

## Quiz Portal Project

### Admin-login.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
<title>Admin Login</title>
<!-- Bootstrap CSS link -->
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
}

.Login-container {
max-width: 400px;
margin: 100px auto;
padding: 20px;
background-color: #ffffff;
border: 1px solid #dee2e6;
border-radius: 5px;
box-shadow: 0 4px 6px rgba(0, 0, 0, 0.1);
}

h1 {
text-align: center;
color: #007bff;
}

form {
margin-top: 20px;
}

.error-message {
color: red;
}

.signup-link {
display: block;
margin-top: 20px;
text-align: center;
}
</style>
</head>
<body>
```

```

<div class="container login-container">
<h1>Admin Login</h1>

<form action="admin-login" method="post">
<div class="form-group">
<label for="username">Username:</label>
<input type="text" class="form-control" id="username" name="username"
required>
</div>

<div class="form-group">
<label for="password">Password:</label>
<input type="password" class="form-control" id="password" name="password"
required>
</div>

<button type="submit" class="btn btn-primary btn-block">Login</button>
</form>

<% if (request.getParameter("error") != null) { %>
<p class="error-message">Invalid username or password</p>
<% } %>

</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## admin-dashboard.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>Admin Dashboard</title>
<!-- Bootstrap CSS link -->
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfspd3yD65VohhpuuCOMLASjC"

```

```

crossorigin="anonymous">
</head>
<body class="bg-light">

<div class="container mt-4">
<h1>Welcome to Admin Dashboard</h1>

<div class="row">
<div class="col-md-6">
<h2>Quiz Manager</h2>
<ul class="list-group">
<li class="list-group-item"><a href="create-quiz.jsp">Create New
Quiz</a></li>
<li class="list-group-item"><a href="quiz-list.jsp">Quiz List</a></li>
</ul>
</div>

<div class="col-md-6">
<h2>Question Manager</h2>
<ul class="list-group">
<li class="list-group-item"><a href="add-question.jsp">Add New Question
(s)</a></li>
<li class="list-group-item"><a href="question-list.jsp">Question
List</a></li>
</ul>
</div>
</div>
</div>
<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL "
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## create-quiz.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

<!DOCTYPE html>
<html lang="en">

```

```

<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>Create Quiz</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWFspD3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
}

.quiz-container {
max-width: 400px;
margin: 100px auto;
padding: 20px;
background-color: #ffffff;
border: 1px solid #dee2e6;
border-radius: 5px;
box-shadow: 0 4px 6px rgba(0, 0, 0, 0.1);
}

h1 {
text-align: center;
color: #007bff;
}
form {
margin-top: 20px;
}

a {
display: block;
margin-top: 20px;
text-align: center;
}
</style>
</head>
<body>

<div class="container quiz-container">
<h1>Create a New Quiz</h1>

<!-- Form for creating a new quiz -->
<form action="create-quiz" method="post">
<div class="form-group">
<label for="quizName">Quiz Name:</label>
<input type="text" class="form-control" id="quizName" name="quizName"
required>

</div>

<button type="submit" class="btn btn-primary btn-block">Create Quiz</button>
</form>

<a href="admin-dashboard.jsp" class="mt-3">Back to Admin Dashboard</a>

```

```

</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNvyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## leaderboard.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<%@ page import="com.LeaderboardEntry" %>
<%@ page import="java.util.List" %>
<%@ page import="com.QuizAttemptDAO" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>Leaderboard</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWFspD3yD65VohhpUuCOmLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
padding: 20px;
}

h1 {
text-align: center;
color: #007bff;
}

table {
width: 100%;
margin-top: 20px;
border-collapse: collapse;
}

th, td {
border: 1px solid #dee2e6;
padding: 8px;
text-align: left;
}

```

```

}

th {
background-color: #007bff;
color: #fff;
}
</style>
</head>
<body>

<div class="container">
<h1>Leaderboard</h1>

<c:if test="${not empty leaderboard}">
<table class="table">
<thead>
<tr>
<th>UserId</th>
<th>Username</th>
<th>QuizId</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<c:forEach var="entry" items="${leaderboard}">
<tr>
<td>${entry.getUserId()}</td>
<td>${entry.getUsername()}</td>
<td>${entry.getQuizId()}</td>
<td>${entry.getScore()}</td>
</tr>
</c:forEach>
</tbody>
</table>
</c:if>
<c:if test="${empty leaderboard}">
<p>No leaderboard entries available.</p>
</c:if>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## logout.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
```

```

pageEncoding="ISO-8859-1"%>
<%@ page import="com.LeaderboardEntry" %>
<%@ page import="java.util.List" %>
<%@ page import="com.QuizAttemptDAO" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>Leaderboard</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
padding: 20px;
}

h1 {
text-align: center;
color: #007bff;
}

table {
width: 100%;
margin-top: 20px;
border-collapse: collapse;
}

th, td {
border: 1px solid #dee2e6;
padding: 8px;
text-align: left;
}

th {
background-color: #007bff;
color: #fff;
}
</style>
</head>
<body>

<div class="container">
<h1>Leaderboard</h1>

<c:if test="${not empty leaderboard}">
<table class="table">
<thead>
<tr>
<th>UserId</th>
<th>Username</th>
<th>QuizId</th>
<th>Score</th>

```

```

</tr>
</thead>
<tbody>
<c:forEach var="entry" items="${leaderboard}">
<tr>
<td>${entry.getUserId()}</td>
<td>${entry.getUsername()}</td>
<td>${entry.getQuizId()}</td>
<td>${entry.getScore()}</td>
</tr>
</c:forEach>
</tbody>
</table>
</c:if>
<c:if test="${empty leaderboard}">
<p>No leaderboard entries available.</p>
</c:if>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## quiz.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

    <%@ page import="com.QuizDAO" %>
    <%@ page import="com.Quiz" %>
    <!DOCTYPE html>
    <html lang="en">
    <head>
    <meta charset="ISO-8859-1">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
    <title>Quiz Page</title>
    <!-- Bootstrap CSS link -->
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpgJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpUuComLASjC"
crossorigin="anonymous">
    <!-- Custom styles -->
    <style>
    body {
background-color: #f8f9fa;

```



```

padding: 20px;
}

h1, h2 {
text-align: center;
color: #007bff;
}

form {
max-width: 400px;
margin: 20px auto;
}

ul {
list-style: none;
padding: 0;
margin: 0;
}

li {
margin-bottom: 10px;
}
</style>
</head>
<body>

<div class="container">
<h1>Welcome to the Quiz</h1>
<!-- Form for adding a new quiz -->
<form action="create-quiz" method="post" class="mb-3">
  <div class="form-group">
<label for="quizName">Quiz Name:</label>
<input type="text" class="form-control" id="quizName" name="quizName"
required>
</div>

<button type="submit" class="btn btn-primary">Create Quiz</button>
</form>

<hr>

<!-- Display quiz list -->
<h2>Quiz List</h2>
<ul>
<% for (Quiz quiz : QuizDAO.getQuizList()) { %>
<li><a href="quiz.jsp?quizId=<%= quiz.getQuizId() %>"><%=
quiz.getQuizName() %></a></li>
<% } %>
</ul>

<!-- Form for adding a new question -->
<form action="add-question" method="post">
<div class="form-group">
<label for="questionText">Question Text:</label>
<input type="text" class="form-control" id="questionText"
name="questionText" required>
</div>
<div class="form-group">

```

```

<label for="answer">Answer:</label>
<input type="text" class="form-control" id="answer" name="answer"
required>
</div>

<!-- Dropdown for selecting a quiz (Assuming you have a method in QuizDAO to
retrieve the quiz list) -->
<div class="form-group">
<label for="quizId">Select Quiz:</label>
<select class="form-control" id="quizId" name="quizId" required>
<% for (Quiz quiz : QuizDAO.getQuizList()) { %>
<option value="<%= quiz.getQuizId() %>"><%= quiz.getQuizName()
%></option>
<% } %>
</select>
</div>

<button type="submit" class="btn btn-primary">Add Question</button>
</form>
</div>
<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script
src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## quiz-attempt.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<%@ page import="com.Question" %>
<%@page import="com.QuizDAO" %>
<%@page import="com.QuestionDAO" %>
<%@page import="java.util.List" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>Attempt Quiz</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpUuCOmLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
padding: 20px;

```

```

}

form {
max-width: 600px;
margin: 20px auto;
}

p {
margin-bottom: 10px;
}

button {
display: block;
margin-top: 20px;
background-color: #007bff;
color: #fff;
padding: 10px;
border: none;
cursor: pointer;
}
</style>
</head>
<body>
<div class="container">
<form action="submit-quiz" method="post">
<% for (Question question : QuestionDAO.getAllQuestions()) { %>
<!-- Render each question here -->
<div class="mb-3">
<p><%= question.getQuestionText() %></p>

<!-- Render options (assuming multiple-choice question) -->
<% for (int i = 1; i <= 4; i++) { %>
<div class="form-check">
<input class="form-check-input" type="radio" name="answer"<%= question.getId() %>"
value="<%= i %>">

<label class="form-check-label"><%= question.getCorrectOption() %></label>
</div>
<% } %>

<!-- Add hidden input to keep track of question ID -->
<input type="hidden" name="questionId"<%= question.getId() %>" value="<%= question.getId()
%>">
</div>
<% } %>

<button type="submit" class="btn btn-primary">Submit Quiz</button>
</form>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNvyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"

```

```
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUt0Bvf08sh+Wy8t+Hhx2NLfQ6xSQ"  
crossorigin="anonymous"></script>  
</body>  
</html>
```

## quiz-list.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"  
    pageEncoding="ISO-8859-1"%>  
  
    <%@ page import="com.QuizDAO" %>  
    <%@ page import="com.Quiz" %>  
    <!DOCTYPE html>  
    <html lang="en">  
    <head>  
    <meta charset="ISO-8859-1">  
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">  
    <title>Quiz List</title>  
    <!-- Bootstrap CSS link -->  
    <link  
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"  
rel="stylesheet"  
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWFspD3yD65VohhpuuCOmLASjC"  
crossorigin="anonymous">  
    <!-- Custom styles -->  
    <style>  
    body {  
    background-color: #f8f9fa;  
    padding: 20px;  
    }  
  
    h1 {  
    text-align: center;  
    color: #007bff;  
    }  
  
    ul {  
    list-style: none;  
    padding: 0;  
    margin: 0;  
    }  
    li {  
    margin-bottom: 10px;  
    }  
  
    a {  
    display: block;  
    margin-top: 20px;  
    text-align: center;  
    color: #007bff;  
    }  
    </style>  
    </head>  
    <body>  
  
    <div class="container">
```

```

<h1>Quiz List</h1>

<!-- Fetch and display quiz list from the database -->
<ul>
<% for (Quiz quiz : QuizDAO.getQuizList()) { %>
<li>
<a href="quiz.jsp?quizId=<%= quiz.getQuizId() %>"><%= quiz.getQuizName %></a>
</li>

<% } %>
</ul>

<a href="admin-dashboard.jsp">Back to Admin Dashboard</a>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPal"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## quiz-page.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>

<%@ page import="com.QuestionDAO" %>
<%@ page import="com.Question" %>
<%@ page import="java.util.List" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
<title>Quiz Page</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfspd3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
padding: 20px;

```

```

}

form {
max-width: 600px;
margin: 20px auto;
}
div {
margin-bottom: 20px;
}

label {
margin-left: 10px;
}
input[type="submit"] {
display: block;
margin-top: 20px;
background-color: #007bff;
color: #fff;
padding: 10px;
border: none;
cursor: pointer;
}
</style>
</head>
<body>
<div class="container">
<form action="submit-quiz" method="post">
<% for (Question question : QuestionDAO.getAllQuestions()) { %>
  <div>
    <%= question.getQuestionText() %>
    <label><input type="radio" name="answer"<%= question.getId() %> "
value="1"> <%= question.getOption1() %> </label>
    <label> <input type="radio" name="answer"<%= question.getId() %> "
value="2"> <%= question.getOption2() %> </label>
    <label><input type="radio" name="answer"<%= question.getId() %> "
value="3"> <%= question.getOption3() %></label>
    <label><input type="radio" name="answer"<%= question.getId() %> "
value="4"> <%= question.getOption4() %></label>
  </div>
  <% } %>
  <input type="submit" class="btn btn-primary" value="Submit Quiz">
</form>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNvyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## submit-quiz.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<%@ page import="com.Question" %>
<%@ page import="java.util.List" %>
<%@ page import="java.util.Map" %>
<%@page import="com.QuestionDAO" %>
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="ISO-8859-1">
  <meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
  <title>Quiz Submission Results</title>
  <!-- Bootstrap CSS link -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWFspdyD65VohhpuuCOmLASjC"
crossorigin="anonymous">
  <!-- Custom styles -->
  <style>
    body {
      background-color: #f8f9fa;
      padding: 20px;
    }

    h1 {
      color: #007bff;
    }
    p {
      font-size: 18px;
      font-weight: bold;
      margin-bottom: 20px;
    }

    p.score {
      color: #28a745;
    }
  </style>
</head>
<body>

  <div class="container">
    <h1>Quiz Submission Results</h1>
    <p class="score">Your Score: <%= request.getAttribute("score") %></p>
  </div>

  <!-- Bootstrap JS and Popper.js -->
  <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
  <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
```

```

integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## add-question.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

    <%@ page import="com.QuizDAO" %>
    <%@ page import="com.Quiz" %>
    <%@ page import="com.QuestionDAO" %>
    <%@ page import="com.Question" %>
    <!DOCTYPE html>
    <html lang="en">
    <head>
    <meta charset="ISO-8859-1">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
    <title>Add Question</title>
    <!-- Bootstrap CSS link -->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
    </head>
    <body>

    <div class="container mt-4">
    <h1>Add a New Question</h1>

    <!-- Form for adding a new question -->
    <form action="add-question" method="post">
    <div class="form-group">
    <label for="questionText">Question Text:</label>
    <input type="text" class="form-control" id="questionText"
name="questionText" required>
    </div>

    <div class="form-group">
    <label for="option1">Option 1:</label>
    <input type="text" class="form-control" id="option1" name="option1"
required>
    </div>
    <div class="form-group">
    <label for="option2">Option 2:</label>
    <input type="text" class="form-control" id="option2" name="option2"
required>
    </div>

    <div class="form-group">
    <label for="option3">Option 3:</label>
    <input type="text" class="form-control" id="option3" name="option3"
required>
    </div>

    <div class="form-group">

```



```

<label for="option4">Option 4:</label>
<input type="text" class="form-control" id="option4" name="option4"
required>
</div>

<div class="form-group">
<label for="correctOption">Correct Option (1-4):</label>
<input type="number" class="form-control" id="correctOption"
name="correctOption" min="1" max="4" required>
</div>

<div class="form-group">
<label for="answer">Answer:</label>
<input type="text" class="form-control" id="answer" name="answer" required>
</div>

<div class="form-group">
<label for="quizId">Select Quiz:</label>
<select class="form-control" id="quizId" name="quizId" required>
<% for (Quiz quiz : QuizDAO.getQuizList()) { %>
<option value="<%= quiz.getQuizId() %>"><%= quiz.getQuizName()
%></option>
<% } %>
</select>
</div>

<button type="submit" class="btn btn-primary">Add Question</button>
</form>

<a class="mt-3 d-block" href="admin-dashboard.jsp">Back to Admin Dashboard</a>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4lsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## add-question-to-quiz.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>

<%@ page import="com.Quiz" %>
<%@ page import="com.QuizDAO" %>
<%@ page import="java.util.List" %>
<!DOCTYPE html>
<html lang="en">
<head>

```

```

<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Add Question to Quiz</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
</head>
<body>

<%
// Retrieve the list of quizzes to select one for adding the question
List<Quiz> quizList = QuizDAO.getQuizList();
%>

<div class="container mt-5">
<h2>Select a Quiz to Add Question:</h2>
<form action="add-question-to-quiz" method="post">
<div class="form-group">
<label for="quizId">Select Quiz:</label>
<select class="form-control" name="quizId" id="quizId">
<% for (Quiz quiz : quizList) { %>
<option value="<%= quiz.getQuizId() %>"><%= quiz.getQuizName()
%></option>
<% } %>
</select>
</div>

<h2>Question Details:</h2>
<div class="form-group">
<label for="questionText">Question Text:</label>
<input type="text" class="form-control" name="questionText" required>
</div>
<div class="form-group">
<label for="option1">Option 1:</label>
<input type="text" class="form-control" name="option1" required>
</div>
<div class="form-group">
<label for="option2">Option 2:</label>
<input type="text" class="form-control" name="option2" required>
</div>
<div class="form-group">
<label for="option3">Option 3:</label>
<input type="text" class="form-control" name="option3" required>
</div>
<div class="form-group">
<label for="option4">Option 4:</label>
<input type="text" class="form-control" name="option4" required>
</div>
<div class="form-group">
<label for="correctOption">Correct Option:</label>
<input type="number" class="form-control" name="correctOption" required>
</div>

<button type="submit" class="btn btn-primary">Add Question</button>
</form>
</div>

```

```

<!-- Bootstrap JS and Popper.js CDN links (required for Bootstrap JavaScript
components) -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
<script
src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.2/dist/umd/popper.min.js"></script>
<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</body>
</html>

```

## question-list.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

    <%@ page import="com.QuestionDAO" %>
    <%@ page import="com.Question" %>
    <%@ page import="com.QuizDAO" %>
    <%@ page import="com.Quiz"%>
    <%@ page import="java.util.List" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>Question List</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
padding: 20px;
}

h1 {
text-align: center;
color: #007bff;
}

ul {
list-style: none;
padding: 0;
}

li {
margin-bottom: 10px;
padding: 10px;
background-color: #ffffff;

```

```

border: 1px solid #dee2e6;
border-radius: 5px;
box-shadow: 0 4px 6px rgba(0, 0, 0, 0.1);
}

a {
display: block;
margin-top: 20px;
text-align: center;
color: #007bff;
}
</style>
</head>
<body>

<div class="container">
<h1>Question List</h1>
<ul>
<% for (Question question : QuestionDAO.getAllQuestions()) { %>
<li>
<%= question.getQuestionText() %> - <%= question.getOption1() %>,
<%= question.getOption2() %>, <%= question.getOption3() %>,
<%= question.getOption4() %> (Correct: <%= question.getCorrectOption()
%>)
</li>
<% } %>
</ul>

<a href="admin-dashboard.jsp">Back to Admin Dashboard</a>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## register.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="ISO-8859-1">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-tofit=no">
<title>User Registration</title>
<!-- Bootstrap CSS link -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"

```

```

rel="stylesheet"
integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<!-- Custom styles -->
<style>
body {
background-color: #f8f9fa;
padding: 20px;
}

h1 {
color: #007bff;
}

form {
max-width: 400px;
margin: 20px auto;
}

input[type="text"],
input[type="password"] {
width: 100%;
padding: 10px;
margin-bottom: 15px;
border: 1px solid #ced4da;
border-radius: 4px;
box-sizing: border-box;
}

input[type="submit"] {
background-color: #007bff;
color: #fff;
padding: 10px 20px;
border: none;
border-radius: 4px;
cursor: pointer;
}

p.error-message {
color: red;
margin-top: 10px;
}
</style>
</head>
<body>

<div class="container">
<h1>User Registration</h1>
<form action="register" method="post">
<div class="form-group">
<label for="username">Username:</label>
<input type="text" id="username" name="username" class="form-control"
required>
</div>
<div class="form-group">
<label for="password">Password:</label>
<input type="password" id="password" name="password" class="form-control"
required>

```

```

</div>
<div class="form-group">
<label for="fullName">Full Name:</label>
<input type="text" id="fullName" name="fullName" class="form-control"
required>
</div>
<input type="submit" class="btn btn-primary" value="Login">
</form>

<% if (request.getParameter("error") != null) { %>
<p class="error-message">Registration failed. Please try again.</p>
<% } %>
</div>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
integrity="sha384-eMNVyHZZJELz4LsuM6FYaiy1ET8tP3qd/Bu9ifCe1ZnM/HzrZZ5HTv4zbggRMPaL "
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
integrity="sha384-B4gt1jrGC7Jh4AgTPSdUtOBvf08sh+Wy8t+Hhx2NlfQ6xSQ"
crossorigin="anonymous"></script>
</body>
</html>

```

## user-dashboard.jsp

```

<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
    <meta charset="UTF-8">
    <title>User Dashboard</title>
    <!-- Add any additional CSS or JS files here -->
</head>
<body>
    <h1>Welcome to the User Dashboard</h1>

    <c:if test="${not empty quizList}">
        <h2>Available Quizzes:</h2>
        <ul>
            <c:forEach var="quiz" items="${quizList}">
                <li>${quiz.quizName}</li>
                <!-- Replace "quizName" with the actual property name in your Quiz class
-->
            </c:forEach>
        </ul>
    </c:if test="${not empty quizList}">

```

```

</c:if>

<!-- Add any additional content or features as needed -->

<!-- Example link to log out -->
<a href="Logout">Logout</a>

<!-- Add any additional HTML, CSS, or JavaScript as needed -->
</body>
</html>

```

## AddQuestionServlets.java

```

package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import com.QuestionDAO;
import com.Question;

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

    /**
     * @see HttpServlet#HttpServlet()
     */
    public AddQuestionServlets() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
        String questionText = request.getParameter("questionText");
        String option1 = request.getParameter("option1");
    }
}

```

```

String option2 = request.getParameter("option2");
String option3 = request.getParameter("option3");
String option4 = request.getParameter("option4");
int correctOption = Integer.parseInt(request.getParameter("correctOption"));
int quizId = Integer.parseInt(request.getParameter("quizId"));

// Add the question
boolean addSuccess = QuestionDAO.addQuestion(questionText, option1, option2,
option3, option4, correctOption);

if (addSuccess) {

// Redirect to a success page or admin dashboard
response.sendRedirect("admin-dashboard.jsp");
} else {
// Redirect to the question addition page with an error message
response.sendRedirect("add-question.jsp?error=1");
}
}
}

```

## AddQuestionToQuizServlet.java

```

package com;

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import com.QuestionDAO;
/**
 * Servlet implementation class AddQuestionToQuizServlet
 */
@WebServlet("/add-question-to-quiz")
public class AddQuestionToQuizServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public AddQuestionToQuizServlet() {
        super();
        // TODO Auto-generated constructor stub
    }
}

```



```

}

/**
26 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
 */
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    // TODO Auto-generated method stub
    response.getWriter().append("Served at: ").append(request.getContextPath());
}

/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    // TODO Auto-generated method stub
    doGet(request, response);
    int quizId = Integer.parseInt(request.getParameter("quizId"));
    int questionId = Integer.parseInt(request.getParameter("questionId"));

    // Add the question to the quiz
    boolean addSuccess = QuestionDAO.addQuestionToQuiz(quizId, questionId);

    if (addSuccess) {
        // Redirect to a success page or admin dashboard
        response.sendRedirect("admin-dashboard.jsp");
    } else {
        // Redirect to the question addition page with an error message
        response.sendRedirect("add-question-to-quiz.jsp?error=1");
    }
}

}

```

## AdminAuthServlet.java

```

package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;

import java.io.IOException;
import com.AdminDAO;
/**
 * Servlet implementation class AdminAuthServlet
 */
@WebServlet("/admin-login")

```

```

public class AdminAuthServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public AdminAuthServlet()
    {
        super();
    }
    // TODO Auto-generated constructor stub
    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
    response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
        String username = request.getParameter("username");
        String password = request.getParameter("password");

        if (AdminDAO.authenticateAdmin(username, password)) {
            // Set admin session attribute for future authorization
            //request.getSession().setAttribute("isAdmin", true);
            HttpSession session = request.getSession();
            session.setAttribute("isAdminLoggedIn", true);
            // Redirect to admin dashboard
            response.sendRedirect("admin-dashboard.jsp");
        } else {
            // Redirect to login page with an error message

            response.sendRedirect("admin-login.jsp?error=1");
        }
    }
}

```

## LogoutServlet.java

```

package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;

```

```

import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;

import java.io.IOException;

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

    /**
     * @see HttpServlet#HttpServlet()
     */
    public LogoutServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
        // Invalidate the session to log out the user
        HttpSession session = request.getSession(false);
        if (session != null) {
            session.invalidate();
        }

        // Redirect to the logout JSP page
        response.sendRedirect(request.getContextPath() + "/logout.jsp");
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }
}

```

## AdminDAO.java

```

package com;

import java.sql.Connection;

import java.sql.PreparedStatement;
import java.sql.ResultSet;

```

```

import java.sql.SQLException;

public class AdminDAO {

    public static boolean authenticateAdmin(String username, String password) {
        try (Connection connection = DBConnection.getConnection());
        PreparedStatement preparedStatement = connection.prepareStatement(
            "SELECT * FROM admin WHERE username=? AND password=?") {
            preparedStatement.setString(1, username);
            preparedStatement.setString(2, password);

            try (ResultSet resultSet = preparedStatement.executeQuery()) {
                return resultSet.next();
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return false;
    }
}

```

## DBConnection.java

```

package com;

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

public class DBConnection {

    private static final String JDBC_URL = "jdbc:mysql://localhost:3306/quiz";
    private static final String DB_USER = "root";
    private static final String DB_PASSWORD = "Sagar@8123";

    static {
        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
            throw new RuntimeException("Error loading MySQL JDBC Driver");
        }
    }

    public static Connection getConnection() throws SQLException {
        return DriverManager.getConnection("jdbc:mysql://localhost:3306, root, Sagar@8123");
    }
}

```

# LeaderboardEntry.java

```
package com;

public class LeaderboardEntry {

    private int userId;
    private String username;
    private int quizId;
    private int score;

    public LeaderboardEntry(int userId, String username, int quizId, int score) {
        this.userId = userId;
        this.username = username;
        this.quizId = quizId;
        this.score = score;
    }

    // Getter and setter methods for each property

    public int getUserId() {
        return userId;
    }

    public void setUserId(int userId) {
        this.userId = userId;
    }

    public String getUsername() {
        return username;
    }

    public void setUsername(String username) {
        this.username = username;
    }

    public int getQuizId() {
        return quizId;
    }

    public void setQuizId(int quizId) {
        this.quizId = quizId;
    }

    public int getScore() {
        return score;
    }

    public void setScore(int score) {
        this.score = score;
    }
}
```

## LeaderBoardServlet.java

```
package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import com.LeaderboardEntry;
import java.util.List;
import com.QuizAttemptDAO;
/**
 * Servlet implementation class LeaderBoardServlet
 */
@WebServlet("/leaderboard")
public class LeaderBoardServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public LeaderBoardServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response) */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
        // Inside the doGet method of LeaderBoardServlet
        int userId = Integer.parseInt(request.getParameter("userId"));
        int quizId = Integer.parseInt(request.getParameter("quizId"));
        int score = Integer.parseInt(request.getParameter("score"));
        String userName = request.getParameter("userName");

        // Save the user's score to the leaderboard
        QuizAttemptDAO.saveLeaderboardEntry(userId, userName, quizId, score);

        // Retrieve leaderboard data from the database using QuizAttemptDAO or another relevant
        DAO
        List<LeaderboardEntry> leaderboard = QuizAttemptDAO.getLeaderboard();

        // Set the leaderboard as an attribute in the request
        request.setAttribute("leaderboard", leaderboard);

        // Forward to the JSP
        request.getRequestDispatcher("leaderboard.jsp").forward(request, response);
    }
}
```

```
/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    // TODO Auto-generated method stub
    doGet(request, response);
}
}
```

## quiz.java

```
package com;

import com.Question;
public class Quiz {

    private int quizId;
    private String quizName;

    public Quiz(int quizId, String quizName) {
        this.quizId = quizId;
        this.quizName = quizName;
    }

    public int getQuizId() {
        return quizId;
    }

    public void setQuizId(int quizId) {
        this.quizId = quizId;
    }

    public String getQuizName() {
        return quizName;
    }

    public void setQuizName(String quizName) {
        this.quizName = quizName;
    }
}
```

## QuizAttemptDAO.java

```
package com;

import java.sql.Connection;

import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;
import java.util.List;
import com.LeaderboardEntry;

public class QuizAttemptDAO {

    public static boolean saveQuizAttempt(int userId, int quizId, int score) {
        boolean success = false;
        String sql = "INSERT INTO quiz_attempts (user_id, quiz_id, score) VALUES (?, ?, ?)";

        try (Connection connection = DBConnection.getConnection();
            PreparedStatement preparedStatement = connection.prepareStatement(sql)) {

            preparedStatement.setInt(1, userId);
            preparedStatement.setInt(2, quizId);
            preparedStatement.setInt(3, score);

            int rowsAffected = preparedStatement.executeUpdate();
            success = rowsAffected > 0;

        } catch (SQLException e) {
            e.printStackTrace();
        }

        return success;
    }

    public static List<LeaderboardEntry> getLeaderboard() {
        List<LeaderboardEntry> leaderboard = new ArrayList<>();

        try (Connection connection = DBConnection.getConnection();
            PreparedStatement preparedStatement = connection.prepareStatement(
                "SELECT username, score FROM quiz_attempts ORDER BY score DESC LIMIT 10")) {

            try (ResultSet resultSet = preparedStatement.executeQuery()) {
                while(resultSet.next()) {
                    int userId = resultSet.getInt("userId");
                    String username = resultSet.getString("username");
                    int quizId = resultSet.getInt("quizId");
                    int score = resultSet.getInt("score");

                    LeaderboardEntry entry = new LeaderboardEntry(userId, username, quizId, score);
                    leaderboard.add(entry);
                }
            }

        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}
```



```

    }
    return leaderboard;
}
public static void saveLeaderboardEntry(int userId, String userName, int quizId,
int score) {
    PreparedStatement preparedStatement = null;

    try {
        Connection connection = DBConnection.getConnection();

        String sql = "INSERT INTO leaderboard (user_id, user_name, quiz_id,score) VALUES
(?, ?, ?, ?)";

        preparedStatement = connection.prepareStatement(sql);
        preparedStatement.setInt(1, userId);
        preparedStatement.setString(2, userName);
        preparedStatement.setInt(3, quizId);
        preparedStatement.setInt(4, score);

        preparedStatement.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    }
}
}
}

```

## QuizAttemptServlet.java

```

package com;

import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;

import java.io.IOException;
import com.QuizAttemptDAO;
import com.QuizDAO;
import com.Question;
import java.util.List;

/**
 * Servlet implementation class QuizAttemptServlet
 */
@WebServlet("/quiz-attempt")
public class QuizAttemptServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */

```

```

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

/**
 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
 */
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    // TODO Auto-generated method stub
    response.getWriter().append("Served at: ").append(request.getContextPath());

}

/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    // TODO Auto-generated method stub
    doGet(request, response);
    // Retrieve quiz ID from the request
    int quizId = Integer.parseInt(request.getParameter("quizId"));

    // Fetch questions for the quiz (you should implement QuizDAO and QuestionDAO)
    List<Question> questionList = QuizDAO.getQuestionsForQuiz(quizId);

    // Set the questions in the request attribute for JSP
    request.setAttribute("questionList", questionList);

    // Forward the request to the quiz page
    RequestDispatcher dispatcher = request.getRequestDispatcher("quiz-page.jsp");
    dispatcher.forward(request, response);

}

}

```

## QuizCreationServlet.java

```

package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;

```

```

import com.QuizDAO;
import com.QuestionDAO;
/**
 * Servlet implementation class QuizCreationServlet
 */
@WebServlet("/create-quiz")
public class QuizCreationServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public QuizCreationServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
    response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
        String quizName = request.getParameter("quizName");

        // You might want to add validation for quizName here
        // Create the quiz
        boolean creationSuccess = QuizDAO.createQuiz(quizName);

        if (creationSuccess) {
            // Redirect to a success page or admin dashboard
            response.sendRedirect("admin-dashboard.jsp");
        } else {
            // Redirect to the creation page with an error message
            response.sendRedirect("create-quiz.jsp?error=1");
        }
    }
}

```

## UserDashboardServlet.java

```
package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.util.List;
import com.Quiz;
import com.QuizDAO;
/**
 * Servlet implementation class UserDashboardServlet
 */
@WebServlet("/user-dashboard")
public class UserDashboardServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public UserDashboardServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
        // Retrieve the list of quizzes from the database using QuizDAO or another relevant DAO
        List<Quiz> quizList = QuizDAO.getQuizList();

        // Set the quiz list as an attribute in the request
        request.setAttribute("quizList", quizList);

        // Forward to the User Dashboard JSP
        request.getRequestDispatcher("user-dashboard.jsp").forward(request, response);
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }
}
```

## UserDAO.java

```
package com;

import java.sql.Connection;

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

public class UserDAO {

    public static boolean registerUser(String username, String password, String fullName) {
        try (Connection connection = DBConnection.getConnection());
        PreparedStatement preparedStatement = connection.prepareStatement("INSERT INTO users
(username, password, full_name) VALUES (?, ?, ?)")) {
            preparedStatement.setString(1, username);
            preparedStatement.setString(2, password);
            preparedStatement.setString(3, fullName);

            int rowsAffected = preparedStatement.executeUpdate();
            return rowsAffected > 0;
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return false;
    }

    public static boolean authenticateUser(String username, String password) {
        try (Connection connection = DBConnection.getConnection());
        PreparedStatement preparedStatement = connection.prepareStatement("SELECT * FROM users
WHERE username=sagar AND password=sagar123")) {
            preparedStatement.setString(1, username);
            preparedStatement.setString(2, password);

            try (ResultSet resultSet = preparedStatement.executeQuery()) {
                return resultSet.next();
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return false;
    }
}
```

## UserDashboardServlet.java

```
package com;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.util.List;
import com.Quiz;
import com.QuizDAO;
/**
 * Servlet implementation class UserDashboardServlet
 */
@WebServlet("/user-dashboard")
public class UserDashboardServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public UserDashboardServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at: ").append(request.getContextPath());
        // Retrieve the list of quizzes from the database using QuizDAO or another relevant DAO
        List<Quiz> quizList = QuizDAO.getQuizList();

        // Set the quiz list as an attribute in the request
        request.setAttribute("quizList", quizList);

        // Forward to the User Dashboard JSP
        request.getRequestDispatcher("user-dashboard.jsp").forward(request, response);
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }

}
```

## web.xml

```
<?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"
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>OnlineQuizPortal</display-name>
  <welcome-file-list>
    <welcome-file>admin-login.jsp</welcome-file>
    <welcome-file>register.jsp</welcome-file>
    <welcome-file>user-dashboard.jsp</welcome-file>
    <welcome-file>admin-dashboard.jsp</welcome-file>
    <welcome-file>create-quiz.jsp</welcome-file>
    <welcome-file>leaderboard.jsp</welcome-file>
    <welcome-file>question-list.jsp</welcome-file>
    <welcome-file>quiz.jsp</welcome-file>
    <welcome-file>quiz-list.jsp</welcome-file>
    <welcome-file>add-question.jsp</welcome-file>
    <welcome-file>add-question-to-quiz.jsp</welcome-file>
    <welcome-file>logout.jsp</welcome-file>
    <welcome-file>submit-quiz.jsp</welcome-file>
    <welcome-file>index.html</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>AdminAuthServlet</display-name>
    <servlet-name>AdminAuthServlet</servlet-name>
    <servlet-class>com.servlet.AdminAuthServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>AdminAuthServlet</servlet-name>
    <url-pattern>/AdminAuthServlet</url-pattern>
  </servlet-mapping>
  <servlet>
    <description></description>
    <display-name>AdminDashboard</display-name>
    <servlet-name>AdminDashboard</servlet-name>
    <servlet-class>com.servlet.AdminDashboard</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>AdminDashboard</servlet-name>
    <url-pattern>/AdminDashboard</url-pattern>
  </servlet-mapping>
  <servlet>
    <description></description>
    <display-name>QuizCreationServlet</display-name>
    <servlet-name>QuizCreationServlet</servlet-name>
    <servlet-class>com.servlet.QuizCreationServlet</servlet-class>
  </servlet>
  <servlet-mapping>
```

```

<servlet-name>QuizCreationServlet</servlet-name>
<url-pattern>/QuizCreationServlet</url-pattern>
</servlet-mapping>
<servlet>
<description></description>
<display-name>UserAuthenticationServlet</display-name>
<servlet-name>UserAuthenticationServlet</servlet-name>
<servlet-class>com.servlet.UserAuthenticationServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>UserAuthenticationServlet</servlet-name>
<url-pattern>/UserAuthenticationServlet</url-pattern>
</servlet-mapping>
<servlet>
<description></description>
<display-name>QuizAttemptServlet</display-name>
<servlet-name>QuizAttemptServlet</servlet-name>
<servlet-class>com.servlet.QuizAttemptServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>QuizAttemptServlet</servlet-name>
<url-pattern>/QuizAttemptServlet</url-pattern>
</servlet-mapping>
<servlet>
<description></description>
<display-name>LeaderBoardServlet</display-name>
<servlet-name>LeaderBoardServlet</servlet-name>
<servlet-class>com.servlet.LeaderBoardServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>LeaderBoardServlet</servlet-name>
<url-pattern>/LeaderBoardServlet</url-pattern>
</servlet-mapping>
<servlet>
<description></description>
<display-name>AddQuestionServlet</display-name>
<servlet-name>AddQuestionServlet</servlet-name>
<servlet-class>com.AddQuestionServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>AddQuestionServlet</servlet-name>
<url-pattern>/AddQuestionServlet</url-pattern>
</servlet-mapping>
<servlet>
<description></description>
<display-name>AddQuestionServlets</display-name>
<servlet-name>AddQuestionServlets</servlet-name>
<servlet-class>com.servlet.AddQuestionServlets</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>AddQuestionServlets</servlet-name>
<url-pattern>/AddQuestionServlets</url-pattern>
</servlet-mapping>
<servlet>
<description></description>
<display-name>AddQuestionToQuizServlet</display-name>
<servlet-name>AddQuestionToQuizServlet</servlet-name>
<servlet-class>com.servlet.AddQuestionToQuizServlet</servlet-class>

```



```
</servlet>
<servlet-mapping>
<servlet-name>AddQuestionToQuizServlet</servlet-name>
<url-pattern>/AddQuestionToQuizServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
<display-name>QuestionListServlet</display-name>
<servlet-name>QuestionListServlet</servlet-name>
<servlet-class>com.servlet.QuestionListServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>QuestionListServlet</servlet-name>
<url-pattern>/QuestionListServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>UserDashboardServlet</display-name>
  <servlet-name>UserDashboardServlet</servlet-name>
  <servlet-class>com.servlet.UserDashboardServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>UserDashboardServlet</servlet-name>
<url-pattern>/UserDashboardServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>SubmitQuizServlet</display-name>
  <servlet-name>SubmitQuizServlet</servlet-name>
  <servlet-class>com.servlet.SubmitQuizServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>SubmitQuizServlet</servlet-name>
<url-pattern>/SubmitQuizServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>LogoutServlet</display-name>
  <servlet-name>LogoutServlet</servlet-name>
  <servlet-class>com.servlet.LogoutServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>LogoutServlet</servlet-name>
<url-pattern>/LogoutServlet</url-pattern>
</servlet-mapping>
</web-app>
```

## pom.xml

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="https://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>OnlineQuizPortal</groupId>
  <artifactId>OnlineQuizPortal</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <packaging>war</packaging>
  <build>
    <plugins>
      <plugin>
        <artifactId>maven-compiler-plugin</artifactId>
        <version>3.8.1</version>
        <configuration>
          <release>17</release>
        </configuration>
      </plugin>
      <plugin>
        <artifactId>maven-war-plugin</artifactId>
        <version>3.2.3</version>
      </plugin>
    </plugins>
  </build>

  <dependencies>

    <dependency>
      <groupId>mysql</groupId>
      <artifactId>mysql-connector-java</artifactId>
      <version>8.0.16</version>
    </dependency>

  </dependencies>

</project>
```