**Quiz Master Platform**

**Description:**

QuizMaster is an interactive web application that allows users to create, attempt, and share multiple-choice quizzes. The platform features user authentication, dynamic quiz creation, score tracking, and a global leaderboard system. Built using modern web technologies, the application provides a responsive and intuitive interface for quiz enthusiasts.

**Objectives:**

* Allow users to register and log in.
* Enable users to create custom quizzes with multiple questions and options.
* Provide an intuitive interface for quiz participation.
* Track and display scores on a global leaderboard.
* Deliver a smooth, responsive user experience.

**Features:**

1. User Authentication (Frontend Only)

* Users can register with a username and password.
* Log in functionality sets the currentUser in application state.
* No backend or database involved (state is stored in memory).

2. Quiz Creation

* Authenticated users can create quizzes with:
  + Custom titles.
  + Dynamically added questions.
  + Four options per question, with a correct answer marked using radio buttons.
* All quiz data is stored in the global state object.
* Quizzes are associated with their creators.

3. Quiz Attempting

* Users can attempt quizzes they just created.
* Questions are displayed with selectable options.
* Upon submission:
  + The score is calculated.
  + The result is added to the user’s record.
  + Results are stored in the state.quizzes and state.currentUser.quizzesTaken.

4. Leaderboard

* Displays the top 10 quiz scores sorted in descending order.
* Shows username, score, and rank.
* Updates dynamically after each quiz submission.

**Project Overview**

* This interactive quiz platform is built using:
  + HTML5 for structure
  + Bootstrap for responsive design
  + Custom CSS for styling
  + Vanilla JavaScript for interactivity

**Key Features Implemented**

* User Authentication
  + Register and login functionality
  + Basic authentication with username/password
  + User state management
* Quiz Creation
  + Dynamic question addition
  + Multiple-choice question support
  + Ability to mark correct answers
* Quiz Attempting
  + Load and display created quizzes
  + Track user answers
  + Score calculation
* Leaderboard
  + Track and display top quiz scores
  + Sort scores in descending order
* Responsive Design
  + Bootstrap grid system
  + Mobile-friendly layout
  + Adaptive components