Green University of Bangladesh

Department of Computer Science and Engineering (CSE)
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Requirements of Functional & Non Functional

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Quiz & Earn: A Dual-Mode Quiz App

1 Functional Requirements

1. User Panel

- **Account Management**

  - Users can create an account using email and password.
  - Users can log in using email and password.
  - Users can use guest mode without creating an account.
  - Users can reset their password via email verification.

- **Profile Management**

  - Users can update their profile information (name, email, etc.).
  - Users can view their account details and quiz history.

- **Quiz Participation**

  - Users can access quizzes in both online and offline modes.
  - In online mode, users can participate in real-time quizzes.
  - Users can select categories and difficulty levels for quizzes.
  - Users can earn rewards for completing quizzes.

- **Rewards System**

  - Users can view their earned rewards and leaderboard status.

- **Subscription Management**

  - Users can subscribe to premium features.
  - Users can view and manage their subscription status.

- **Offline Mode**

  - Users can take quizzes without an internet connection.
  - Offline quizzes will sync results when the user reconnects.

2. Admin Panel

- **User Management**

  - Admin can view and manage user accounts.
  - Admin can deactivate or delete user accounts if necessary.

- **Quiz Management**

- Admin can create, edit, and delete quizzes.
- Admin can manage quiz categories and difficulty levels.

- **Reward Management**

  - Admin can set up and modify the rewards system.
  - Admin can track reward distribution to users.

- **Analytics Dashboard**

  - Admin can view user statistics, quiz participation rates, and overall app performance.

- **Notifications**

  - Admin can send announcements or updates to all users.

3. App Initialization

- On app launch:

  - If internet is available, redirect to the sign-in page.
  - If internet is not available, open in offline mode.
  - Provide an option to access limited features in offline mode.

4. Additional Features

- **Help & Support**

  - Users can access FAQs and support resources.
  - Users can contact support for account issues or technical help.

- **Feedback System**

  - Users can provide feedback on quizzes and app features.

2 Non Functional Requirements

- **Two-Step Verification**

  - Implement two-step verification for user accounts to enhance security during login and transactions.

- **Password Change Management**

  - Allow users to change their passwords securely, with strong password policies enforced.

- **Humanity Cheek**

  - Integrate CAPTCHA or other bot detection mechanisms to prevent automated access and ensure fair play.

- **Secure Payment Gateway**

  - Use a secure, PCI-compliant payment gateway for processing subscriptions and withdrawals.

- **Response Time**

  - The app should load within 2 seconds and provide feedback (e.g., score updates, rewards) within 1 second after quiz submission.

- **Data Backup**

  - Implement regular data backups to prevent loss of user data and quiz results in case of system failures.