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NBA Trivia Application - Project Documentation

NBA Trivia Application

Project Overview

NBA Trivia is a full-stack web application designed to test and enhance users' knowledge of NBA history, players, and statistics through engaging, interactive quiz games. The application combines education with entertainment, providing basketball enthusiasts with a platform to challenge themselves, track their progress, and compete with others.

Problem Statement

Basketball fans often lack engaging platforms to test and improve their NBA knowledge in a structured, competitive environment. Traditional trivia formats are static and don't provide personalized progress tracking or varied game modes to maintain user engagement.

Solution

This application addresses these challenges by providing:

- Multiple game modes to keep the experience fresh and challenging
- Comprehensive statistics tracking to monitor personal growth
- Competitive leaderboards to foster community engagement
- Secure user accounts with progress persistence
- Admin panel for content management and scalability

Educational Value

The application serves as an educational tool for:

- Learning NBA history and milestone events

- Understanding player statistics and career achievements

- Recognizing historical patterns and records

- Engaging with basketball culture in an interactive format

3. Target Users

Primary Users

1. NBA Fans

- Basketball enthusiasts who want to test their knowledge

- Fans seeking to deepen their understanding of NBA history

- Users who enjoy competitive trivia challenges

2. Casual Players

- Users looking for quick, fun entertainment

- People interested in learning about basketball

- Players who enjoy short gaming sessions

3. Competitive Players

- Users who enjoy leaderboard competition

- Players focused on achieving high scores and streaks

- Achievement-oriented users tracking personal bests

Secondary Users

4. Administrators

- Content managers who maintain question databases

- Moderators ensuring content quality and accuracy

- System administrators monitoring application health

5. Educators

- Teachers using the platform for sports history education

- Coaches incorporating trivia into team-building activities

- Educational institutions teaching sports analytics

User Features

Authentication & Account Management

Secure Registration: Email-based account creation with password strength validation

- JWT Authentication: Token-based login with HTTP-only cookies

- Password Reset: Email-based password recovery with security questions

- Account Security: Automatic lockout after 5 failed login attempts (15-minute cooldown)

- Profile Management: View and track personal statistics

Game Modes

1. NBA Trivia Quiz

- Multiple choice questions covering general NBA knowledge

- Three difficulty levels: Easy (🏀), Medium (🏀🏀), Hard (🏀🏀🏀)

- Points awarded based on difficulty: 10/20/30 points

- Fun facts displayed after each answer

- Question review available at game end

2. NBA History Quiz

- Historical events, records, and milestone questions

- Focus on NBA evolution and significant moments

- Same difficulty and scoring system as Trivia Quiz

- Educational facts about basketball history

3. Guess the Player

- Progressive clue revelation system (5 clues per player)
- Strategic gameplay: fewer clues used = higher score
- Career statistics display
- Clues progress from easier to harder

4. MVP Speed Challenge

- 60-second timed challenge
- Type first and last names of NBA MVP winners
- Real-time score tracking
- Historical MVP data from 1956-2025

Statistics & Progress Tracking

- Personal Bests: Track highest scores per game mode
- Overall Accuracy: Monitor performance metrics across all games
- Daily Streaks: Consecutive days played tracking
- Global Rankings: Leaderboard position and rank tracking

User Experience Enhancements

- Sound Effects: Audio feedback for correct/incorrect answers

- Confetti Animations: Visual celebrations for perfect scores

- Responsive Design: Optimized for desktop, tablet, and mobile

- Loading States: Skeleton loaders for smooth UX

- Error Handling: User-friendly error messages

4.2 Admin Features

Question Management

- CRUD Operations: Create, Read, Update, Delete trivia questions

- Filtering & Search: Find questions by category, difficulty, or keyword

- Difficulty Assignment: Categorize questions as Easy/Medium/Hard

- Category Management: Organize questions by type (Trivia/History)

- Bulk Operations: Manage multiple questions efficiently

Content Analytics

- Question Statistics: View usage and performance metrics

- Difficulty Distribution: Monitor question balance across level

- Category Breakdown: Track content distribution

- Content Quality: Ensure diverse and accurate question pool

Links

Youtube: **https://youtu.be/OIDB26g8jcw**

WebApp link: https://nba-trivia-liart.vercel.app/

Github :https://github.com/N1gel7/NbaTrivia/