**Online Quiz System**

Creating an **online quiz system** using **JSP, HTML, CSS, and MySQL** involves several key steps. Here’s a breakdown of the components and implementation:

**Features of the Online Quiz System**

1. User Authentication (Login/Signup)
2. Displaying Quiz Questions
3. Timer for Quiz
4. Storing User Responses
5. Evaluating Scores and Showing Results
6. Admin Panel for Adding/Managing Questions

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| 1. -- phpMyAdmin SQL Dump 2. -- version 5.2.1 3. -- https://www.phpmyadmin.net/ 4. -- 5. -- Host: 127.0.0.1 6. -- Generation Time: Feb 21, 2025 at 11:32 AM 7. -- Server version: 10.4.32-MariaDB 8. -- PHP Version: 8.2.12 9. SET SQL\_MODE = "NO\_AUTO\_VALUE\_ON\_ZERO"; 10. START TRANSACTION; 11. SET time\_zone = "+00:00"; 12. /\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/; 13. /\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/; 14. /\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/; 15. /\*!40101 SET NAMES utf8mb4 \*/; 16. -- 17. -- Database: `quizdb` 18. -- 19. -- -------------------------------------------------------- 20. -- 21. -- Table structure for table `questions` 22. -- 23. CREATE TABLE `questions` ( 24. `id` int(11) NOT NULL, 25. `question` text NOT NULL, 26. `option1` varchar(255) NOT NULL, 27. `option2` varchar(255) NOT NULL, 28. `option3` varchar(255) NOT NULL, 29. `option4` varchar(255) NOT NULL, 30. `correct\_option` int(11) NOT NULL 31. ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_general\_ci; 32. -- 33. -- Dumping data for table `questions` 34. -- 35. INSERT INTO `questions` (`id`, `question`, `option1`, `option2`, `option3`, `option4`, `correct\_option`) VALUES 36. (1, 'How many primitive data types available in Java?', '2', '4', '8', '10', 3), 37. (2, 'What is the size of character in Java?', '2', '4', '8', '10', 1), 38. (3, 'How many wrapper classes in Java?', '2', '4', '8', '10', 3), 39. (4, 'String belongs to which package?', 'Lang ', 'Util', 'Sql', 'io', 1), 40. (5, 'jsp having how many builtin objects?', '3', '5', '7', '9', 4), 41. (6, 'what is the size of float in java', '1', '2', '3', '4', 4), 42. (7, 'Collections in java belongs to which package', 'io', 'lang', 'util', 'colection', 3), 43. (8, 'what is the full form of JSP ?', 'java string program', 'java stream project', 'java server pages', 'java spring project', 3), 44. (9, 'Java follows which character coding standard', 'ASCII', 'Unicode', 'Teracode', 'Ebcid', 2); 45. -- -------------------------------------------------------- 46. -- 47. -- Table structure for table `quiz\_attempts` 48. -- 49. CREATE TABLE `quiz\_attempts` ( 50. `id` int(11) NOT NULL, 51. `user\_id` int(11) NOT NULL, 52. `question\_id` int(11) DEFAULT NULL, 53. `chosen\_option` int(11) DEFAULT NULL, 54. `record\_time` datetime NOT NULL DEFAULT current\_timestamp() 55. ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_general\_ci; 56. -- 57. -- Dumping data for table `quiz\_attempts` 58. -- 59. INSERT INTO `quiz\_attempts` (`id`, `user\_id`, `question\_id`, `chosen\_option`, `record\_time`) VALUES 60. (16, 1, 1, 3, '2025-02-19 11:04:22'), 61. (17, 1, 2, 1, '2025-02-19 11:04:22'), 62. (18, 1, 3, 2, '2025-02-19 11:04:22'), 63. (19, 1, 4, 2, '2025-02-19 11:04:22'), 64. (20, 1, 5, 4, '2025-02-19 11:04:22'), 65. (21, 1, 6, 4, '2025-02-19 11:04:22'), 66. (22, 1, 7, 3, '2025-02-19 11:04:22'), 67. (86, 2, 1, 1, '2025-02-21 11:13:15'), 68. (87, 2, 2, 1, '2025-02-21 11:13:15'), 69. (88, 2, 3, 3, '2025-02-21 11:13:15'), 70. (89, 2, 4, 1, '2025-02-21 11:13:15'), 71. (90, 2, 5, 2, '2025-02-21 11:13:15'), 72. (91, 2, 6, 1, '2025-02-21 11:13:15'), 73. (92, 2, 7, 4, '2025-02-21 11:13:15'), 74. (23, 4, 1, 3, '2025-02-19 12:25:36'), 75. (24, 4, 2, 2, '2025-02-19 12:25:36'), 76. (25, 4, 3, 1, '2025-02-19 12:25:36'), 77. (26, 4, 4, 2, '2025-02-19 12:25:36'), 78. (27, 4, 5, 4, '2025-02-19 12:25:36'), 79. (28, 4, 6, 4, '2025-02-19 12:25:36'), 80. (29, 4, 7, 3, '2025-02-19 12:25:36'), 81. (165, 5, 1, 3, '2025-02-21 15:48:45'), 82. (166, 5, 2, 1, '2025-02-21 15:48:45'), 83. (167, 5, 3, 3, '2025-02-21 15:48:45'), 84. (168, 5, 4, 1, '2025-02-21 15:48:45'), 85. (169, 5, 5, 4, '2025-02-21 15:48:45'), 86. (170, 5, 6, 4, '2025-02-21 15:48:45'), 87. (171, 5, 7, 3, '2025-02-21 15:48:45'), 88. (172, 5, 8, 3, '2025-02-21 15:48:45'), 89. (173, 5, 9, 2, '2025-02-21 15:48:45'); 90. -- -------------------------------------------------------- 91. -- 92. -- Table structure for table `users` 93. -- 94. CREATE TABLE `users` ( 95. `id` int(11) NOT NULL, 96. `username` varchar(50) NOT NULL, 97. `password` varchar(255) NOT NULL, 98. `user\_type` varchar(20) NOT NULL DEFAULT 'NORMAL' 99. ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_general\_ci; 100. -- 101. -- Dumping data for table `users` 102. -- 103. INSERT INTO `users` (`id`, `username`, `password`, `user\_type`) VALUES 104. (1, 'a', 'b', 'NORMAL'), 105. (2, '22951A6735', 'Dibjyoti', 'NORMAL'), 106. (3, 'manju', 'sree', 'ADMIN'), 107. (4, 'shivaarthika', '123', 'NORMAL'), 108. (5, '22951A0545', '123', 'NORMAL'); 109. -- 110. -- Indexes for dumped tables 111. -- 112. -- 113. -- Indexes for table `questions` 114. -- 115. ALTER TABLE `questions` 116. ADD PRIMARY KEY (`id`); 117. -- 118. -- Indexes for table `quiz\_attempts` 119. -- 120. ALTER TABLE `quiz\_attempts` 121. ADD PRIMARY KEY (`id`), 122. ADD UNIQUE KEY `user\_id` (`user\_id`,`question\_id`,`chosen\_option`,`record\_time`); 123. -- 124. -- Indexes for table `users` 125. -- 126. ALTER TABLE `users` 127. ADD PRIMARY KEY (`id`), 128. ADD UNIQUE KEY `username` (`username`); 129. -- 130. -- AUTO\_INCREMENT for dumped tables 131. -- 132. -- 133. -- AUTO\_INCREMENT for table `questions` 134. -- 135. ALTER TABLE `questions` 136. MODIFY `id` int(11) NOT NULL AUTO\_INCREMENT, AUTO\_INCREMENT=10; 137. -- 138. -- AUTO\_INCREMENT for table `quiz\_attempts` 139. -- 140. ALTER TABLE `quiz\_attempts` 141. MODIFY `id` int(11) NOT NULL AUTO\_INCREMENT, AUTO\_INCREMENT=174; 142. -- 143. -- AUTO\_INCREMENT for table `users` 144. -- 145. ALTER TABLE `users` 146. MODIFY `id` int(11) NOT NULL AUTO\_INCREMENT, AUTO\_INCREMENT=6; 147. -- 148. -- Constraints for dumped tables 149. -- 150. -- 151. -- Constraints for table `quiz\_attempts` 152. -- 153. ALTER TABLE `quiz\_attempts` 154. ADD CONSTRAINT `quiz\_attempts\_ibfk\_1` FOREIGN KEY (`user\_id`) REFERENCES `users` (`id`), 155. ADD CONSTRAINT `quiz\_attempts\_ibfk\_2` FOREIGN KEY (`question\_id`) REFERENCES `questions` (`id`); 156. COMMIT; 157. /\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/; 158. /\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/; 159. /\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/; |
| Implementation Steps  1. **Database Setup (MySQL)**  Create a database quizdb with tables for users, questions, and quiz responses.  CREATE DATABASE quizdb;  USE quizdb;  CREATE TABLE users (  id INT PRIMARY KEY AUTO\_INCREMENT,  username VARCHAR(50) UNIQUE NOT NULL,  password VARCHAR(255) NOT NULL  );  CREATE TABLE questions (  id INT PRIMARY KEY AUTO\_INCREMENT,  question TEXT NOT NULL,  option1 VARCHAR(255) NOT NULL,  option2 VARCHAR(255) NOT NULL,  option3 VARCHAR(255) NOT NULL,  option4 VARCHAR(255) NOT NULL,  correct\_option INT NOT NULL  );  CREATE TABLE quiz\_attempts (  id INT PRIMARY KEY AUTO\_INCREMENT,  user\_id INT,  question\_id INT,  chosen\_option INT,  FOREIGN KEY (user\_id) REFERENCES users(id),  FOREIGN KEY (question\_id) REFERENCES questions(id)  ); |
| **2. Database Connection (dbconnect.jsp)**  This file handles the MySQL connection.  <%@ page import="java.sql.\*" %>  <%  String url = "jdbc:mysql://localhost:3306/quizdb";  String user = "root";  String password = "";  Connection con = null;  try {  Class.forName("com.mysql.jdbc.Driver");  con = DriverManager.getConnection(url, user, password);  session.setAttribute("dbConnection", con);  } catch (Exception e) {  out.println("Database connection error: " + e);  }  **RequestDispatcher rd = request.getRequestDispatcher("login.jsp");**  **rd.forward(request,response);**  %> |
| 1. **User Login (login.jsp)**   <%@ page import="java.sql.\*" %>  <%  String username = request.getParameter("username");  String password = request.getParameter("password");  Connection con = (Connection) session.getAttribute("dbConnection");  PreparedStatement pst = con.prepareStatement("SELECT \* FROM users WHERE username=? AND password=?");  pst.setString(1, username);  pst.setString(2, password);  ResultSet rs = pst.executeQuery();  if (rs.next()) {  session.setAttribute("username", username);  response.sendRedirect("quiz.jsp");  } else {  out.println("Invalid username or password.");  }  %> |
| 1. **Quiz Page (quiz.jsp)**   This page retrieves and displays quiz questions.  <%@ page import="java.sql.\*, java.util.\*" %>  <%  Connection con = (Connection) session.getAttribute("dbConnection");  Statement stmt = con.createStatement();  ResultSet rs = stmt.executeQuery("SELECT \* FROM questions");  List<String> questions = new ArrayList<>();  while (rs.next()) {  questions.add("<p>" + rs.getString("question") + "</p>"  + "<input type='radio' name='q" + rs.getInt("id") + "' value='1'> " + rs.getString("option1") + "<br>"  + "<input type='radio' name='q" + rs.getInt("id") + "' value='2'> " + rs.getString("option2") + "<br>"  + "<input type='radio' name='q" + rs.getInt("id") + "' value='3'> " + rs.getString("option3") + "<br>"  + "<input type='radio' name='q" + rs.getInt("id") + "' value='4'> " + rs.getString("option4") + "<br>"  );  }  %>  <html>  <head>  <title>Online Quiz</title>  </head>  <body>  <h2>Quiz</h2>  <form action="submit\_quiz.jsp" method="post">  <%= String.join("<br>", questions) %>  <input type="submit" value="Submit">  </form>  </body>  </html> |
| 1. **Submit Quiz (submit\_quiz.jsp)**   This file processes the answers and calculates the score.  <%@ page import="java.sql.\*" %>  <%  Connection con = (Connection) session.getAttribute("dbConnection");  Statement stmt = con.createStatement();  ResultSet rs = stmt.executeQuery("SELECT \* FROM questions");  int score = 0;  while (rs.next()) {  int questionId = rs.getInt("id");  int correctAnswer = rs.getInt("correct\_option");  String selectedOption = request.getParameter("q" + questionId);  if (selectedOption != null && Integer.parseInt(selectedOption) == correctAnswer) {  score++;  }  }  out.println("<h2>Your Score: " + score + "</h2>");  %> |
| 1. **Admin Panel (admin.jsp)**   Allows the admin to add new questions.  <%@ page import="java.sql.\*" %>  <html>  <head>  <title>Admin Panel</title>  </head>  <body>  <h2>Add New Question</h2>  <form action="add\_question.jsp" method="post">  Question: <input type="text" name="question"><br>  Option 1: <input type="text" name="option1"><br>  Option 2: <input type="text" name="option2"><br>  Option 3: <input type="text" name="option3"><br>  Option 4: <input type="text" name="option4"><br>  Correct Option (1-4): <input type="number" name="correct\_option"><br>  <input type="submit" value="Add Question">  </form>  </body>  </html> |
| **Add Question (add\_question.jsp)**  jsp  CopyEdit  <%@ page import="java.sql.\*" %>  <%  String question = request.getParameter("question");  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("correct\_option"));  Connection con = (Connection) session.getAttribute("dbConnection");  PreparedStatement pst = con.prepareStatement("INSERT INTO questions (question, option1, option2, option3, option4, correct\_option) VALUES (?, ?, ?, ?, ?, ?)");  pst.setString(1, question);  pst.setString(2, option1);  pst.setString(3, option2);  pst.setString(4, option3);  pst.setString(5, option4);  pst.setInt(6, correctOption);  pst.executeUpdate();  out.println("Question added successfully!");  %> |
| **Login.html**  **<!DOCTYPE html>**  **<html>**  **<head>**  **<meta charset=*"ISO-8859-1"*>**  **<title>Insert title here</title>**  **</head>**  **<body>**  **<form action=*"dbconnect.jsp"*>**  **<label>Username:</label>**  **<input type=*"text"* value=*""* name=*"username"* id=*"username"*>**  **<label>Password:</label>**  **<input type=*"password"* value=*""* name=*"password"* id=*"password"*>**  **<input type=*"submit"* value=*"login"*>**  **</form>**  **</body>**  **</html>** |