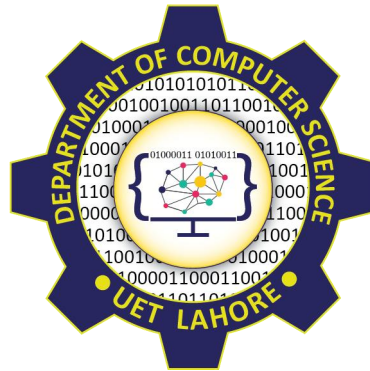


UET Quiz Mobile App



Session 2023 - 2027

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Course:

Advanced Database

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1. Introduction

The UET Quiz Mobile App is a cross-platform application developed using React Native and Expo, designed to facilitate quiz creation for teachers and quiz attempts for students. The app supports **offline functionality** through SQLite, ensuring data persistence even without internet connectivity.

2. Features

2.1 Teacher Features

- Create, edit, and delete quizzes.
- Add multiple-choice questions with customizable options.
- Publish/unpublish quizzes for student access.
- View student performance analytics.

2.2 Student Features

- Attempt quizzes offline.
- Receive instant results with score breakdowns.
- Review past quiz attempts and performance history.

3. Technical Specifications

3.1 Tech Stack

- **Frontend:** React Native + Expo.
- **Database:** SQLite (local storage)(In-memory).
- **State Management:** Context API.
- **Navigation:** React Navigation.

3.2 Database Schema

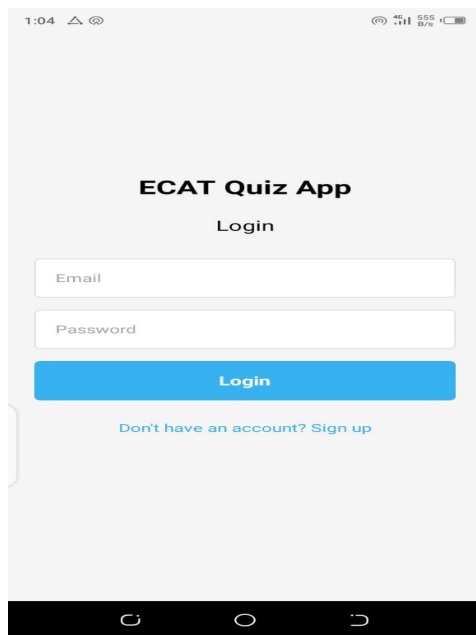
The SQLite database includes the following tables:

- **Users:** Stores teacher/student credentials.
- **Quizzes:** Contains quiz metadata (title, publish status).
- **Questions:** Links to quizzes with question text.
- **Answers:** Stores options and correct answers.
- **Results:** Tracks student attempts and scores..

4. Offline Functionality

- All data is stored locally via SQLite.
- Teachers can draft quizzes offline; changes sync when online.
- Students can attempt quizzes without internet access.

5. Wireframes



1:04

ECAT Quiz App

Login

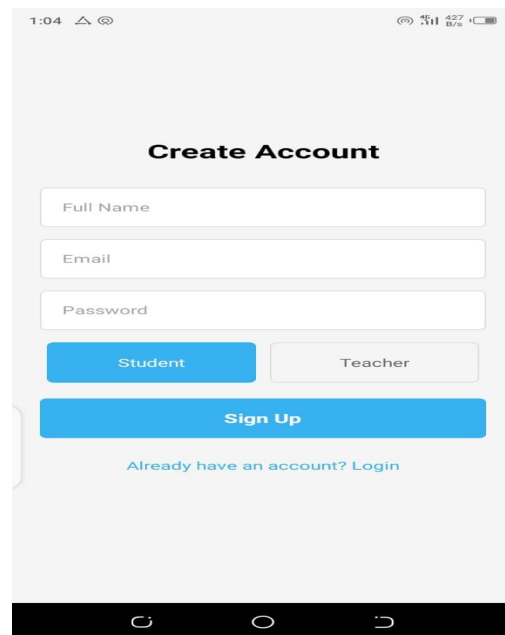
Email

Password

Login

Don't have an account? Sign up

This wireframe shows the login screen of the ECAT Quiz App. It features a title 'ECAT Quiz App' and a subtitle 'Login'. Below these are two input fields for 'Email' and 'Password'. A blue 'Login' button is positioned below the password field. At the bottom, there is a link that says 'Don't have an account? Sign up'. The status bar at the top shows the time as 1:04 and various connectivity icons.



1:04

Create Account

Full Name

Email

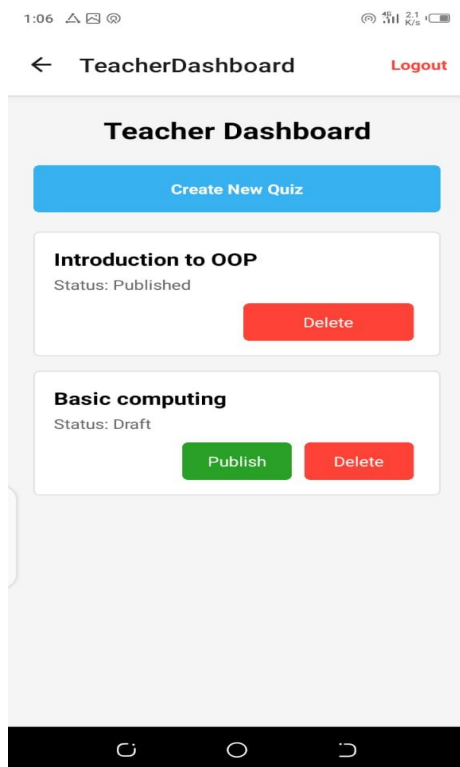
Password

Student Teacher

Sign Up

Already have an account? Login

This wireframe shows the 'Create Account' screen. It has a title 'Create Account'. Below the title are three input fields for 'Full Name', 'Email', and 'Password'. There are two buttons, 'Student' and 'Teacher', for selecting a role. A blue 'Sign Up' button is located below these. At the bottom, there is a link that says 'Already have an account? Login'. The status bar at the top shows the time as 1:04 and various connectivity icons.



1:06

TeacherDashboard Logout

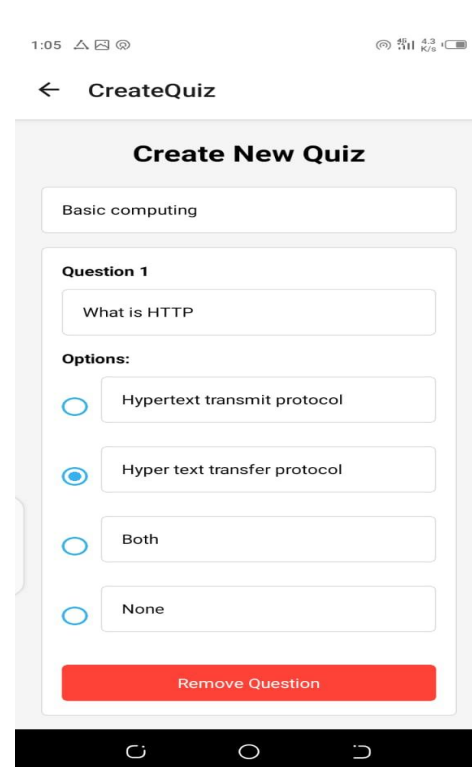
Teacher Dashboard

Create New Quiz

Introduction to OOP
Status: Published
Delete

Basic computing
Status: Draft
Publish Delete

This wireframe shows the 'Teacher Dashboard' screen. It has a title 'Teacher Dashboard' and a 'Logout' link. Below the title is a blue 'Create New Quiz' button. There are two quiz cards. The first card is titled 'Introduction to OOP' with a status of 'Published' and a 'Delete' button. The second card is titled 'Basic computing' with a status of 'Draft' and 'Publish' and 'Delete' buttons. The status bar at the top shows the time as 1:06 and various connectivity icons.



1:05

CreateQuiz

Create New Quiz

Basic computing

Question 1

What is HTTP

Options:

☐ Hypertext transmit protocol

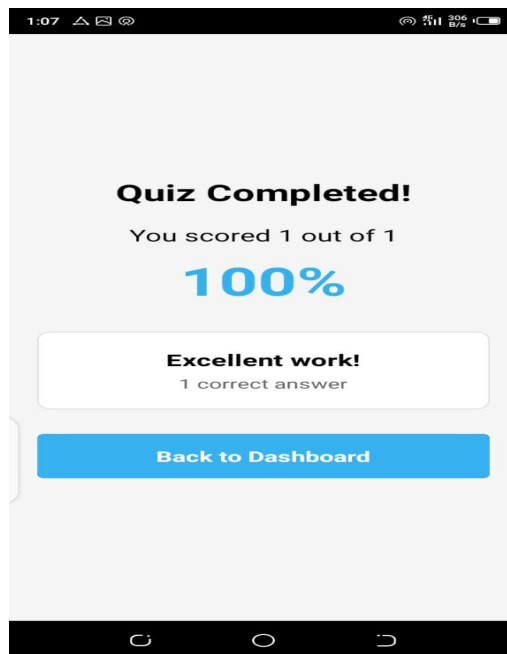
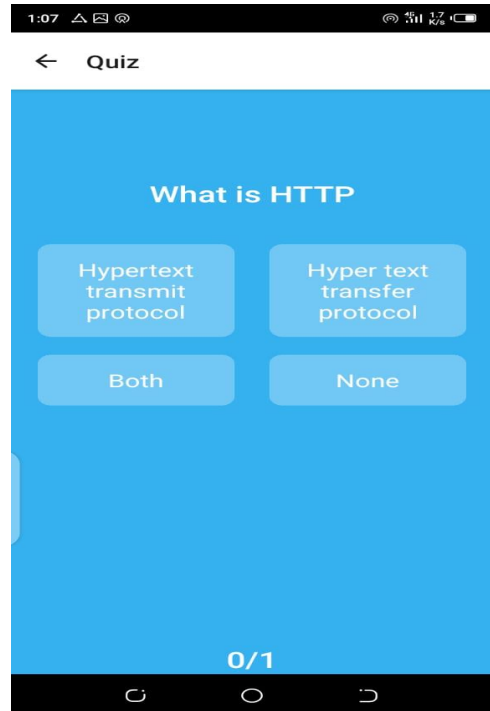
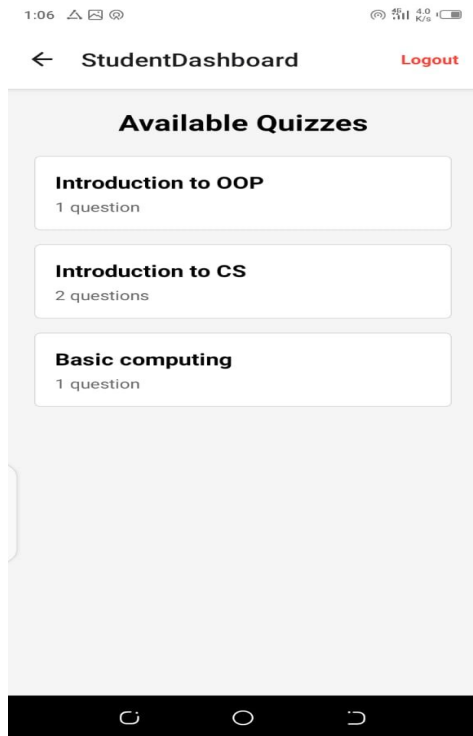
☒ Hyper text transfer protocol

☐ Both

☐ None

Remove Question

This wireframe shows the 'Create New Quiz' screen. It has a title 'Create New Quiz'. Below the title is a text input field for the quiz title, currently containing 'Basic computing'. Below this is a section for 'Question 1' with a text input field for the question, currently containing 'What is HTTP'. There are four radio button options: 'Hypertext transmit protocol', 'Hyper text transfer protocol' (which is selected), 'Both', and 'None'. At the bottom, there is a red 'Remove Question' button. The status bar at the top shows the time as 1:05 and various connectivity icons.



6. Conclusion

The UET Quiz Mobile App demonstrates the use of **React Native for cross-platform development** and **SQLite for offline data persistence**, making it ideal for educational environments with limited connectivity.

GitHub Repository:

<https://github.com/AmirHashmi017/Mobile-App-Development/tree/main/quiz-app>