MINDSPARK!

Project Goal

Create a beautiful, fast, fun, and 100% bug-free online quiz game that works perfectly on phones and computers with zero overlapping screens and stunning design.

Key Features

- Gorgeous login screen with big "MINDSPARK!" title in bright yellow
- White name input box directly UNDER the title (exactly as requested)
- Player can change name anytime before starting
- Choose quizzes from 20+ real categories (Science, History, Movies, Sports, etc.)
- 10 fresh questions every time from OpenTDB API
- 30-second timer per question
- Smooth green progress bar
- Answers turn green (correct) or red (wrong) instantly
- Clean final result screen with player name and score
- "Play Again" button to restart instantly
- "View Highscores" button to see leaderboard with ranks, names, scores, and dates
- Highscores saved in MySQL database for persistence
- Works perfectly on mobile & desktop
- No screen overlapping
- jQuery for DOM manipulation and animations (e.g., fade in)
- Strong client-side and server-side validation with regex and userfriendly messages
- Classic CSS floating layout demonstrated with proper clearing

Target Users

- Students & friends who want quick fun

- Teachers for classroom quizzes

- Anyone who loves trivia games

Functional Requirements

1. Login Screen with Player Name Input

The app starts with a beautiful screen where the player must type their name before playing. Name input is validated client-side with regex for allowed characters and length, with real-time feedback.

2. Option to Change Name Before Starting Quiz

After login, the player can edit their name again in the category screen if they want. Name changes are also validated.

3. Category Selection

Player can choose a quiz category from a dropdown list loaded from OpenTDB API.

4. Fetch 10 Multiple-Choice Questions from API

When "Start Quiz" is clicked, the app downloads 10 fresh questions from the internet.

5. Display One Question at a Time with 4 Shuffled Answers

Only one question appears with 4 answer buttons (correct answer is mixed randomly). Questions and answers are displayed in a clean card layout with large buttons.

6. 30-Second Timer per Question

Each question has a countdown timer. If time runs out, it counts as wrong and moves on.

7. Progress Bar
    A green bar grows to show how many questions have been answered (e.g., 4/10).

8. Visual Feedback for Answers
    Correct answer turns green, wrong answer turns red after selection or timeout.

9. Score Calculation
    +1 point for every correct answer. Final score is shown at the end and saved to database via AJAX.

10. Result Screen with Name and Score
    After the last question, a clean result screen shows the player's name and final score (e.g., "Ahmed, your score: 7/10").

11. Play Again Button
    A button that restarts the quiz (returns to category selection).

12. View Highscores
    A button that navigates to a leaderboard page displaying top scores from the database, with ranks, names, scores, and dates.

Non-Functional Requirements

1. Beautiful & Modern Design
    Clean purple-pink theme, big text, rounded cards, soft shadows, and smooth animations using jQuery (e.g., fadeIn for screens).

2. Fully Responsive
    Looks and works perfectly on mobile phones, tablets, and desktop with media queries.

3. No Screen Overlapping
    Only one screen is visible at a time — result screen never overlaps with quiz, using jQuery hide/show/fade.

4. Name Input Box Directly Under "MINDSPARK!"
    The white input field appears exactly below the big title (not beside it).

5. Fast Loading & Smooth Performance
    Questions load quickly even on average internet using async fetch.

6. Data Saved Securely
    Highscores are saved in MySQL database using PDO and prepared statements for security; no other data is stored on device.

7. Works on All Modern Browsers
    Chrome, Firefox, Safari, Edge — all supported.

8. Great User Experience
    Simple, fun, intuitive — anyone can play without instructions. Real-time validation feedback and animations enhance usability.

9. Strong Validation

Client-side regex for name input with real-time messages; serverside checks for name length and score range.

10. jQuery Integration

Used for events, DOM manipulation, and animations.

11. Classic Floating Layout

Demonstrated with float: left/right and multiple clearing methods (clearfix, overflow, clear property).

Stakeholders

- Players / End Users

  People who play the quiz for fun or to test their knowledge.

- Students (Development Team)   Me, who built the project.

- Teaching Assistants (TAs)

  Grade the project and check if all requirements are met.

- Course Instructor

  Oversees the course and wants to see good web programming skills.

- Open Trivia Database (OpenTDB)

  Provides the questions; must be credited as the data source.

Use Case

QUIZ WEB APPLICATION

- Enter Username
- start game
- change name
- Start Quiz
- <<extend>>
- <<include>>
- <<include>>
- Choose Category
- view question
- <<include>>
- <<include>>
- answer question
- <<include>> recieve immeiate feedback
- <<extend>>
- move to next question
- run out of time
- view high score
- Play Again
- <<extend>>
- view final score+ auto save to database

player