

## General Requirements Document

**Project Name:** Live Quiz Showdown

**Objective:** Build a real-time, admin-controlled quizzing platform for internal team events conducted over video calls.

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### Overview

Live Quiz Showdown is a web-based application that facilitates time-bound quizzes with live admin control. Participants from within the organization join quizzes during live video sessions (e.g., MS Teams), and questions are revealed in real-time. The system includes two user roles: Admin and User (Contestant).

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### User Roles

#### 1. Admin

- Single, secure login
- Creates and manages quizzes
- Controls quiz flow (start, stop, reveal questions)
- Monitors live leaderboard
- Can disqualify users
- Can reveal Bonus Questions
- Configures quiz-specific scoring logic

#### 2. User / Contestant

- Logs in with an organization email (@fiftyfivetech.io)
  - Authenticates via OTP
  - Can join ongoing quizzes using a passkey (announced during live call)
  - Sees only current and upcoming quizzes
  - Can attempt visible questions in real-time
  - Can view live leaderboard
  - Can skip any question (no scoring penalty)
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## Authentication and Access Control

- Only emails ending with @fiftyfivetech.io can register/login
  - OTP-based login system (sent via email)
  - Only one active session per user (no multi-device login)
  - Quizzes require a passkey to join
  - Admin routes are protected
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## Quiz Management

### Admin Features:

- Create quizzes by uploading Excel files
  - Set start time (manual or scheduled)
  - Define scoring logic per quiz:
    - Points for 1st/2nd/3rd correct answer
    - Negative marking (optional)
    - Bonus question scoring
  - Set time limit **per question** (e.g., 30s, 45s, 60s)
  - Mark any question as a Bonus Question
  - Start/reveal each question manually
  - Reveal Bonus Question globally during quiz
  - Monitor live leaderboard
  - Disqualify participants with suspicious behavior
  - Export leaderboard as CSV/Excel
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## Excel Upload Format

Question Option A Option B Option C Option D Correct Answer Is Bonus Time Limit (seconds)

...	...	...	...	...	C	Yes	60
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## User Quiz Experience

### Before Quiz

- User logs in via email & OTP
- Sees a list of **Upcoming and Ongoing Quizzes**
- Clicks "Join" and enters the **Passkey**

### During Quiz

- Only the **currently active question** is visible
- Each question shows:
  - 4 options
  - **Skip** button
  - **Timer countdown** based on that question's setting
- Submitting correct answers gives points (based on answer order)
- Wrong answers may incur negative marks
- Skipping gives zero points
- **Bonus questions** are announced mid-quiz and visible to all when triggered by Admin
- Leaderboard updates live

### Late Joining

- If a user joins mid-quiz:
  - They land directly on the **current question**
  - **No access to previous questions**

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## Leaderboard

- Displays:
  - Rank
  - User email/name
  - Total Score
  - (Optional) Total time taken

- Updates in real-time
  - Exportable by Admin
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## Technical Overview

### Suggested Stack:

- **Frontend:** React + Tailwind CSS
  - **Backend:** Node.js + Express
  - **Database:** MongoDB
  - **Auth:** JWT + OTP via email (Nodemailer)
  - **Real-time communication:** WebSocket or Socket.IO
  - **Excel Upload:** xlsx npm package
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## Security Measures

- Domain-restricted email login
  - OTP-based authentication
  - One active session per user
  - Passkey-protected quiz access
  - Secure, admin-only quiz controls
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## Optional Features (Stretch Goals)

- Light/Dark Mode toggle
- Countdown animation per question
- Auto-submit answer when time ends
- Timer bar with animation
- Admin option to skip or repeat questions
- Auto-disable skipped or expired questions