SOURCE CODES PHASE 02

RAILWAY CROSSING STATUS

SQL QUERIES

- create database railway_crossing_status;
- use railway_crossing_status;
- CREATE TABLE user_signup (
  id INT PRIMARY KEY
  AUTO_INCREMENT, name
  VARCHAR(255) NOT NULL,
  email VARCHAR(255) NOT NULL,
  password VARCHAR(255) NOT NULL
  );
- CREATE TABLE railway_crossing (
  id INT PRIMARY KEY
  AUTO_INCREMENT, name
  VARCHAR(255),
  address VARCHAR(255),
  landmark
  VARCHAR(255),
  train_schedule VARCHAR(255),
  person_in_charge
  VARCHAR(255), status
  VARCHAR(50)
  );
- CREATE TABLE favorite_crossing (

id INT PRIMARY KEY AUTO_INCREMENT,
railway_crossing_id INT,
FOREIGN KEY (railway_crossing_id) REFERENCES railway_crossing(id)
);

web.xml (src/webapp/WEB-INF) :

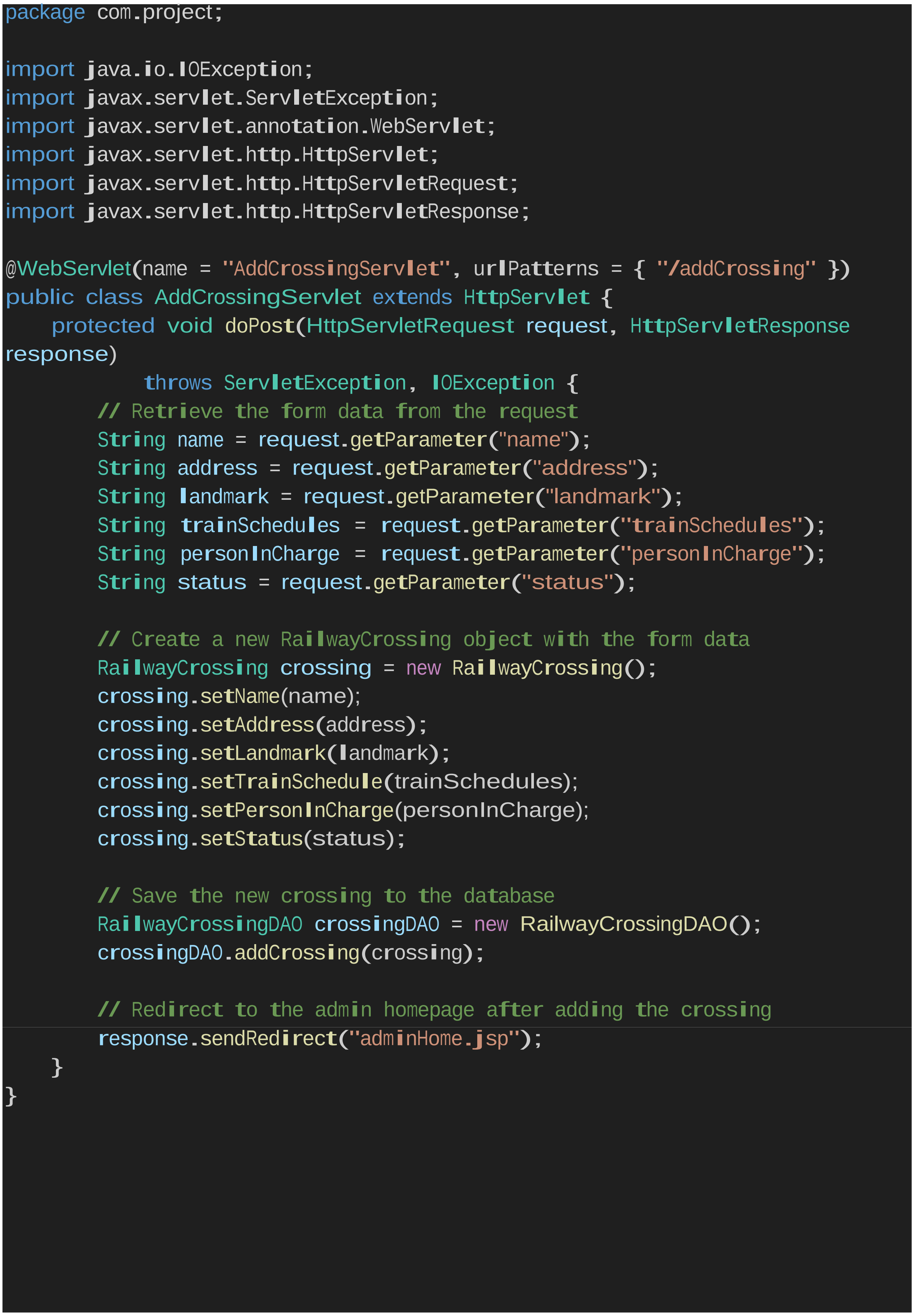
```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="https://jakarta.ee/xml/ns/jakartaee"
      xmlns:web="http://xmlns.jcp.org/xml/ns/javaee"
      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee
https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
      id="WebApp_ID" version="5.0">
      <display-name>RailwayCrossingStatus</display-name>
      <welcome-file-list>
            <welcome-file>HomePage.jsp</welcome-file>
            <welcome-file>index.jsp</welcome-file>
            <welcome-file>index.htm</welcome-file>
            <welcome-file>default.html</welcome-file>
            <welcome-file>default.jsp</welcome-file>
            <welcome-file>default.htm</welcome-file>
      </welcome-file-list>
      <servlet>
            <description></description>
            <display-name>GovernmentServlet</display-name>
```

```xml
        <servlet-name>GovernmentServlet</servlet-name>
        <servlet-class>com.project.GovernmentServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>GovernmentServlet</servlet-name>
        <url-pattern>/GovernmentServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>LoginServlet</display-name>
        <servlet-name>LoginServlet</servlet-name>
        <servlet-class>com.project.LoginServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>LoginServlet</servlet-name>
        <url-pattern>/LoginServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>RegisterServlet</display-name>
        <servlet-name>RegisterServlet</servlet-name>
        <servlet-class>com.project.RegisterServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>RegisterServlet</servlet-name>
        <url-pattern>/RegisterServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>AdminRegisterServlet</display-name>
        <servlet-name>AdminRegisterServlet</servlet-name>
        <servlet-class>com.project.AdminRegisterServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>AdminRegisterServlet</servlet-name>
        <url-pattern>/AdminRegisterServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>AdminLoginServlet</display-name>
        <servlet-name>AdminLoginServlet</servlet-name>
        <servlet-class>com.project.AdminLoginServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>AdminLoginServlet</servlet-name>
        <url-pattern>/AdminLoginServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>AdminHomePageServlet</display-name>
        <servlet-name>AdminHomePageServlet</servlet-name>
        <servlet-class>com.project.AdminHomePageServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>AdminHomePageServlet</servlet-name>
        <url-pattern>/AdminHomePageServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>UpdateCrossingServlet</display-name>
        <servlet-name>UpdateCrossingServlet</servlet-name>
        <servlet-class>com.project.UpdateCrossingServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>UpdateCrossingServlet</servlet-name>
        <url-pattern>/UpdateCrossingServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>DeleteCrossingServlet</display-name>
        <servlet-name>DeleteCrossingServlet</servlet-name>
        <servlet-class>com.project.DeleteCrossingServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>DeleteCrossingServlet</servlet-name>
        <url-pattern>/DeleteCrossingServlet</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>SearchCrossingServlet</display-name>
        <servlet-name>SearchCrossingServlet</servlet-name>
        <servlet-class>com.project.SearchCrossingServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>SearchCrossingServlet</servlet-name>
        <url-pattern>/searchCrossing</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>AddCrossingServlet</display-name>
        <servlet-name>AddCrossingServlet</servlet-name>
        <servlet-class>com.project.AddCrossingServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>AddCrossingServlet</servlet-name>
        <url-pattern>/addCrossing</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>AddToFavoritesServlet</display-name>
        <servlet-name>AddToFavoritesServlet</servlet-name>
        <servlet-class>com.project.AddToFavoritesServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>AddToFavoritesServlet</servlet-name>
        <url-pattern>/addToFavorites</url-pattern>
    </servlet-mapping>
    <servlet>
        <description></description>
        <display-name>RemoveFromFavoritesServlet</display-name>
        <servlet-name>RemoveFromFavoritesServlet</servlet-name>
        <servlet-class>com.project.RemoveFromFavoritesServlet</servlet-
class>
    </servlet>
    <servlet-mapping>
        <servlet-name>RemoveFromFavoritesServlet</servlet-name>
        <url-pattern>/removeFromFavorites</url-pattern>
    </servlet-mapping>
</web-app>
```

pom.xml (RailwayCrossingStatus/pom.xml) :

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.project.railwaycrossing</groupId>
    <artifactId>RailwayCrossingStatus</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <packaging>war</packaging>
    <name>Building an application to communicate the status of railway crossings
        in advance</name>
    <properties>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>
    <dependencies>

        <!-- https://mvnrepository.com/artifact/javax.servlet/jstl -->
        <dependency>
            <groupId>javax.servlet</groupId>
            <artifactId>jstl</artifactId>
            <version>1.2</version>
        </dependency>


        <!-- MySQL Connector -->
        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <version>8.0.33</version>
        </dependency>

        <!-- Jakarta Servlet API -->
        <dependency>
            <groupId>javax.servlet</groupId>
            <artifactId>javax.servlet-api</artifactId>
            <version>4.0.0</version>
            <scope>provided</scope>
        </dependency>

    </dependencies>
    <build>
        <plugins>
            <plugin>
                <artifactId>maven-compiler-plugin</artifactId>
                <version>3.8.1</version>
                <configuration>
                    <release>8</release>
                </configuration>
            </plugin>
            <plugin>
                <artifactId>maven-war-plugin</artifactId>
                <version>3.2.3</version>
            </plugin>
        </plugins>
    </build>
</project>
```

AddCrossingServlet.java (src/main/java/com/project) :



```
package com.project;

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 {
    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");
    }
}
```

AddToFavoritesServlet.java (src/main/java/com/project) :

```
package com.project;

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 {
    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");
    }
}
```

AdminHomePageServlet.java (src/main/java/com/project) :

```
package com.project;

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 RailwayCrossingDAO crossingDAO;

    public void init() {
        crossingDAO = new RailwayCrossingDAO();
    }
    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);
    }
}
```

AdminLoginServlet.java (src/main/java/com/project) :

```
package com.project;

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("/adminLogin")
public class AdminLoginServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    private static final String ADMIN_ID = "Project@roy";
    private static final String ADMIN_PASSWORD = "123";

    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {
        String email = request.getParameter("email");
        String password = request.getParameter("password");

        if (email != null && email.equals(ADMIN_ID) && password != null &&
password.equals(ADMIN_PASSWORD)) {
            response.sendRedirect("adminHome.jsp");
        } else {
            request.getRequestDispatcher("adminLogin.jsp").forward(request,
response);
        }
    }

}
```

DatabaseConnection.java (src/main/java/com/project) :

```java
package com.project;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class DatabaseConnection {
    private static final String URL =
"jdbc:mysql://localhost:3306/railway_crossing_status";
    private static final String USERNAME = "root";
    private static final String PASSWORD = "Kumar@123";

    public static Connection getConnection() {
        Connection connection = null;
        try {
            Class.forName("com.mysql.jdbc.Driver");
            connection = DriverManager.getConnection(URL, USERNAME, PASSWORD);
        } catch (ClassNotFoundException | SQLException e) {
            e.printStackTrace();
        }
        return connection;
    }
}
```

DeleteCrossingServlet.java (src/main/java/com/project) :

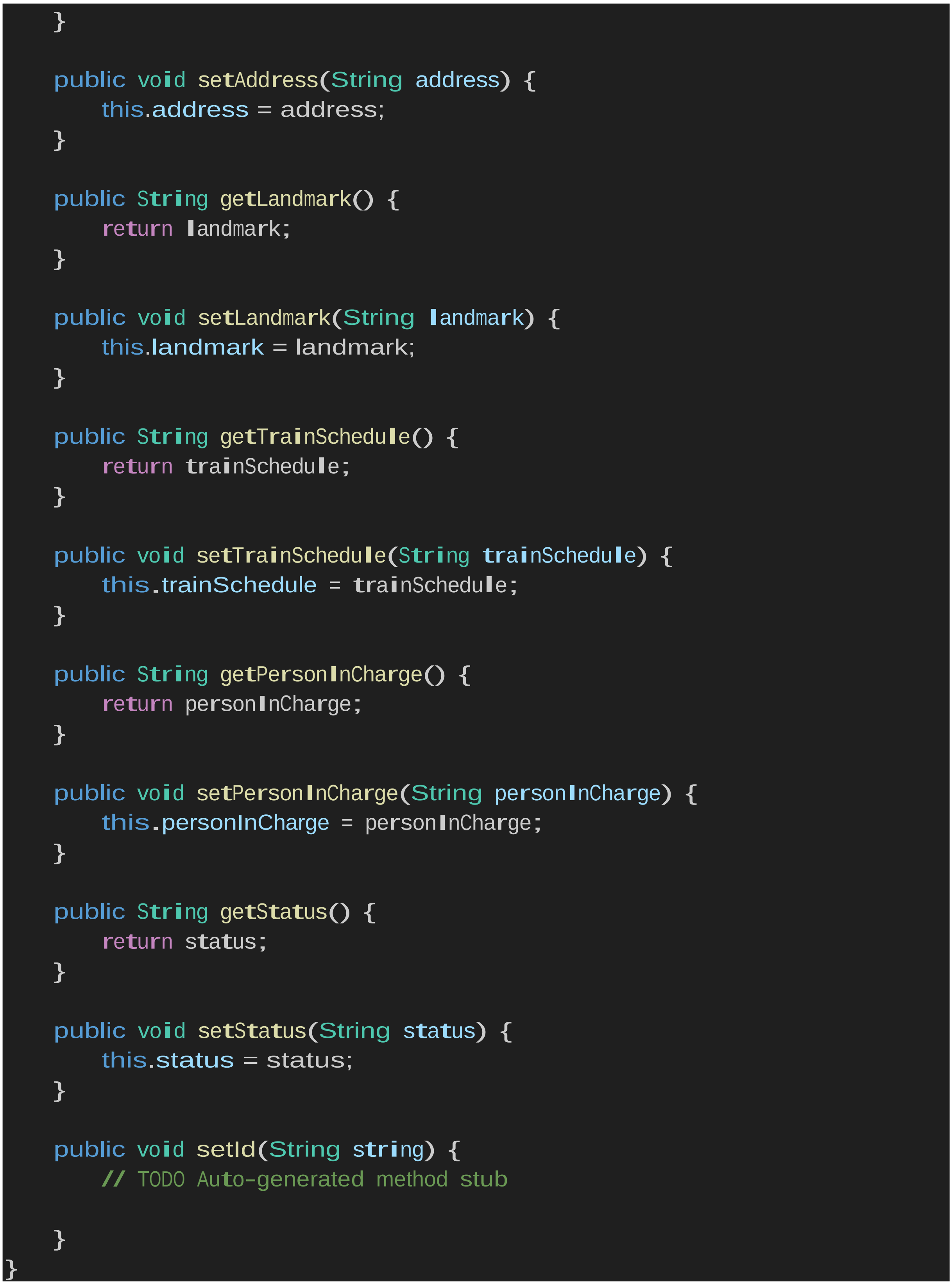
```java
package com.project;

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 {
    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {
        // 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");
    }
}
```

LoginServlet.java (src/main/java/com/project) :

```
package com.project;

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;
import javax.servlet.http.HttpSession;

@WebServlet("/login")
public class LoginServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        // Retrieve the form data
        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");
        }
    }
}
```

RailwayCrossing.java (src/main/java/com/project) :

```
package com.project;

public class RailwayCrossing{
    private int id;
    private String name;
    private String address;
    private String landmark;
    private String trainSchedule;
    private String personInCharge;
    private String status;

    public RailwayCrossing() {
        super();
        // TODO Auto-generated constructor stub
    }

    public RailwayCrossing(int id, String name, String address, String
landmark, String trainSchedule,
            String personInCharge, String status) {
        super();
        this.id = id;
        this.name = name;
        this.address = address;
        this.landmark = landmark;
        this.trainSchedule = trainSchedule;
        this.personInCharge = personInCharge;
        this.status = status;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getAddress() {
        return address;
```

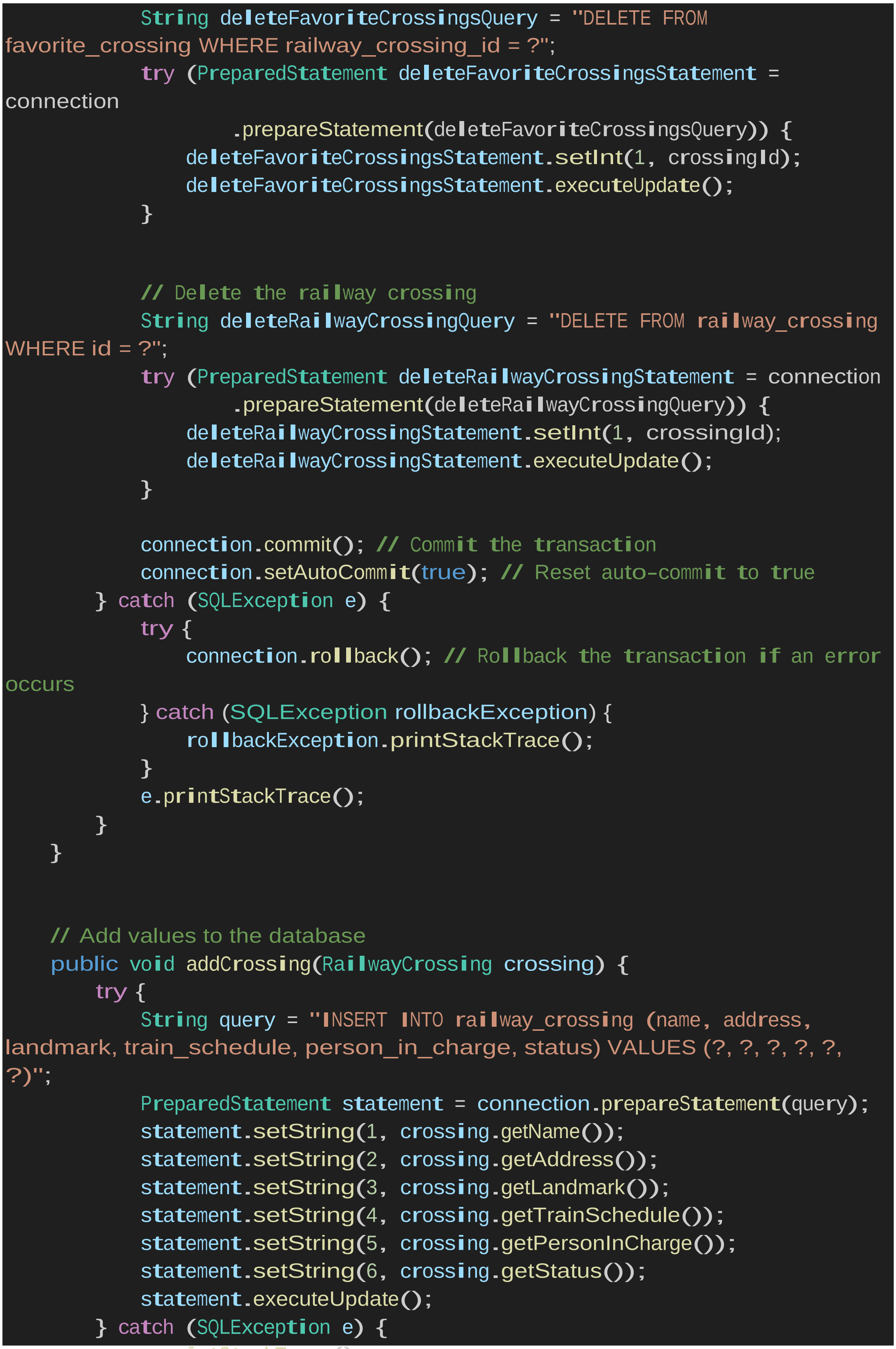


```
    }

    public void setAddress(String address) {
        this.address = address;
    }

    public String getLandmark() {
        return landmark;
    }

    public void setLandmark(String landmark) {
        this.landmark = landmark;
    }

    public String getTrainSchedule() {
        return trainSchedule;
    }

    public void setTrainSchedule(String trainSchedule) {
        this.trainSchedule = trainSchedule;
    }

    public String getPersonInCharge() {
        return personInCharge;
    }

    public void setPersonInCharge(String personInCharge) {
        this.personInCharge = personInCharge;
    }

    public String getStatus() {
        return status;
    }

    public void setStatus(String status) {
        this.status = status;
    }

    public void setId(String string) {
        // TODO Auto-generated method stub

    }
}
```

RailwayCrossingDAO.java (src/main/java/com/project) :

```java
package com.project;

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 = ?";
            PreparedStatement statement = connection.prepareStatement(query);
            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_char
ge"));
                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());
            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
        }
    }

}
```

RegisterServlet.java (src/main/java/com/project) :

```
package com.project;

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;

/**
 * Servlet implementation class  RegisterServlet
 */
@WebServlet("/register")
public class RegisterServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {
        // Retrieve the form data
        String name = request.getParameter("name");
        String email = request.getParameter("email");
        String password = request.getParameter("password");

        // Create a new User object
        User user = new User(name, email, password);

        // Store the user in the database
        UserDAO userDAO = new UserDAO();
        userDAO.registerUser(user);

        // Redirect to a success page or perform any other necessary actions
        response.sendRedirect("userLogin.jsp");
    }

}
```

RemoveFromFavoritesServlet.java (src/main/java/com/project) :

```
package com.project;

import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * Servlet implementation class RemoveFromFavoritesServlet
 */
public class RemoveFromFavoritesServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {
        // TODO Auto-generated method stub
        String crossingId = request.getParameter("crossingId");
        if (crossingId != null && !crossingId.isEmpty()) {
            int railwayCrossingId = Integer.parseInt(crossingId);
            // Perform the database operation to remove the crossing from
favorites
            RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();
            crossingDAO.removeFromFavorites(railwayCrossingId); // Implement
this method in RailwayCrossingDAO
        }
        // Redirect back to the userHome.jsp page
        response.sendRedirect("userHome.jsp");
    }

}
```

SearchCrossingServlet.java (src/main/java/com/project) :

```
package com.project;

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 = "SearchCrossingServlet", urlPatterns = { "/searchCrossing"
})
public class SearchCrossingServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {
        // Retrieve the search ID from the request
        int searchId = Integer.parseInt(request.getParameter("searchId"));

        // Implement your logic to search for the crossing by ID and retrieve
its
        // details from the database
        RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();
        RailwayCrossing crossing = crossingDAO.getCrossingById(searchId);

        // Set the search result in the request attribute
        request.setAttribute("crossing", crossing);

        // Redirect to the admin homepage with the search results
        request.getRequestDispatcher("adminHome.jsp").forward(request,
response);
    }
}
```

UpdateCrossingServlet.java (src/main/java/com/project) :

```
package com.project;

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 {
    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);
        }
    }
}
```

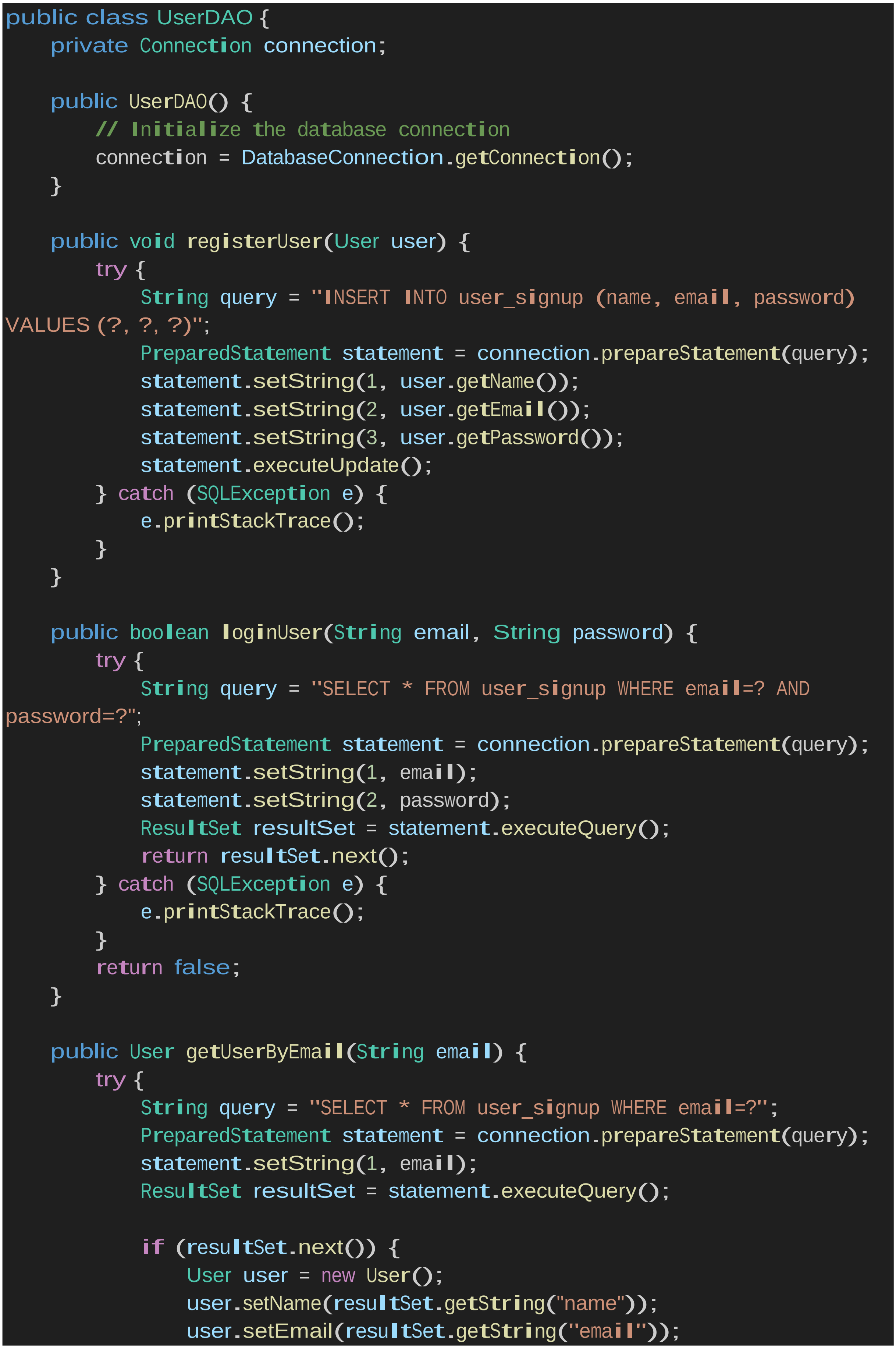
User.java (src/main/java/com/project) :

```
package com.project;
```

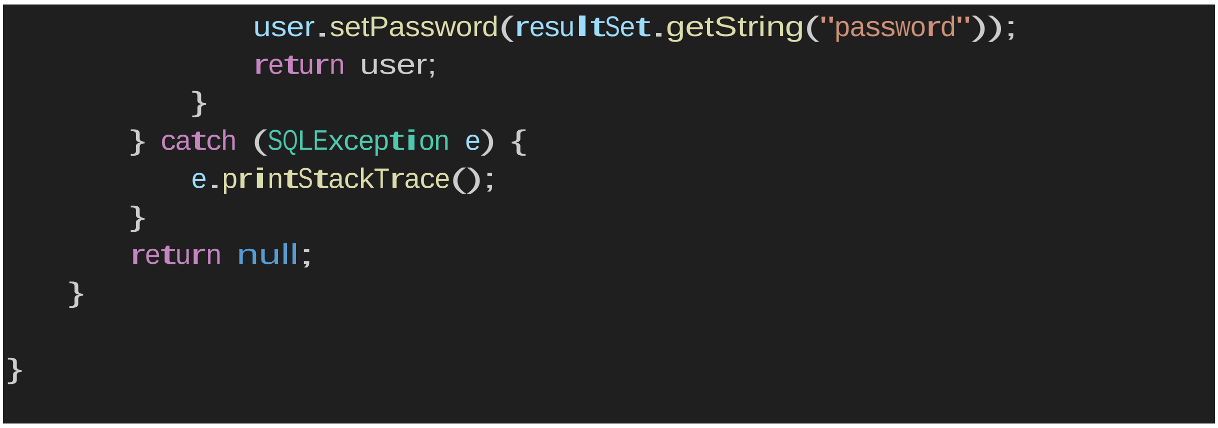
```java
public class User {
    private String name;
    private String email;
    private String password;

    public User() {
        super();
    }

    public User(String name, String email, String password) {
        this.name = name;
        this.email = email;
        this.password = password;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }
}
```

UserDAO.java (src/main/java/com/project) :

```java
package com.project;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
```

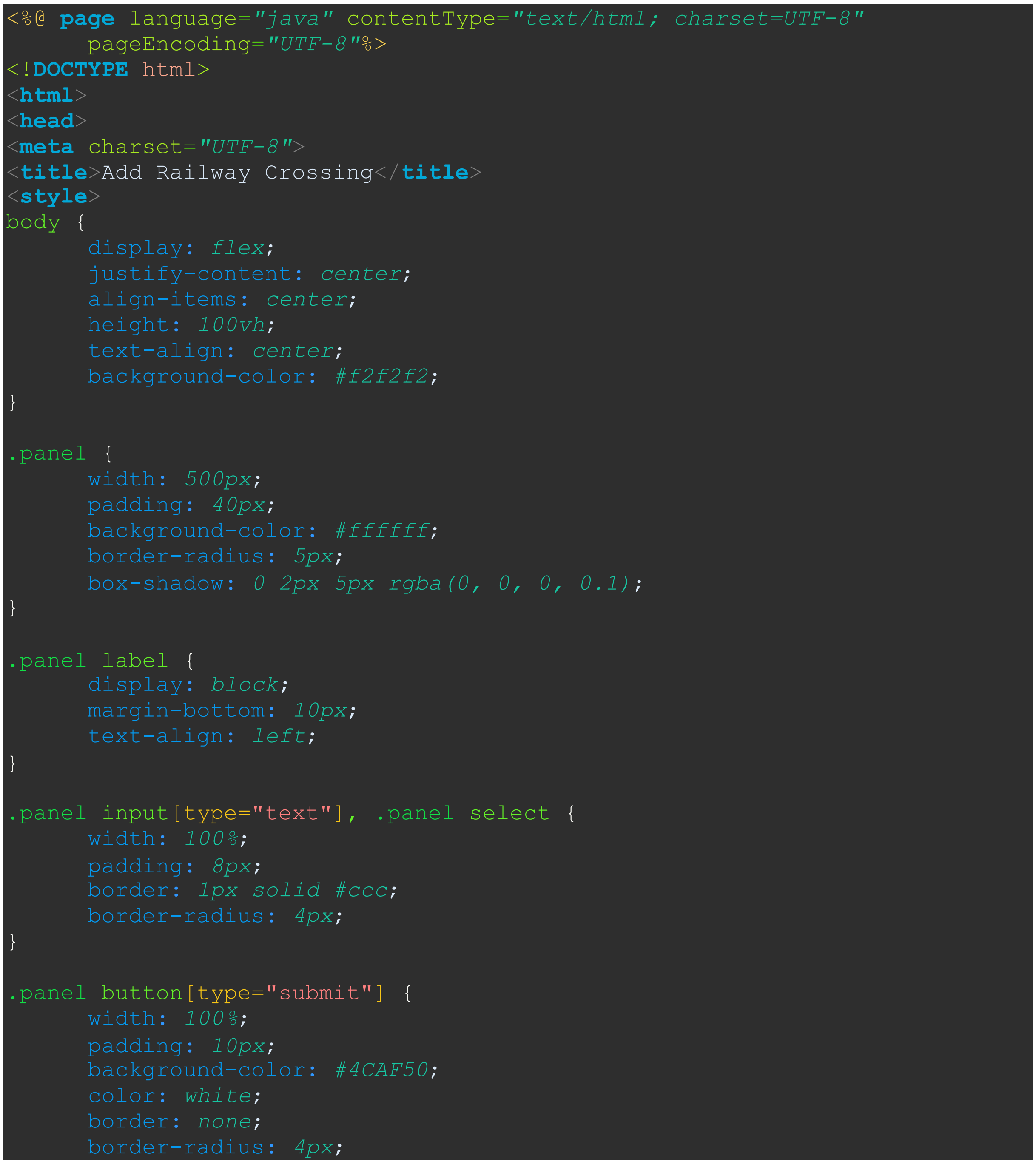


```java
public class UserDAO {
    private Connection connection;

    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;
    }

}
```

addRailCrossingForm.jsp (src/webapp) :

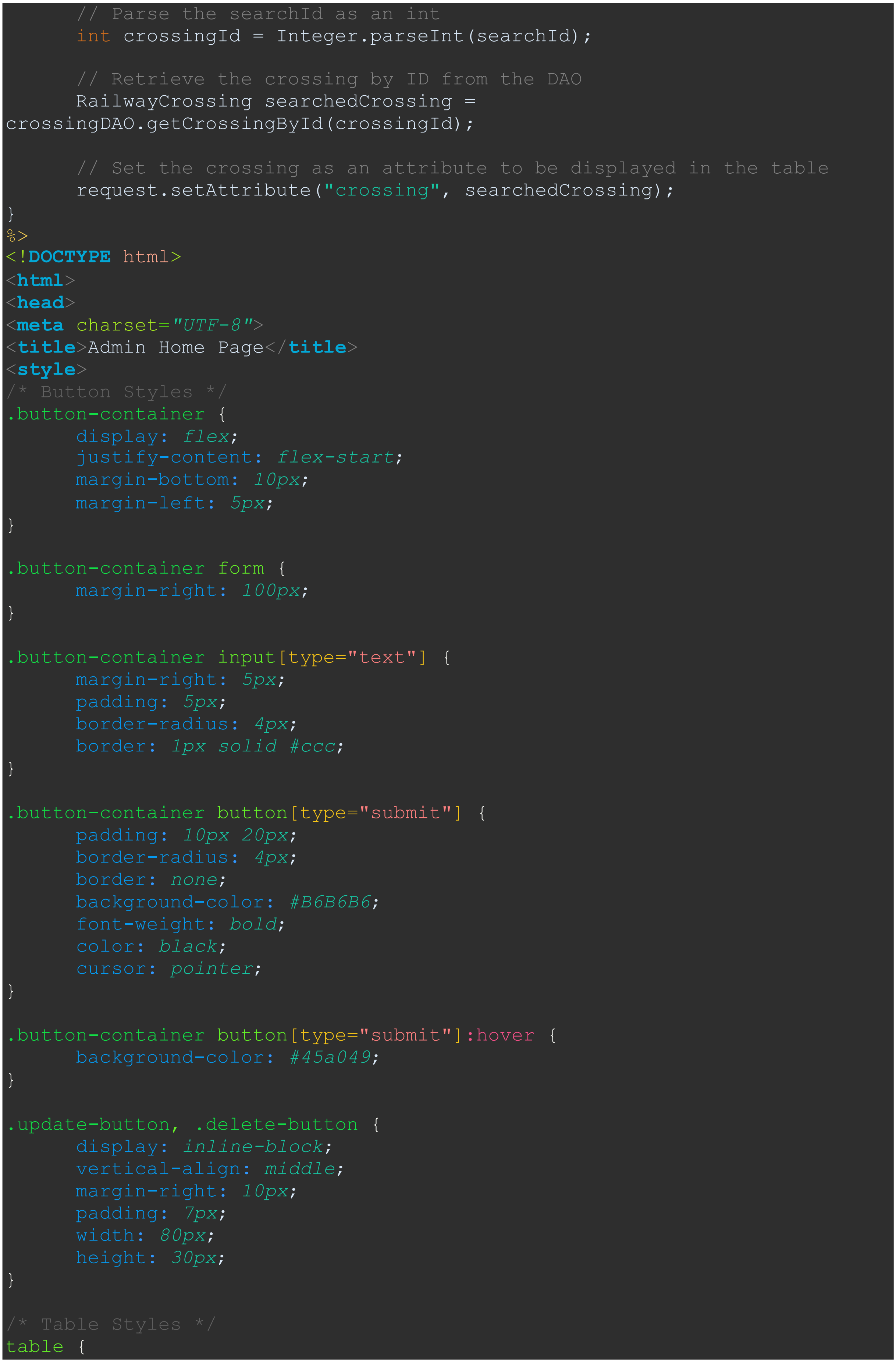


```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Add Railway Crossing</title>
<style>
body {
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      text-align: center;
      background-color: #f2f2f2;
}

.panel {
      width: 500px;
      padding: 40px;
      background-color: #ffffff;
      border-radius: 5px;
      box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
}

.panel label {
      display: block;
      margin-bottom: 10px;
      text-align: left;
}

.panel input[type="text"], .panel select {
      width: 100%;
      padding: 8px;
      border: 1px solid #ccc;
      border-radius: 4px;
}

.panel button[type="submit"] {
      width: 100%;
      padding: 10px;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 4px;
```

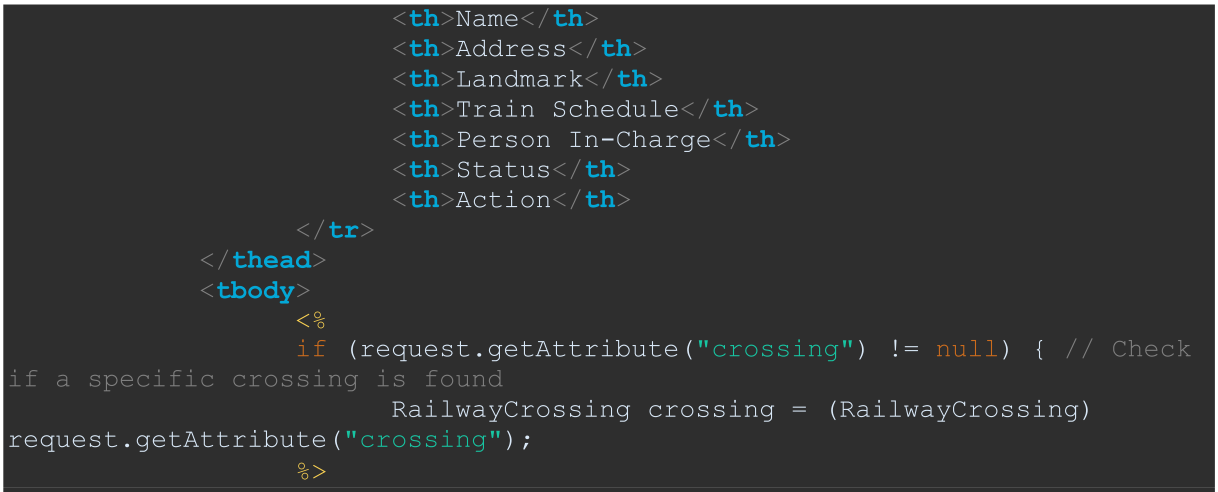
```
	cursor: pointer;
}

.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 type="text"
id="name"
				name="name" required><br> <label
for="address">Address</label>
			<input type="text" id="address" name="address"
required><br>
			<label for="landmark">Landmark</label> <input type="text"
				id="landmark" name="landmark" required><br> <label
				for="trainSchedules">Train Schedules</label> <input
type="text"
				id="trainSchedules" name="trainSchedules"
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"
				name="status">
				<option value="Open">Open</option>
				<option value="Closed">Closed</option>
			</select><br>
			<button type="submit">Submit</button>
		</form>
	</div>
</body>
</html>
```

adminHome.jsp (src/webapp) :

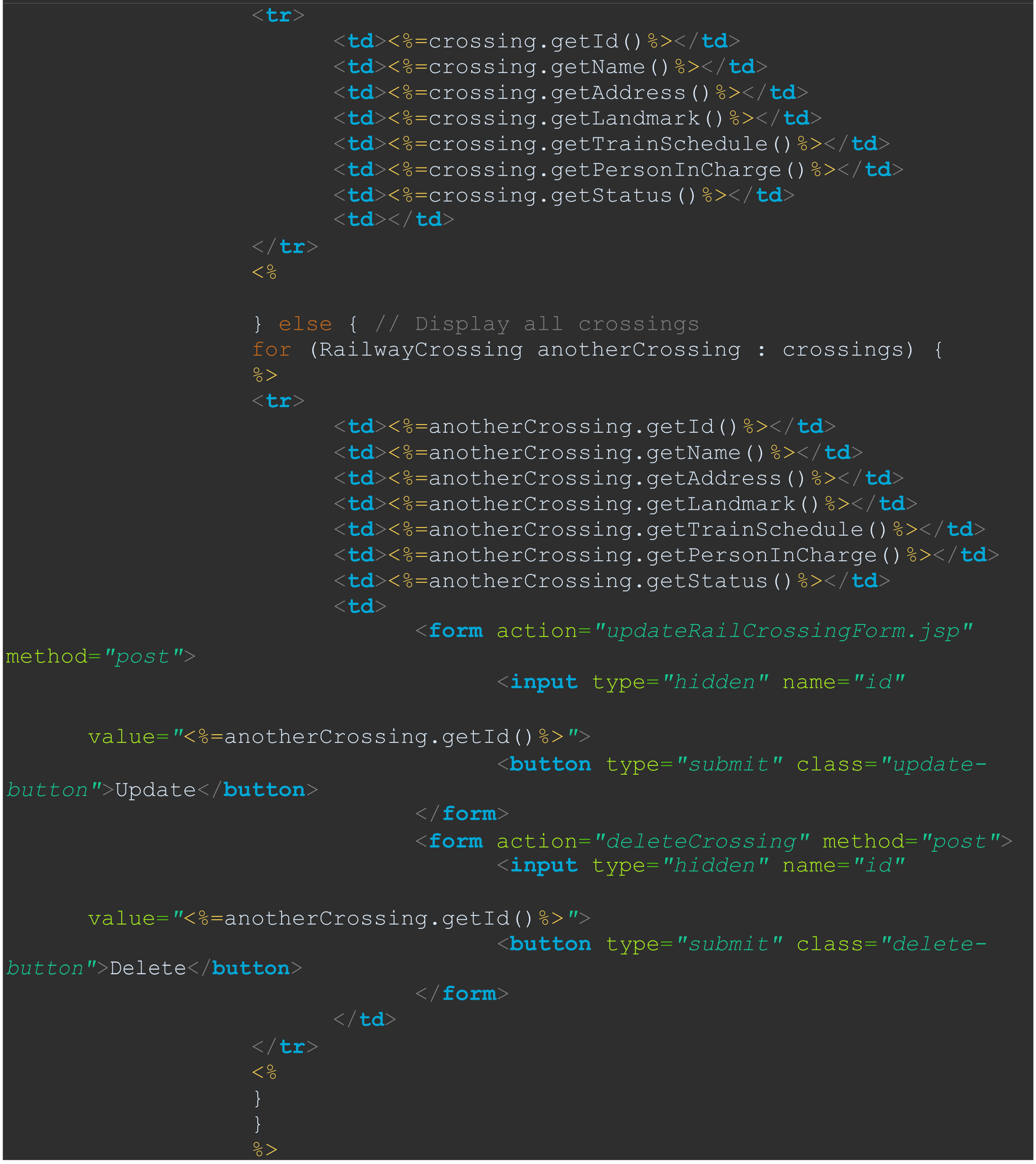
```
<%@ page language="java" contentType="text/html; charset=UTF-8"
	pageEncoding="UTF-8"%>
<%@ page import="com.project.RailwayCrossing"%>
<%@ page import="com.project.RailwayCrossingDAO"%>
<%@ page import="java.util.List"%>

<%
// Create an instance of RailwayCrossingDAO
RailwayCrossingDAO crossingDAO = new RailwayCrossingDAO();

// Retrieve all crossings from the DAO
List<RailwayCrossing> crossings = crossingDAO.getAllCrossings();

// Get the ID from the search request parameter
String searchId = request.getParameter("searchId");

// Check if the searchId parameter is provided
if (searchId != null && !searchId.isEmpty()) {
```



```
      // Parse the searchId as an int
      int crossingId = Integer.parseInt(searchId);

      // Retrieve the crossing by ID from the DAO
      RailwayCrossing searchedCrossing =
crossingDAO.getCrossingById(crossingId);

      // Set the crossing as an attribute to be displayed in the table
      request.setAttribute("crossing", searchedCrossing);
}
%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Admin Home Page</title>
<style>
/* Button Styles */
.button-container {
      display: flex;
      justify-content: flex-start;
      margin-bottom: 10px;
      margin-left: 5px;
}

.button-container form {
      margin-right: 100px;
}

.button-container input[type="text"] {
      margin-right: 5px;
      padding: 5px;
      border-radius: 4px;
      border: 1px solid #ccc;
}

.button-container button[type="submit"] {
      padding: 10px 20px;
      border-radius: 4px;
      border: none;
      background-color: #B6B6B6;
      font-weight: bold;
      color: black;
      cursor: pointer;
}

.button-container button[type="submit"]:hover {
      background-color: #45a049;
}

.update-button, .delete-button {
      display: inline-block;
      vertical-align: middle;
      margin-right: 10px;
      padding: 7px;
      width: 80px;
      height: 30px;
}

/* Table Styles */
table {
      border-collapse: collapse;
      width: 100%;
}

th, td {
      text-align: left;
      padding: 8px;
      border-bottom: 1px solid #ddd;
}

th {
      background-color: #f2f2f2;
}


/* Responsive Styles */
@media only screen and (max-width: 768px) {
      .button-container form {
            margin-right: 5px;
      }
      .update-button, .delete-button {
            float: none;
            margin-right: 5px;
            margin-bottom: 5px;
      }
}
</style>
</head>
<body>
      <h1>Admin Home Page</h1>
      <h3>
            Railway Crossing[<%=crossings.size()%>]
      </h3>

      <!-- Buttons -->
      <div class="button-container">
            <form action="HomePage.jsp" method="post">
                  <button type="submit">Home</button>
            </form>
            <form action="addRailCrossingForm.jsp" method="post">
                  <button type="submit">Add Railway Crossing</button>
            </form>
            <form action="searchCrossing" method="post">
                  <input type="text" name="searchId" placeholder="Enter
ID">

                  <button type="submit">Search Crossing</button>
            </form>
            <form action="adminHome.jsp" method="post">
                  <button type="submit">Display All Railway
Crossings</button>
            </form>
            <!-- Logout Button -->
            <form action="adminRegister.jsp" method="post">
                  <button type="submit">Logout</button>
            </form>
      </div>

      <!-- Table -->
      <table>
            <thead>
                  <tr>
                        <th>Sr.No</th>
```



```
                <th>Name</th>
                <th>Address</th>
                <th>Landmark</th>
                <th>Train Schedule</th>
                <th>Person In-Charge</th>
                <th>Status</th>
                <th>Action</th>
            </tr>
        </thead>
        <tbody>
            <%
            if (request.getAttribute("crossing") != null) { // Check
if a specific crossing is found
                RailwayCrossing crossing = (RailwayCrossing)
request.getAttribute("crossing");
            %>
```



```
            <tr>
                <td><%=crossing.getId()%></td>
                <td><%=crossing.getName()%></td>
                <td><%=crossing.getAddress()%></td>
                <td><%=crossing.getLandmark()%></td>
                <td><%=crossing.getTrainSchedule()%></td>
                <td><%=crossing.getPersonInCharge()%></td>
                <td><%=crossing.getStatus()%></td>
                <td></td>
            </tr>
            <%

            } else { // Display all crossings
            for (RailwayCrossing anotherCrossing : crossings) {
            %>
            <tr>
                <td><%=anotherCrossing.getId()%></td>
                <td><%=anotherCrossing.getName()%></td>
                <td><%=anotherCrossing.getAddress()%></td>
                <td><%=anotherCrossing.getLandmark()%></td>
                <td><%=anotherCrossing.getTrainSchedule()%></td>
                <td><%=anotherCrossing.getPersonInCharge()%></td>
                <td><%=anotherCrossing.getStatus()%></td>
                <td>
                    <form action="updateRailCrossingForm.jsp"
method="post">
                        <input type="hidden" name="id"

    value="<%=anotherCrossing.getId()%>">
                        <button type="submit" class="update-
button">Update</button>
                    </form>
                    <form action="deleteCrossing" method="post">
                        <input type="hidden" name="id"

    value="<%=anotherCrossing.getId()%>">
                        <button type="submit" class="delete-
button">Delete</button>
                    </form>
                </td>
            </tr>
            <%
            }
            }
            %>
```

```
        </tbody>
```

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

adminLogin.jsp (src/webapp) :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Admin Login</title>
<style>
body {
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      text-align: center;
      background-color: #f2f2f2;
}

.panel {
      width: 400px;
      padding: 40px;
      background-color: #ffffff;
      border-radius: 5px;
      box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
}

.panel label {
      display: block;
      margin-bottom: 10px;
      text-align: left;
}

.panel input[type="text"], .panel input[type="password"] {
      width: 100%;
      padding: 10px;
      border: 1px solid #ccc;
      border-radius: 4px;
}

.panel button[type="submit"] {
      width: 100%;
      padding: 10px;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 4px;
      cursor: pointer;
}

.panel button[type="submit"]:hover {
      background-color: #45a049;
}

.panel .signup-link {
      display: block;
      margin-top: 20px;
}
</style>
</head>
<body>
      <div class="panel">
            <h2>Railway Crossing</h2>
            <h4>Admin Login</h4>
            <form action="adminLogin" method="post">
                  <label for="email">Email:</label> <input type="text"
id="email"
                        name="email" required><br> <label
for="password">Password:</label>
                  <input type="password" id="password" name="password"
required><br>
                  <button type="submit">Login</button>
            </form>
      </div>
</body>
</html>
```

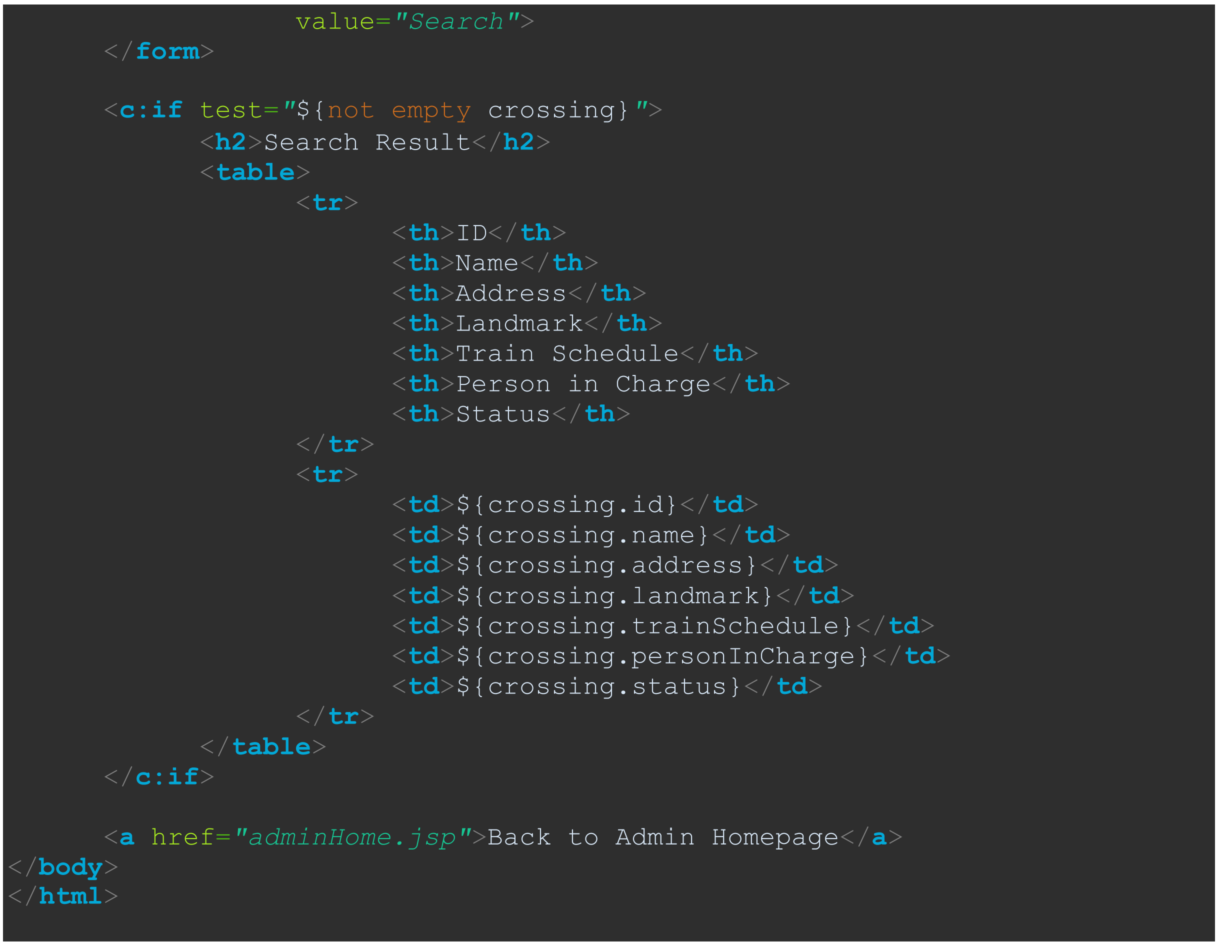
HomePage.jsp (src/webapp) :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<!doctype html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<title>Railway Crossing Status</title>
<link
      href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap
.min.css"
      rel="stylesheet"
      integrity="sha384-
9ndCyUaIbzAi2FUVXJi0CjmCapSmO7SnpJef0486qhLnuZ2cdeRhO02iuK6FUUVM"
      crossorigin="anonymous">

<style>
body {
      background-image:
            url("https://source.unsplash.com/1000x1000/?nature,mountain");
      background-repeat: no-repeat;
      background-size: cover;
}

.navbar-brand span.quiz-text {
      color: red;
}

.navbar-nav.custom-ml-auto {
      margin-left: auto;
}

.navbar-nav.custom-ml-auto .nav-item {
      margin-left: 10px;
}
</style>
</head>
<body>
      <nav
```

```
        class="navbar navbar-expand-lg bg-body-tertiary navbar-dark border-bottom border-bottom-dark"
        data-bs-theme="dark">
        <div class="container-fluid">
            <a class="navbar-brand" href="#">Railway Crossing Status</a>
            <button class="navbar-toggler" type="button"
                data-bs-toggle="collapse" data-bs-target="#navbarSupportedContent"
                aria-controls="navbarSupportedContent" aria-expanded="false"
                aria-label="Toggle navigation">
                <span class="navbar-toggler-icon"></span>
            </button>
            <div class="collapse navbar-collapse" id="navbarSupportedContent">
                <ul class="navbar-nav custom-ml-auto">
                    <!-- Move the "Home", "Quiz", "Login/Signup" links to the right using custom CSS -->
                    <li class="nav-item"><a class="nav-link active"
                        aria-current="page"
href="#">Home</a></li>
                    <li class="nav-item"><a class="nav-link" href="adminLogin.jsp">Admin-Login/Signup</a></li>
                    <li class="nav-item"><a class="nav-link" href="userLogin.jsp">User-Login/Signup</a>
                    </li>
                </ul>
            </div>
        </div>
    </nav>

    <script

    src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"
        integrity="sha384-geWF76RCwLtnZ8qwWowPQNguL3RmwHVBC9FhGdlKrxdiJJigb/j/68SIy3Te4Bkz"
        crossorigin="anonymous"></script>
</body>
</html>
```

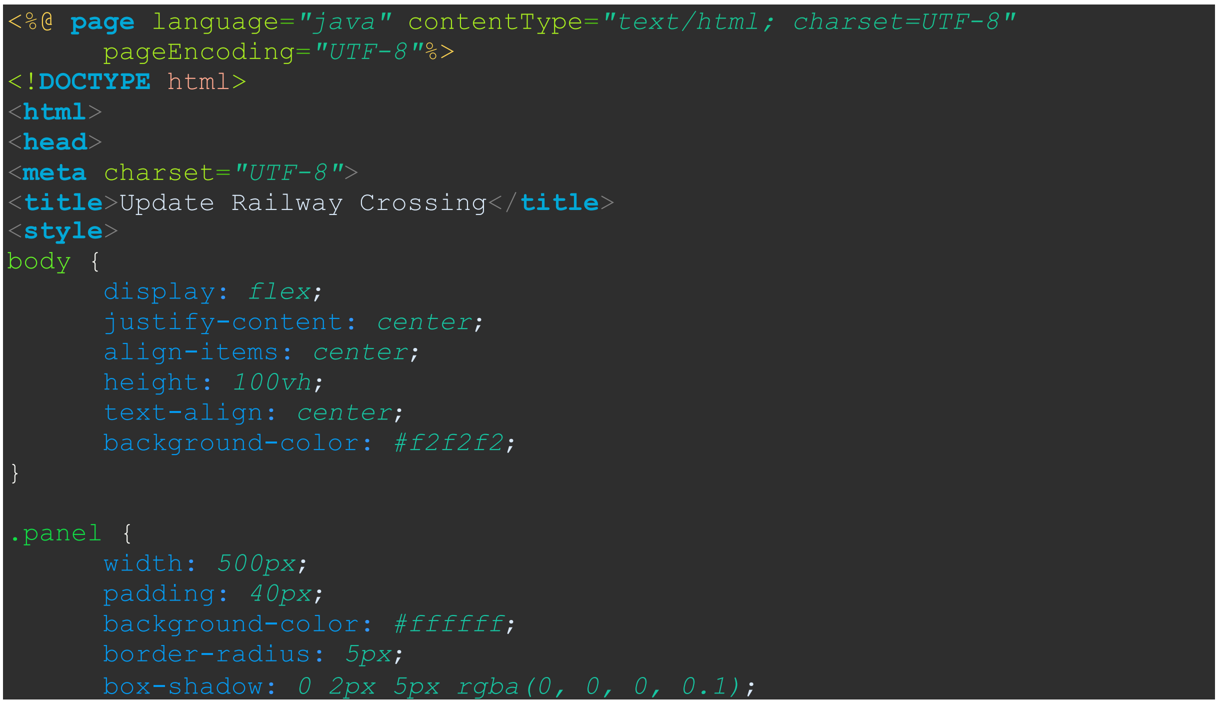
searchCrossing.jsp (src/webapp) :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Search Crossing</title>
</head>

<body>
    <h1>Search Crossing</h1>

    <form action="searchCrossing" method="post">
        <label for="searchId">Search ID:</label> <input type="number"
            id="searchId" name="searchId" required> <input type="submit"
```



```
                  value="Search">
      </form>

      <c:if test="${not empty crossing}">
            <h2>Search Result</h2>
            <table>
                  <tr>
                        <th>ID</th>
                        <th>Name</th>
                        <th>Address</th>
                        <th>Landmark</th>
                        <th>Train Schedule</th>
                        <th>Person in Charge</th>
                        <th>Status</th>
                  </tr>
                  <tr>
                        <td>${crossing.id}</td>
                        <td>${crossing.name}</td>
                        <td>${crossing.address}</td>
                        <td>${crossing.landmark}</td>
                        <td>${crossing.trainSchedule}</td>
                        <td>${crossing.personInCharge}</td>
                        <td>${crossing.status}</td>
                  </tr>
            </table>
      </c:if>

      <a href="adminHome.jsp">Back to Admin Homepage</a>
</body>
</html>
```

updateRailCrossingForm.jsp (src/webapp) :

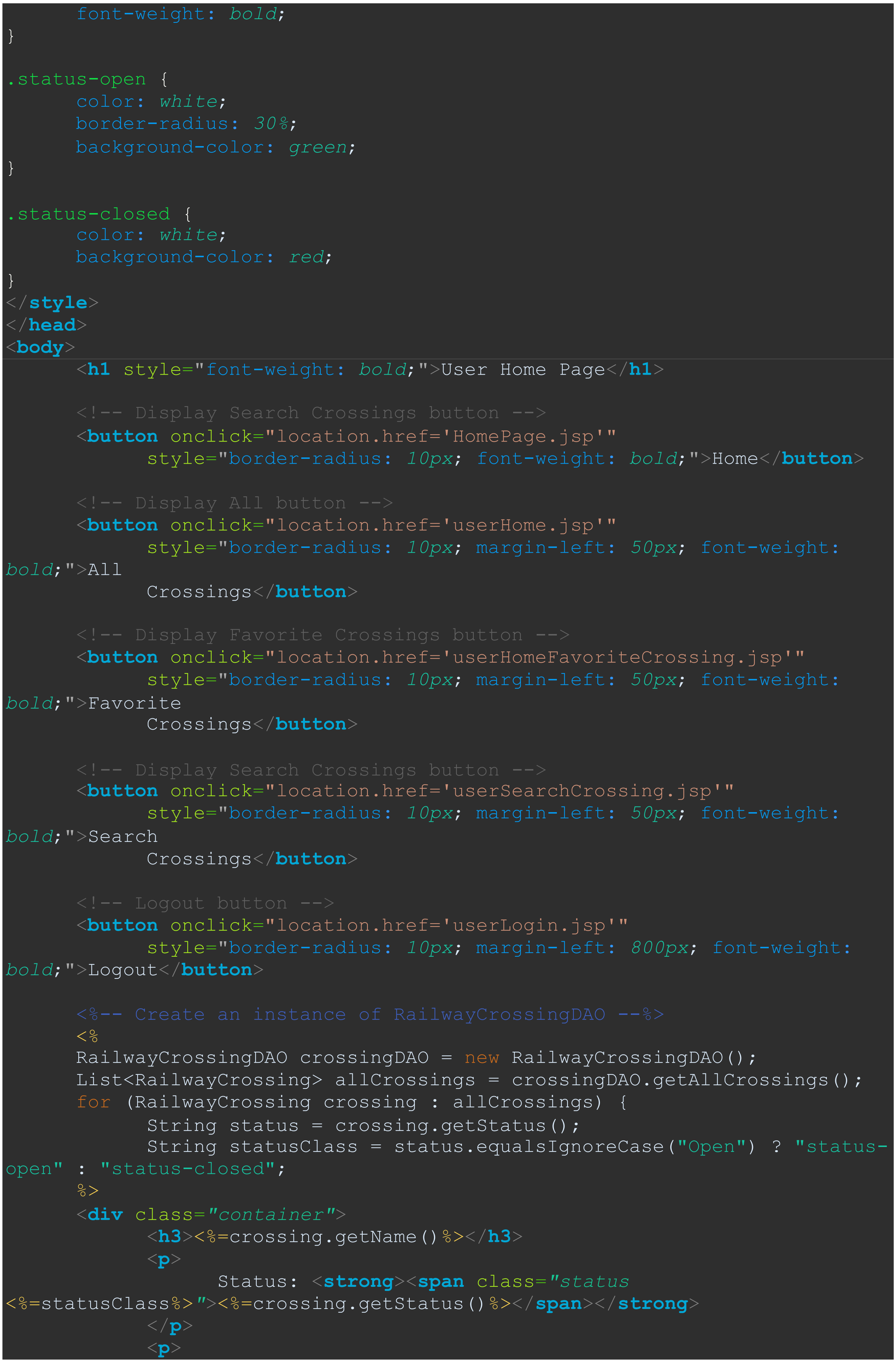


```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Update Railway Crossing</title>
<style>
body {
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      text-align: center;
      background-color: #f2f2f2;
}

.panel {
      width: 500px;
      padding: 40px;
      background-color: #ffffff;
      border-radius: 5px;
      box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
}

.panel label {
      display: block;
      margin-bottom: 10px;
      text-align: left;
}

.panel input[type="text"], .panel select {
      width: 100%;
      padding: 8px;
      border: 1px solid #ccc;
      border-radius: 4px;
}

.panel button[type="submit"] {
      width: 100%;
      padding: 10px;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 4px;
      cursor: pointer;
}

.panel button[type="submit"]:hover {
      background-color: #45a049;
}
</style>
</head>
<body>
      <div class="panel">
            <h2>Railway Crossings</h2>
            <h4>Update Railway Crossing Information</h4>
            <form action="updateCrossing" method="post">
                  <label for="crossingId">Crossing ID</label> <input
type="text"
                        id="crossingId" name="crossingId"
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 type="text"
id="address"
                        name="address" value="${crossing.address}"
required><br>
                  <label for="landmark">Landmark</label> <input type="text"
                        id="landmark" name="landmark"
value="${crossing.landmark}" required><br>
                  <label for="trainSchedules">Train Schedules</label>
<input
                        type="text" id="trainSchedules"
name="trainSchedules"
                        value="${crossing.trainSchedule}" required><br>
<label
                        for="personInCharge">Person in Charge</label>
<input type="text"
                        id="personInCharge" name="personInCharge"
                        value="${crossing.personInCharge}" required><br>
<label
```

```
                        for="status">Crossing Status</label> <select
id="status"
                        name="status">
                        <option value="Open" ${crossing.status == 'Open' ?
'selected' : ''}>Open</option>
                        <option value="Closed"
                              ${crossing.status == 'Closed' ? 'selected' :
''}>Closed</option>
                  </select><br>
                  <button type="submit">Submit</button>
            </form>
      </div>
</body>
</html>
```

userHome.jsp (src/webapp) :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<%@ page import="com.project.RailwayCrossing"%>
<%@ page import="com.project.RailwayCrossingDAO"%>
<%@ page import="java.util.List"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Railway Crossings - User Home Page</title>
<style>
body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 20px;
}

.container {
      border: 1px solid #ccc;
      border-radius: 10px;
      padding: 20px;
      margin-bottom: 20px;
      margin-top: 20px;
}

.container h3 {
      margin-top: 0;
}

.container p {
      margin: 0;
}

.crossing {
      margin-bottom: 10px;
}

.crossing button {
      margin-left: 10px;
}

.status {
      display: inline-block;
      padding: 5px;
```



```
        font-weight: bold;
}

.status-open {
        color: white;
        border-radius: 30%;
        background-color: green;
}

.status-closed {
        color: white;
        background-color: red;
}
</style>
</head>
<body>
        <h1 style="font-weight: bold;">User Home Page</h1>

        <!-- Display Search Crossings button -->
        <button onclick="location.href='HomePage.jsp'"
                style="border-radius: 10px; font-weight: bold;">Home</button>

        <!-- Display All button -->
        <button onclick="location.href='userHome.jsp'"
                style="border-radius: 10px; margin-left: 50px; font-weight:
bold;">All
                Crossings</button>

        <!-- Display Favorite Crossings button -->
        <button onclick="location.href='userHomeFavoriteCrossing.jsp'"
                style="border-radius: 10px; margin-left: 50px; font-weight:
bold;">Favorite
                Crossings</button>

        <!-- Display Search Crossings button -->
        <button onclick="location.href='userSearchCrossing.jsp'"
                style="border-radius: 10px; margin-left: 50px; font-weight:
bold;">Search
                Crossings</button>

        <!-- Logout button -->
        <button onclick="location.href='userLogin.jsp'"
                style="border-radius: 10px; margin-left: 800px; font-weight:
bold;">Logout</button>

        <%-- Create an instance of RailwayCrossingDAO --%>
        <%
        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-closed";
        %>
        <div class="container">
                <h3><%=crossing.getName()%></h3>
                <p>
                        Status: <strong><span class="status
<%=statusClass%>"><%=crossing.getStatus()%></span></strong>
                </p>
                <p>
```

```
            Person in Charge:
<strong><%=crossing.getPersonInCharge()%></strong>
        </p>
        <p>
            Train Schedules:
<strong><%=crossing.getTrainSchedule()%></strong>
        </p>
        <p>
            Landmark: <strong><%=crossing.getLandmark()%></strong>
        </p>
        <p>
            Address: <strong><%=crossing.getAddress()%></strong>
        </p>
        <form action="addToFavorites" method="post" style="display:
inline;">
            <input type="hidden" name="crossingId"
value="<%=crossing.getId()%>">
            <button type="submit"
                style="border-radius: 10px; font-weight: bold;
margin-top: 10px; margin-left: 0px;">ADD
                TO FAVORITES</button>
        </form>
    </div>
    <%
    }
    %>
</body>
</html>
```

userHomeFavoriteCrossing.jsp (src/webapp) :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ page import="com.project.RailwayCrossing"%>
<%@ page import="com.project.RailwayCrossingDAO"%>
<%@ page import="java.util.List"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Railway Crossings - Favorite Crossings</title>
<style>
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 20px;
}

.container {
    border: 1px solid #ccc;
    border-radius: 10px;
    padding: 20px;
    margin-bottom: 20px;
    margin-top: 20px;
}

.container h3 {
    margin-top: 0;
}

.container p {
      margin: 0;
}

.status {
      display: inline-block;
      padding: 5px;
      color: white;
      font-weight: bold;
}

.status-open {
      background-color: green;
}

.status-closed {
      background-color: red;
}
</style>
</head>
<body>
      <h2>User Home Page</h2>

      <!-- Display All button -->
      <button onclick="location.href='userHome.jsp'">All Crossings</button>

      <!-- Favorite Crossings Container -->
      <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-closed";
            %>
            <div class="container">
                  <h3><%=crossing.getName()%></h3>
                  <p>
                        Status: <strong><span class="status
<%=statusClass%>"><%=status%></span></strong>
                  </p>
                  <p>
                        Person in Charge:
<strong><%=crossing.getPersonInCharge()%></strong>
                  </p>
                  <p>
                        Train Schedules:
<strong><%=crossing.getTrainSchedule()%></strong>
                  </p>
                  <p>
                        Landmark:
<strong><%=crossing.getLandmark()%></strong>
                  </p>
                  <p>
                        Address:
<strong><%=crossing.getAddress()%></strong>
                  </p>
                  <form action="removeFromFavorites" method="post"
                        style="display: inline;">
                        <input type="hidden" name="crossingId"
value="<%=crossing.getId()%>">
                        <button type="submit"
                              style="border-radius: 10px; font-weight:
bold; margin-top: 10px;">REMOVE
                              FROM FAVORITES</button>
                  </form>
            </div>
            <%
            }
            %>
      </div>
</body>
</html>
```

userLogin.jsp (src/webapp) :

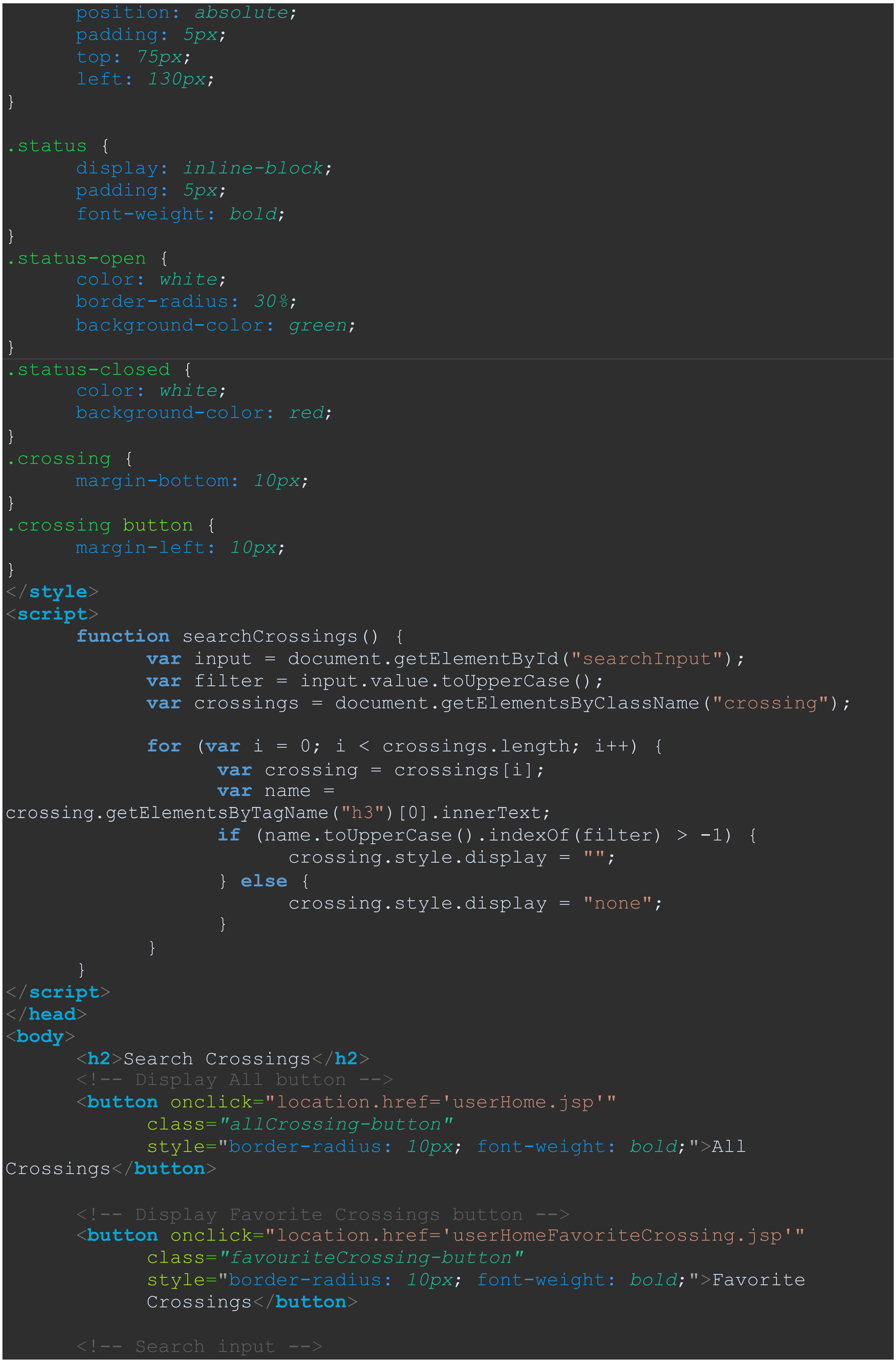
```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>User Login</title>
<style>
body {
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      text-align: center;
      background-color: #f2f2f2;
}

.panel {
      width: 400px;
      padding: 40px;
      background-color: #ffffff;
      border-radius: 5px;
      box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
}

.panel label {
      display: block;
      margin-bottom: 10px;
      text-align: left;
}

.panel input[type="text"], .panel input[type="password"] {
      width: 100%;
      padding: 10px;
      border: 1px solid #ccc;
      border-radius: 4px;
}
.panel button[type="submit"] {
      width: 100%;
      padding: 10px;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 4px;
      cursor: pointer;
}

.panel button[type="submit"]:hover {
      background-color: #45a049;
}
.panel .signup-link {
      display: block;
      margin-top: 20px;
}
</style>
</head>
<body>
      <div class="panel">
            <h2>Railway Crossing</h2>
            <h4>User Login</h4>
            <form action="login" method="post">
                  <label for="email">Email:</label> <input type="text"
id="email"
                        name="email" required><br> <label
for="password">Password:</label>
                  <input type="password" id="password" name="password"
required><br>
                  <button type="submit">Login</button>
            </form>
            <div class="signup-link">
                  <p>
                        Don't have an account? <a
href="userRegister.jsp">Create New
                              Account</a>
                  </p>
            </div>
      </div>
</body>
</html>
```

userRegister.jsp (src/webapp) :

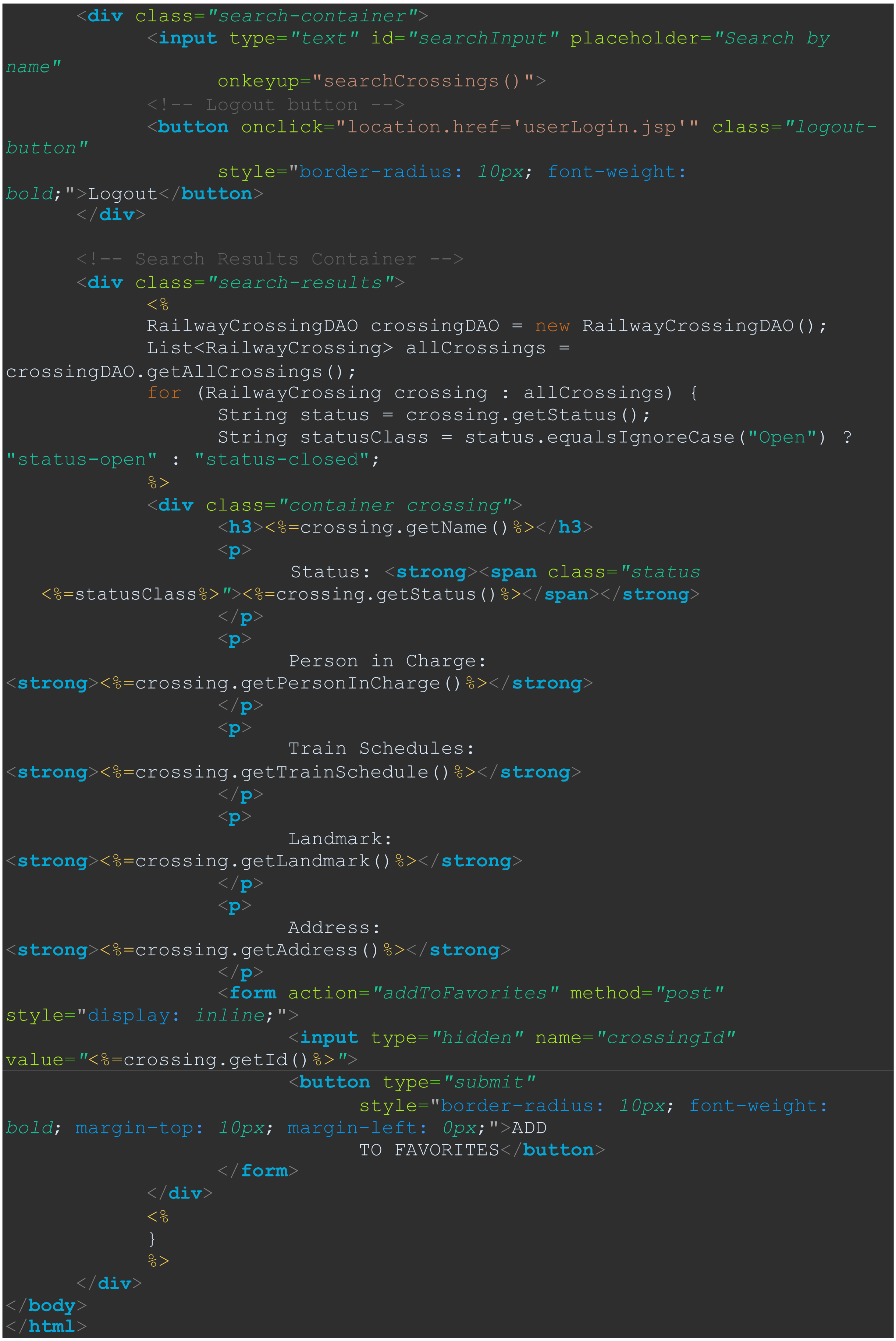
```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>User Registration</title>
<style>
body {
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      text-align: center;
      background-color: #f2f2f2;
}

.panel {
      width: 500px;
      padding: 40px;
      background-color: #ffffff;
      border-radius: 5px;
      box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
}

.panel label {
      display: block;
      margin-bottom: 10px;
      text-align: left;
}

.panel input[type="text"], .panel input[type="password"] {
      width: 100%;
      padding: 10px;
      border: 1px solid #ccc;
      border-radius: 4px;
}

.panel button[type="submit"] {
      width: 100%;
      padding: 10px;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 4px;
      cursor: pointer;
}

.panel button[type="submit"]:hover {
      background-color: #45a049;
}

.panel .signup-link {
      display: block;
      margin-top: 20px;
}
</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 type="text"
id="name"
                        name="name" required><br> <label
for="email">Email:</label>
                  <input type="text" id="email" name="email" required><br>
                  <label for="password">Password:</label> <input
type="password"
                        id="password" name="password" required><br>
                  <button type="submit">Register</button>
            </form>
            <div class="signup-link">
                  <p>
                        Already have an account? <a
href="userLogin.jsp">Sign in</a>
                  </p>
            </div>
      </div>
</body>
</html>
```

userSearchCrossing.jsp (src/webapp) :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<%@ page import="com.project.RailwayCrossing"%>
<%@ page import="com.project.RailwayCrossingDAO"%>
<%@ page import="java.util.List"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Railway Crossings - Search Crossings</title>
<style>
body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 20px;
}

.container {
      border: 1px solid #ccc;
      border-radius: 10px;
      padding: 20px;
      margin-bottom: 20px;
      margin-top: 20px;
}

.container h3 {
      margin-top: 0;
}

.container p {
      margin: 0;
}

.search-container {
      margin-top: 60px;
      margin-bottom: 20px;
}

.search-container input[type="text"] {
      padding: 10px;
      width: 200px;
}

.logout-button {
      position: absolute;
      padding: 10px;
      top: 50px;
      right: 30px;
      border-radius: 10px;
      font-weight: bold;
      top: 50px;
}

.allCrossing-button {
      position: absolute;
      padding: 5px;
      top: 75px;
      left: 10px;
}

.favouriteCrossing-button {
```



```
      position: absolute;
      padding: 5px;
      top: 75px;
      left: 130px;
}

.status {
      display: inline-block;
      padding: 5px;
      font-weight: bold;
}
.status-open {
      color: white;
      border-radius: 30%;
      background-color: green;
}
.status-closed {
      color: white;
      background-color: red;
}
.crossing {
      margin-bottom: 10px;
}
.crossing button {
      margin-left: 10px;
}
</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++) {
                  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>
      <!-- Display All button -->
      <button onclick="location.href='userHome.jsp'"
            class="allCrossing-button"
            style="border-radius: 10px; font-weight: bold;">All
Crossings</button>

      <!-- Display Favorite Crossings button -->
      <button onclick="location.href='userHomeFavoriteCrossing.jsp'"
            class="favouriteCrossing-button"
            style="border-radius: 10px; font-weight: bold;">Favorite
            Crossings</button>

      <!-- Search input -->
```



```
      <div class="search-container">
            <input type="text" id="searchInput" placeholder="Search by
name"
                  onkeyup="searchCrossings()">
            <!-- Logout button -->
            <button onclick="location.href='userLogin.jsp'" class="logout-
button"
                  style="border-radius: 10px; font-weight:
bold;">Logout</button>
      </div>

      <!-- Search Results Container -->
      <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-closed";
            %>
            <div class="container crossing">
                  <h3><%=crossing.getName()%></h3>
                  <p>
                        Status: <strong><span class="status
   <%=statusClass%>"><%=crossing.getStatus()%></span></strong>
                  </p>
                  <p>
                        Person in Charge:
<strong><%=crossing.getPersonInCharge()%></strong>
                  </p>
                  <p>
                        Train Schedules:
<strong><%=crossing.getTrainSchedule()%></strong>
                  </p>
                  <p>
                        Landmark:
<strong><%=crossing.getLandmark()%></strong>
                  </p>
                  <p>
                        Address:
<strong><%=crossing.getAddress()%></strong>
                  </p>
                  <form action="addToFavorites" method="post"
style="display: inline;">
                        <input type="hidden" name="crossingId"
value="<%=crossing.getId()%>">
                        <button type="submit"
                              style="border-radius: 10px; font-weight:
bold; margin-top: 10px; margin-left: 0px;">ADD
                              TO FAVORITES</button>
                  </form>
            </div>
            <%
            }
            %>
      </div>
</body>
</html>
```