응>
     <div class="container">
          <h3><%=crossing.getName()%></h3>
               Status: <strong><span class="status"
<%=statusClass%>"><%=crossing.getStatus()%></span></strong>
```

```
Person in Charge:
<strong><%=crossing.getPersonInCharge()%></strong>
                Train Schedules:
<strong><%=crossing.getTrainSchedule()%></strong>
          </p>
                Landmark:
<strong><%=crossing.getLandmark()%></strong>
               Address:
<strong><%=crossing.getAddress()%></strong>
          <form action="addToFavorites" method="post"</pre>
                <input type="hidden" name="crossingId"</pre>
value="<%=crossing.getId()%>">
                <button type="submit"</pre>
                     style="border-radius: 10px; font-weight:
                    TO FAVORITES</button>
          </form>
     </div>
     응>
</body>
 /html>
```

Favorite

```
</style>
<body>
     <h2>User Home Page</h2>
     <button onclick="location.href='userHome.jsp'">All
Crossings
    <div class="favorites">
         RailwayCrossingDAO crossingDAO = new
RailwayCrossingDAO();
          List<RailwayCrossing> favoriteCrossings =
crossingDAO.getFavoriteCrossings();
          for (RailwayCrossing crossing : favoriteCrossings) {
               String status = crossing.getStatus();
```

```
String statusClass =
status.equalsIgnoreCase("Open") ? "status-open" : "status-
          <div class="container">
                <h3><%=crossing.getName()%></h3>
                     Status: <strong><span class="status"</pre>
<%=statusClass%>"><%=status%></span></strong>
                     Person in Charge:
<strong><%=crossing.getPersonInCharge()%></strong>
                     Train Schedules:
<strong><%=crossing.getTrainSchedule()%></strong>
                     Landmark:
<strong><%=crossing.getLandmark()%></strong>
                     Address:
<strong><%=crossing.getAddress()%></strong>
                <form action="removeFromFavorites"</pre>
method="post"
                     style="display: inline;">
                     <input type="hidden" name="crossingId"</pre>
value="<%=crossing.getId()%>">
                     <button type="submit"</pre>
weight: bold; margin-top: 10px;">REMOVE
                          FROM FAVORITES</button>
                </form>
          </div>
          < %
     </div>
</body>
(/html>
```

```
<%@ page language="java" contentType="text/html; charset=UTF-
     pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>User Login</title>
<style>
body {
.panel label {
     display: block;
.panel input[type="text"], .panel input[type="password"] {
.panel button[type="submit"] {
.panel button[type="submit"]:hover {
     background-color: #45a049;
```

```
</style>
</head>
<body>
          <h2>Railway Crossing</h2>
          <h4>User Login</h4>
          <form action="login" method="post">
                <label for="email">Email:</label> <input</pre>
type="text" id="email"
                    name="email" required><br> <label</pre>
for="password">Password:</label>
               <input type="password" id="password"</pre>
name="password" required><br>>
               <button type="submit">Login
          </form>
                     Don't have an account? <a
href="userRegister.jsp">Create New
                          Account </a>
          </div>
     </div>
</body>
</html>
```

Register

```
text-align: center;
    background-color: #ffffff;
.panel label {
.panel input[type="text"], .panel input[type="password"] {
.panel button[type="submit"] {
.panel button[type="submit"]:hover {
</style>
</head>
<body>
    <div class="panel">
         <h2>Railway Crossing</h2>
          <h4>User Register</h4>
          <form action="register" method="post">
```

```
<label for="name">Name:</label> <input</pre>
type="text" id="name"
for="email">Email:</label>
               <input type="text" id="email" name="email"</pre>
required><br>
               <label for="password">Password:</label> <input</pre>
type="password"
                    id="password" name="password"
required><br>>
               <button type="submit">Register
          </form>
                    Already have an account? <a
href="userLogin.jsp">Sign in</a>
          </div>
     </div>
</body>
</html>
```

searchCrossing

```
.search-container input[type="text"] {
```

```
</style>
<script>
     function searchCrossings() {
          var input = document.getElementById("searchInput");
          var filter = input.value.toUpperCase();
          var crossings =
document.getElementsByClassName("crossing");
          for (var i = 0; i < crossings.length; i++) {</pre>
               var crossing = crossings[i];
               var name =
crossing.getElementsByTagName("h3")[0].innerText;
               if (name.toUpperCase().indexOf(filter) > -1) {
                    crossing.style.display = "";
               } else {
                    crossing.style.display = "none";
</script>
</head>
<body>
     <h2>Search Crossings</h2>
          class="allCrossing-button"
          style="border-radius: 10px; font-weight: bold;">All
Crossings</button>
     <button
onclick="location.href='userHomeFavoriteCrossing.jsp'"
          class="favouriteCrossing-button"
          style="border-radius: 10px; font-weight:
bold;">Favorite
```

```
Crossings</button>
     <div class="search-container">
          <input type="text" id="searchInput"</pre>
placeholder="Search by name"
               onkeyup="searchCrossings()">
          <button onclick="location.href='userLogin.jsp'"</pre>
               style="border-radius: 10px; font-weight:
bold; ">Logout</button>
     </div>
     <div class="search-results">
          RailwayCrossingDAO crossingDAO = new
RailwayCrossingDAO();
          List<RailwayCrossing> allCrossings =
crossingDAO.getAllCrossings();
          for (RailwayCrossing crossing : allCrossings) {
               String status = crossing.getStatus();
               String statusClass =
status.equalsIgnoreCase("Open") ? "status-open" : "status-
               <h3><%=crossing.getName()%></h3>
                    Status: <strong><span class="status"
<%=statusClass%>"><%=crossing.qetStatus()%></span></strong>
                    Person in Charge:
<strong><%=crossing.getPersonInCharge()%></strong>
                    Train Schedules:
<strong><%=crossing.getTrainSchedule()%></strong>
                    Landmark:
<strong><%=crossing.getLandmark()%></strong>
                    Address:
<strong><%=crossing.getAddress()%></strong>
```

databaseConnection.java

```
package com.simpli;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class DatabaseConnection {
    public static final String DRIVER_CLASS="com.mysql.cj.jdbc.Driver";

    private static final String URL = "jdbc:mysql://localhost:3306/railcross";

    private static final String USERNAME = "root";

    private static final String PASSWORD = "Pass@06";

public static Connection getConnection() {
        Connection connection = null;
```

loginServlet.java

```
String email = request.getParameter("email");
               String password = request.getParameter("password");
               // Check if the provided credentials are valid
               UserDAO userDAO = new UserDAO();
               User user = userDAO.getUserByEmail(email);
               if (user != null && user.getPassword().equals(password)) {
                       // Authentication successful
                       // You can store user details in session for further use
                        HttpSession session = request.getSession();
                        session.setAttribute("user", user);
                       // Redirect to a success page or perform any other necessary actions
                        response.sendRedirect("userHome.jsp");
               } else {
                       // Authentication failed
                       // Redirect to an error page or display an error message
                        response.sendRedirect("userRegister.jsp?error=1");
               }
       }
}
```

User.java

```
package com.simpli;

public class User {
    private String name;
    private String email;
```

```
private String password;
public User() {
    super();
public User(String name, String email, String password) {
    this.email = email;
    this.password = password;
public String getName() {
    return name;
public String getEmail() {
    return email;
public String getPassword() {
    return password;
    this.password = password;
```

userDAO

```
package com.simpli;
```

import java.sql.Connection;

```
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
public class UserDAO {
        private Connection connection;
        public UserDAO() {
               // Initialize the database connection
               connection = DatabaseConnection.getConnection();
       }
        public void registerUser(User user) {
               try {
                       String query = "INSERT INTO user_signup (name, email, password) VALUES
(?, ?, ?)";
                       PreparedStatement statement = connection.prepareStatement(query);
                       statement.setString(1, user.getName());
                       statement.setString(2, user.getEmail());
                       statement.setString(3, user.getPassword());
                       statement.executeUpdate();
               } catch (SQLException e) {
                       e.printStackTrace();
               }
       }
        public boolean loginUser(String email, String password) {
               try {
                       String query = "SELECT * FROM user_signup WHERE email=? AND
password=?";
                       PreparedStatement statement = connection.prepareStatement(query);
                       statement.setString(1, email);
```

```
statement.setString(2, password);
                ResultSet resultSet = statement.executeQuery();
                return resultSet.next();
        } catch (SQLException e) {
                e.printStackTrace();
        }
        return false;
}
public User getUserByEmail(String email) {
        try {
                String query = "SELECT * FROM user_signup WHERE email=?";
                PreparedStatement statement = connection.prepareStatement(query);
                statement.setString(1, email);
                ResultSet resultSet = statement.executeQuery();
                if (resultSet.next()) {
                        User user = new User();
                        user.setName(resultSet.getString("name"));
                        user.setEmail(resultSet.getString("email"));
                        user.setPassword(resultSet.getString("password"));
                        return user;
                }
        } catch (SQLException e) {
                e.printStackTrace();
        }
        return null;
}
```

}

```
addCrossing
package com.simpli;
import java.io.IOException;
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(name = "AddCrossingServlet", urlPatterns = { "/addCrossing" })
public class AddCrossingServlet extends HttpServlet {
       private static final long serialVersionUID = 1L;
       protected void doPost(HttpServletRequest request, HttpServletResponse response)
                       throws ServletException, IOException {
               // Retrieve the form data from the request
               String name = request.getParameter("name");
               String address = request.getParameter("address");
               String landmark = request.getParameter("landmark");
               String trainSchedules = request.getParameter("trainSchedules");
               String personInCharge = request.getParameter("personInCharge");
               String status = request.getParameter("status");
               // Create a new RailwayCrossing object with the form data
               RailwayCrossing crossing = new RailwayCrossing();
               crossing.setName(name);
               crossing.setAddress(address);
               crossing.setLandmark(landmark);
```

```
crossing.setTrainSchedule(trainSchedules);
               crossing.setPersonInCharge(personInCharge);
               crossing.setStatus(status);
               // Save the new crossing to the database
                RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();
               crossingDAO.addCrossing(crossing);
               // Redirect to the admin homepage after adding the crossing
               response.sendRedirect("adminHome.jsp");
       }
}
addfavoriteServlet
package com.simpli;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
public class AddToFavoritesServlet extends HttpServlet {
        private static final long serialVersionUID = 1L;
        protected void doPost(HttpServletRequest request, HttpServletResponse response)
                       throws ServletException, IOException {
               String crossingId = request.getParameter("crossingId");
```

```
if (crossingId != null && !crossingId.isEmpty()) {
                        int railwayCrossingId = Integer.parseInt(crossingId);
                       // Perform the database operation to add the crossing to favorites
                        RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();
                       crossingDAO.addToFavorites(railwayCrossingId); // Implement this method in
RailwayCrossingDAO
               }
               // Redirect back to the userHome.jsp page
               response.sendRedirect("userHome.jsp");
       }
}
adminHomepage
package com.simpli;
import java.io.IOException;
import java.util.List;
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("/adminHomePage")
public class AdminHomePageServlet extends HttpServlet {
        private static final long serialVersionUID = 1L;
        private RailwayCrossingDAO crossingDAO;
        public void init() {
```

```
}
        protected void doGet(HttpServletRequest request, HttpServletResponse response)
                        throws ServletException, IOException {
               // Fetch all railway crossing details from the database
               List<RailwayCrossing> crossings = crossingDAO.getAllCrossings();
               // Pass the crossing details to the JSP page
                request.setAttribute("crossings", crossings);
                request.getRequestDispatcher("adminHome.jsp").forward(request, response);
       }
}
Deletecrossing
package com.simpli;
import java.io.IOException;
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("/deleteCrossing")
public class DeleteCrossingServlet extends HttpServlet {
        private static final long serialVersionUID = 1L;
        protected void doPost(HttpServletRequest request, HttpServletResponse response)
                       throws ServletException, IOException {
```

crossingDAO = new RailwayCrossingDAO();

```
// Retrieve the crossing ID from the request
               int crossingId = Integer.parseInt(request.getParameter("id"));
               // Perform the delete operation (implement your logic)
                RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();
               crossingDAO.deleteCrossing(crossingId);
               // Redirect to the admin homepage after the deletion
               response.sendRedirect("adminHome.jsp");
       }
}
railway Crossing DAO\\
package com.simpli;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;
import java.util.List;
public class RailwayCrossingDAO {
        private Connection connection;
        public RailwayCrossingDAO() {
               // Initialize the database connection
               connection = DatabaseConnection.getConnection();
       }
```

```
// Fetch all values from the database
public List<RailwayCrossing> getAllCrossings() {
        List<RailwayCrossing> crossings = new ArrayList<>();
        try {
                String query = "SELECT * FROM railway_crossing";
                PreparedStatement statement = connection.prepareStatement(query);
                ResultSet resultSet = statement.executeQuery();
                while (resultSet.next()) {
                        RailwayCrossing crossing = new RailwayCrossing();
                        crossing.setId(resultSet.getInt("id"));
                        crossing.setName(resultSet.getString("name"));
                        crossing.setAddress(resultSet.getString("address"));
                        crossing.setLandmark(resultSet.getString("landmark"));
                        crossing.setTrainSchedule(resultSet.getString("train_schedule"));
crossing.setPersonInCharge(resultSet.getString("person_in_charge"));
                        crossing.setStatus(resultSet.getString("status"));
                        crossings.add(crossing);
                }
        } catch (SQLException e) {
                e.printStackTrace();
        }
        return crossings;
}
// Search values by id and display it from the database
public RailwayCrossing getCrossingById(int crossingId) {
        RailwayCrossing crossing = null;
        try {
                String query = "SELECT * FROM railway_crossing WHERE id = ?";
```

```
statement.setInt(1, crossingId);
                        ResultSet resultSet = statement.executeQuery();
                        if (resultSet.next()) {
                                crossing = new RailwayCrossing();
                                crossing.setId(resultSet.getInt("id"));
                                crossing.setName(resultSet.getString("name"));
                                crossing.setAddress(resultSet.getString("address"));
                                crossing.setLandmark(resultSet.getString("landmark"));
                                crossing.setTrainSchedule(resultSet.getString("train_schedule"));
        crossing.setPersonInCharge(resultSet.getString("person_in_charge"));
                                crossing.setStatus(resultSet.getString("status"));
                        }
               } catch (SQLException e) {
                        e.printStackTrace();
               }
                return crossing;
       }
        // update the values in the database
        public void updateCrossing(RailwayCrossing crossing) {
               try {
                        String query = "UPDATE railway crossing SET name=?, address=?,
landmark=?, train_schedule=?, person_in_charge=?, status=? WHERE id=?";
                        PreparedStatement statement = connection.prepareStatement(query);
                        statement.setString(1, crossing.getName());
                        statement.setString(2, crossing.getAddress());
                        statement.setString(3, crossing.getLandmark());
                        statement.setString(4, crossing.getTrainSchedule());
                        statement.setString(5, crossing.getPersonInCharge());
                        statement.setString(6, crossing.getStatus());
```

PreparedStatement statement = connection.prepareStatement(query);

```
statement.setInt(7, crossing.getId());
                       statement.executeUpdate();
               } catch (SQLException e) {
                       e.printStackTrace();
               }
       }
       // Delete Railway Crossing
       public void deleteCrossing(int crossingId) {
               try {
                       connection.setAutoCommit(false); // Start transaction
                       // Delete associated favorite crossings
                       String deleteFavoriteCrossingsQuery = "DELETE FROM favorite_crossing
WHERE railway_crossing_id = ?";
                       try (PreparedStatement deleteFavoriteCrossingsStatement = connection
                                       .prepareStatement(deleteFavoriteCrossingsQuery)) {
                               deleteFavoriteCrossingsStatement.setInt(1, crossingId);
                               deleteFavoriteCrossingsStatement.executeUpdate();
                       }
                       // Delete the railway crossing
                       String deleteRailwayCrossingQuery = "DELETE FROM railway_crossing
WHERE id = ?";
                       try (PreparedStatement deleteRailwayCrossingStatement = connection
                                       .prepareStatement(deleteRailwayCrossingQuery)) {
                               deleteRailwayCrossingStatement.setInt(1, crossingId);
                               deleteRailwayCrossingStatement.executeUpdate();
                       }
                       connection.commit(); // Commit the transaction
                       connection.setAutoCommit(true); // Reset auto-commit to true
```

```
} catch (SQLException e) {
                        try {
                                connection.rollback(); // Rollback the transaction if an error occurs
                        } catch (SQLException rollbackException) {
                                rollbackException.printStackTrace();
                        }
                        e.printStackTrace();
                }
       }
        // Add values to the database
        public void addCrossing(RailwayCrossing crossing) {
                try {
                        String query = "INSERT INTO railway_crossing (name, address, landmark,
train_schedule, person_in_charge, status) VALUES (?, ?, ?, ?, ?, ?)";
                        PreparedStatement statement = connection.prepareStatement(query);
                        statement.setString(1, crossing.getName());
                        statement.setString(2, crossing.getAddress());
                        statement.setString(3, crossing.getLandmark());
                        statement.setString(4, crossing.getTrainSchedule());
                        statement.setString(5, crossing.getPersonInCharge());
                        statement.setString(6, crossing.getStatus());
                        statement.executeUpdate();
                } catch (SQLException e) {
                        e.printStackTrace();
                }
       }
        public List<RailwayCrossing> getFavoriteCrossings() {
                List<RailwayCrossing> favoriteCrossings = new ArrayList<>();
```

```
try (Connection connection = DatabaseConnection.getConnection()) {
                        String query = "SELECT rc.* FROM railway_crossing rc"
                                        + "JOIN favorite_crossing fc ON rc.id =
fc.railway_crossing_id";
                        PreparedStatement statement = connection.prepareStatement(query);
                        ResultSet resultSet = statement.executeQuery();
                       while (resultSet.next()) {
                                RailwayCrossing crossing = new RailwayCrossing();
                                crossing.setId(resultSet.getInt("id"));
                                crossing.setName(resultSet.getString("name"));
                                crossing.setAddress(resultSet.getString("address"));
                                crossing.setLandmark(resultSet.getString("landmark"));
                                crossing.setTrainSchedule(resultSet.getString("train_schedule"));
        crossing.setPersonInCharge(resultSet.getString("person in charge"));
                                crossing.setStatus(resultSet.getString("status"));
                               favoriteCrossings.add(crossing);
                       }
               } catch (SQLException e) {
                        e.printStackTrace();
               }
                return favoriteCrossings;
       }
        public void addToFavorites(int crossingId) {
               try (Connection connection = DatabaseConnection.getConnection()) {
                        String sql = "INSERT INTO favorite_crossing (railway_crossing_id) VALUES
(?)";
                        PreparedStatement statement = connection.prepareStatement(sql);
```

```
statement.setInt(1, crossingId);
                       statement.executeUpdate();
               } catch (SQLException e) {
                       e.printStackTrace();
                       // Handle the exception as needed
               }
       }
        public void removeFromFavorites(int crossingId) {
               try (Connection connection = DatabaseConnection.getConnection()) {
                       String sql = "DELETE FROM favorite_crossing WHERE railway_crossing_id =
?";
                       PreparedStatement statement = connection.prepareStatement(sql);
                       statement.setInt(1, crossingId);
                       statement.executeUpdate();
               } catch (SQLException e) {
                       e.printStackTrace();
                       // Handle the exception as needed
               }
       }
}
Updatecrossing
package com.simpli;
import java.io.IOException;
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("/updateCrossing")
public class UpdateCrossingServlet extends HttpServlet {
       private static final long serialVersionUID = 1L;
       protected void doPost(HttpServletRequest request, HttpServletResponse response)
                       throws ServletException, IOException {
               try {
                       // Retrieve the crossing ID from the hidden field
                       String idParam = request.getParameter("crossingId");
                       if (idParam != null && !idParam.isEmpty()) {
                               int crossingId = Integer.parseInt(idParam);
                               // Retrieve the updated details for the crossing
                               String name = request.getParameter("name");
                               String address = request.getParameter("address");
                               String landmark = request.getParameter("landmark");
                               String trainSchedules = request.getParameter("trainSchedules");
                               String personInCharge = request.getParameter("personInCharge");
                               String status = request.getParameter("status");
                               // Create a new RailwayCrossing object with the updated details
                               RailwayCrossing updatedCrossing = new RailwayCrossing();
                               updatedCrossing.setId(crossingId);
                               updatedCrossing.setName(name);
                               updatedCrossing.setAddress(address);
                               updatedCrossing.setLandmark(landmark);
                               updatedCrossing.setTrainSchedule(trainSchedules);
```

```
updatedCrossing.setPersonInCharge(personInCharge);
                               updatedCrossing.setStatus(status);
                               // Perform the update operation
                               RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();
                               crossingDAO.updateCrossing(updatedCrossing);
                               // Redirect to the admin homepage after the update
                               response.sendRedirect("adminHome.jsp");
                       } else {
                               // Handle case where idParam is empty or null
                               throw new ServletException("Crossing ID is missing.");
                       }
               } catch (NumberFormatException e) {
                       // Handle case where idParam is not a valid integer
                       throw new ServletException("Invalid Crossing ID format.", e);
               } catch (Exception e) {
                       // Handle other exceptions
                       throw new ServletException("An error occurred during the crossing
update.", e);
               }
       }
}
```