# Online Quiz Competition Application

## 1. ****User Login Module****

### Purpose:

Authenticate and allow only registered participants to access the quiz.

### Features:

* **Participant Data Upload**
  + Admin uploads an Excel/CSV file with participant details:
    - Name
    - Designation
    - Email
    - Mobile
    - Company
* **Account Generation**
  + System automatically creates login credentials (username/password).
  + Credentials distributed to participants via email/SMS.
* **Secure Access**
  + Only registered participants can log in.
  + After login → Redirected to the **Quiz Module**.

## 2. ****Quiz Module****

### Purpose:

Main area where participants attempt the quiz.

### Components:

#### 2.1 Quiz Info Section

* Displays **Name, Email, Mobile**.
* Shows a **welcome message and exam instructions**:
  + Quiz starts at **04:00 AM**.
  + **5 minutes reading time** (system alerts user to start quiz after this).
  + **15 minutes exam time**.
  + Auto-submit when timer ends.
  + Questions appear **one at a time**.
  + Participants can **skip & return** to questions.
  + Once submitted, answers **cannot be changed**.

#### 2.2 Timer

* **15:00 minutes countdown** (excludes 5-minute instruction time).
* Updates in real-time.
* Last 1 minute → Timer turns **red**.
* Auto-submits when time runs out.

#### 2.3 Questions Area

* Displays MCQs (Multiple Choice Questions).
* Options shown with **radio buttons**.
* One question visible at a time.

#### 2.4 Navigation

* **Next / Previous** buttons.
* Jump back to skipped questions.

#### 2.5 Quiz Actions (Updated with Prizes)

* **Submit Button** → End exam before time expires.
* **Auto-submit** → Triggered when timer ends.
* **After Submission or Time Expiry:**
  + System displays:
    - ✅ Congratulations message.
    - ✅ Number of Correct, Incorrect, and Unanswered questions.
    - ✅ Total time taken.
  + **Prize Display (New Feature):**
    - Ranking calculated across all participants:
      * Higher score ranks higher.
      * If two participants have same score → Earlier completion time ranks higher.
    - System announces:
      * 🥇 **First Prize Winner** → Name, Score, Time.
      * 🥈 **Second Prize Winner** → Name, Score, Time.
    - Displayed on participant screen & results board.

## 3. ****Results Module****

### Purpose:

Provide participants with a **summary and detailed analysis** of performance.

### Features:

* **Final Score Summary**
  + Total marks.
  + Percentage score.
  + Completion time.
* **Statistics Section**
  + Number of correct answers.
  + Number of incorrect answers.
  + Skipped/unanswered questions.
  + Time taken.
  + Performance Category: Excellent / Good / Needs Improvement.
* **Detailed Results**
  + For each question:
    - Question text.
    - User’s answer.
    - Correct answer.
    - Indicator → ✔ Correct / ✖ Incorrect.
* **Leaderboard / Prize Announcement**
  + 🥇 First Prize Winner: Name + Marks + Completion Time.
  + 🥈 Second Prize Winner: Name + Marks + Completion Time.
  + Visible to all participants once the quiz ends.
  + Stored in database for admin reporting.
* **Motivation**
  + Encourages participants to review answers and improve.

## 4. ****Admin Panel Module****

### Purpose:

Centralized control for quiz setup, participant management, and monitoring results.

### Features:

* **Data Upload**
  + Upload quiz questions (with correct answers).
  + Upload participant list (Excel/CSV).
* **Result Monitoring**
  + Results table includes:
    - Participant Name
    - Employee ID / Designation
    - Score (%)
    - Time Taken
    - Date of Attempt
    - Action → View Details (detailed report).
* **Leaderboard & Prize Control**
  + View **Top Performers** with time priority rule.
  + Export prize winners list to Excel/PDF.
* **Reports**
  + Download overall quiz results.
  + Generate performance analysis reports.

## 5. ****Timer Module****

### Purpose:

Handle countdown for quiz fairness.

### Features:

* Starts at **15:00 minutes** (after 5-min instruction time).
* Updates every second.
* Last minute → Turns **red**.
* Auto-submits quiz on **time expiry**.

## 6. ****Prize Allocation Logic****

### Business Rules:

* Rank participants by **Score**.
* If tie → Earlier submission time wins.
* First two ranks displayed as winners.

### Display Flow:

* After quiz submission or timeout:
  + System calculates marks.
  + Stores score + time in database.
  + Compares across all participants.
  + Declares:
    - 🥇 First Prize Winner.
    - 🥈 Second Prize Winner.
  + Visible on **Result Screen & Leaderboard**.

## 7. ****System Workflow (Step-by-Step)****

1. **Admin uploads participants & quiz questions**.
2. Participants receive login credentials.
3. At scheduled time, participants **log in**.
4. 5-minute instruction screen shown.
5. Quiz starts → 15-minute timer begins.
6. Participants attempt questions, can skip/return.
7. Quiz ends by:
   * Manual submission OR
   * Auto-submit at time expiry.
8. System processes answers, calculates score.
9. Result screen displays:
   * Correct / Incorrect / Unanswered count.
   * Time taken.
   * 🥇 First Prize Winner & 🥈 Second Prize Winner (after comparison).
10. Admin views/export results in Admin Panel.