**Title: OnlineQuiz**

The goal of this project is to develop a web-based online quiz application using Java, JSP, Servlets, and MySQL. It allows users to register/login, attempt a **20-question quiz within 1 minute**, and view results based on their performance. The system ensures fair play by **updating the score if the new attempt is higher than the previous one**, and automatically submitting the quiz if the 1-minute timer expires. All user data and scores are securely saved in the database, making the application reliable for online assessment

**User List and Roles**

**1. Admin**

Role: System Administrator  
Responsibilities:

* View and manage all registered users
* Check quiz scores and attempts
* Users can retake the quiz multiple times, and the database updates the score only if the new attempt is higher
* Maintain database and quiz system

**2. User (Student/Participant)**

Role: Person who takes the quiz (End User)  
Responsibilities:

* Register and log in
* Attempt all 20 quiz questions within 1 minute
* Submit the quiz manually, or it is automatically submitted when time expires
* View result and message based on score
* Use “Close” button to go back to login page
* Users can retake the quiz multiple times, but only higher scores replace previous ones

**Main Modules & Sub-Modules**

**1. User Management Module**

Handles user login and registration  
Includes:

* Sign up and login form
* Admin and User login roles
* Profile details
* Users can retake quizzes, but **scores are updated only if improved**

**2. Quiz Module**

Main part where users take the quiz  
Includes:

* 2
* 0 MCQs shown to user
* 1-minute countdown timer
* All questions must be answered before submitting
* Automatically checks the score
* Automatically submits quiz if timer expires

**3. Result Module**

Displays result after quiz is submitted  
Includes:

* Shows score and feedback (Congrats or Better Luck Next Time)
* Saves score to database only if new score is higher than previous attempt
* “Close” button redirects to login page

**4. Admin Panel**

For admin to monitor the system  
Includes:

* View all users
* Check who submitted quiz and their scores
* Ensure quiz rules are followed

**DataBase And Tables**

CREATE TABLE users (

id INT PRIMARY KEY AUTO\_INCREMENT,

username VARCHAR(50) NOT NULL UNIQUE,

email VARCHAR(100),

password VARCHAR(50)

);

CREATE TABLE result (

username VARCHAR(50),

score INT,

language VARCHAR(50),

FOREIGN KEY (username) REFERENCES users(username)

);

**Constants**

* **User Roles**: Admin, User
* **Result Status**: Passed, Failed
* **Submission Condition**: All Questions Attempted, Time Expired

**Key Features**

* Secure registration and login with session management
* 20 multiple-choice questions to be completed in 1 minute
* Submission allowed only if all questions are answered or automatically submitted when time expires
* Case-insensitive and trimmed answer comparison
* Shows custom message based on score (>5 = Congratulations, else Better Luck Next Time)
* Users can retake quiz, but new scores are not stored
* “Close” button redirects user to login page after result
* Admin can view users and quiz results, and manage system behavior

**Technology Used**

* Frontend: HTML, CSS, Bootstrap (for UI design)
* Backend: Java (JSP, Servlets)
* Database: MySQL
* Server: Apache Tomcat
* Tools: Eclipse, MySQL Workbench
* Version Control: Git & GitHub

