Interactive Quiz Application (Team 12)

**Team Members:**

Class ID	Name
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9	Chinthakindhi,Nikhila
62	Arun

Introduction:

Interactive Quiz application is a dynamic application which facilitates users to take quizzes online through web portal. Details of the tests taken with their results are accessible to the user at any time.

Users can take tests, retake tests and view written tests results in this application.

Objectives:

- Objective is to create user friendly Interactive quiz application with register page, login page and home page using ionic framework.
- Home page would contain tabs for user profile and to take online quiz.
- User would receive an instant score as soon as he/she is done with the quiz.

Features:

- User can select topic for quiz from the various topics displayed in the home page.
- User can listen to questions in their quizzes while taking test.
- Timer is displayed on the screen for user's comfort.
- Scribble pad is available for users for scratch work. It is saved for user's future use to analyse wrong answers if any.
- Application is built on ionic framework.

Detailed design of features:

- **Wire Frames:**

  Wire frame design for Start/Index page of the Interactive quiz application is as follows:

  LOGIN

  UserName

  Password

  Login

  Or Create account

  Login with Facebook

Wire frame design for sign up page of the Interactive quiz application is as follows:

SIGNUP

User Name

Email ID

Phone No

Password

Confirm PWD

[Sign Up]

Wire frame design for profile page of the Interactive quiz application is as follows:

PROFILE

UserName

Email ID

Phone Number

Number of Exams Taken:
Link of that exam
Subject

Wire frame design for quiz selection page of the Interactive quiz application is as follows:

SELECT SUBJECT

C Language

Java

Angular JS

MongoDB

Next

Wire frame design for quiz questions page of the Interactive quiz application is as follows:

QUIZ

Question?

Option A

Option B

Option C

Option D

Next		Submit

Wire frame design for tabs available in Interactive quiz application is as follows:
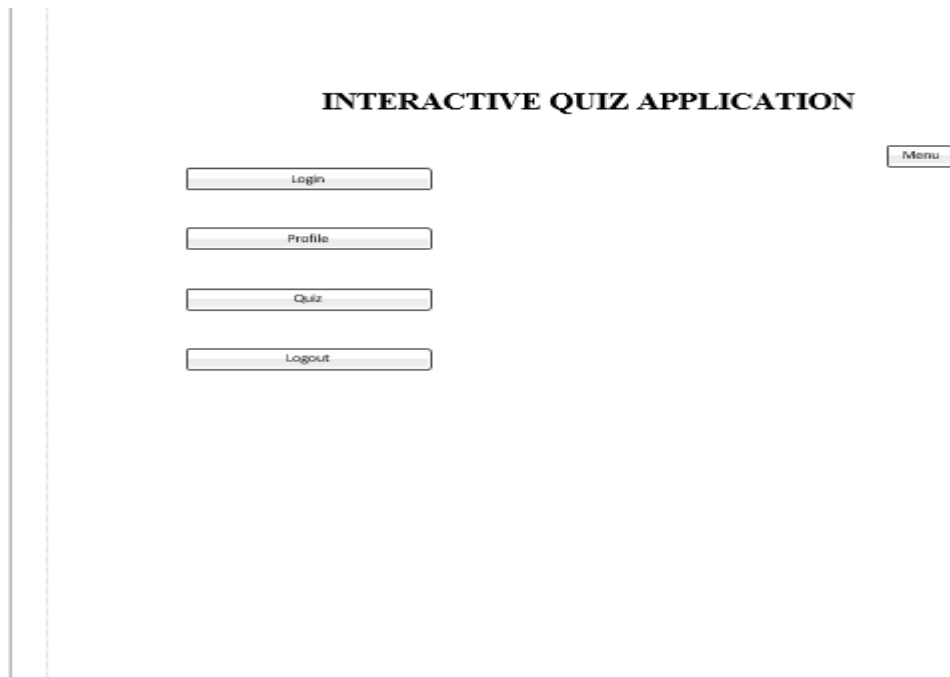
Wire frame design for quiz history page of the Interactive quiz application is as follows:
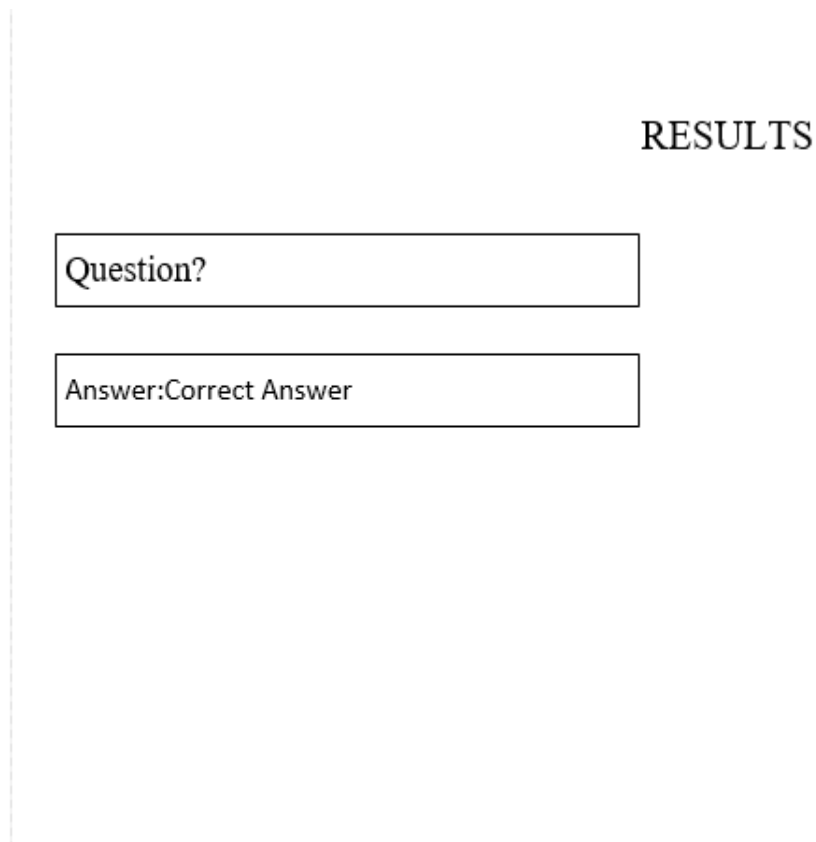
- **Architectural diagram:**

Architectural diagram for the project is as follows:
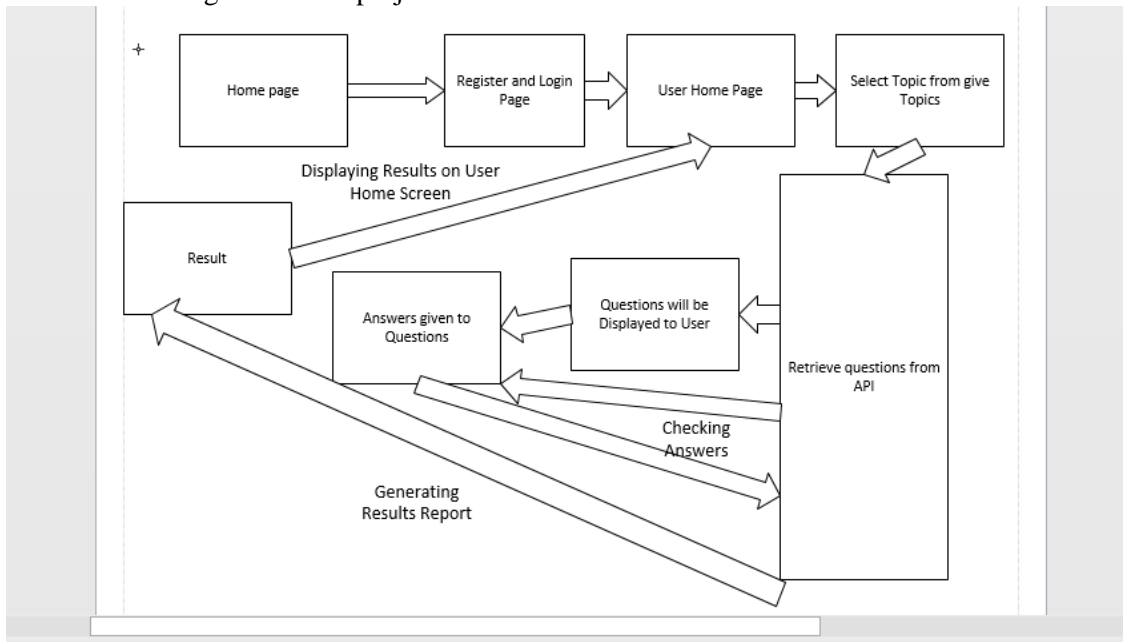
- **Sequence diagram:**

Sequence diagram for the project is as follows:
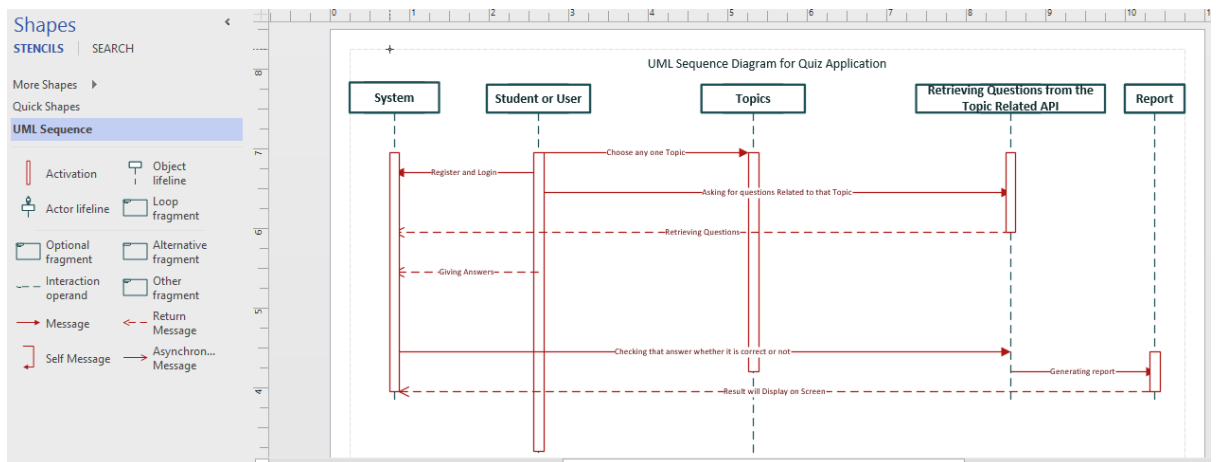
- **Class diagram:**

  Class diagram for the project is as follows:
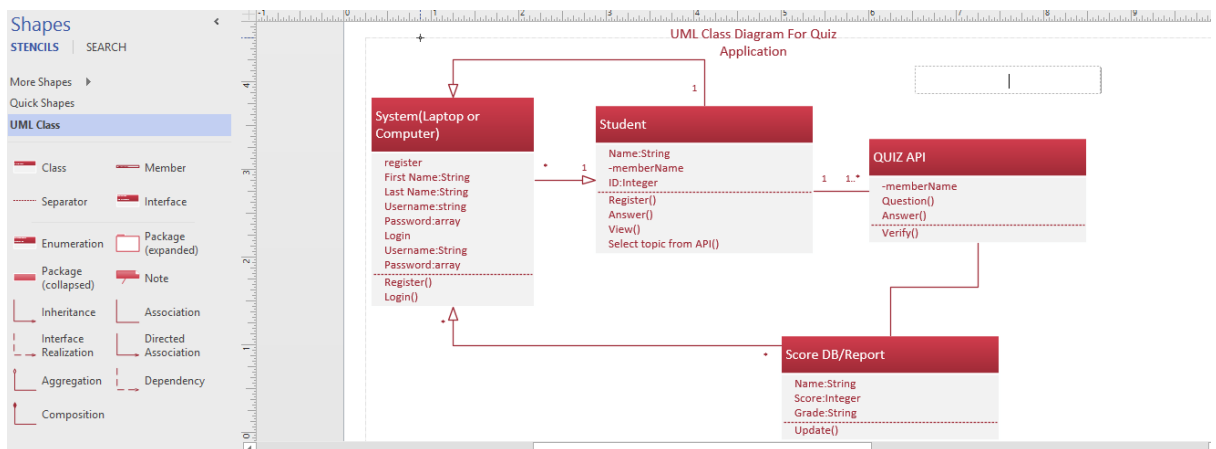
- **Activity diagram:**

  Activity diagram for the project is as follows:
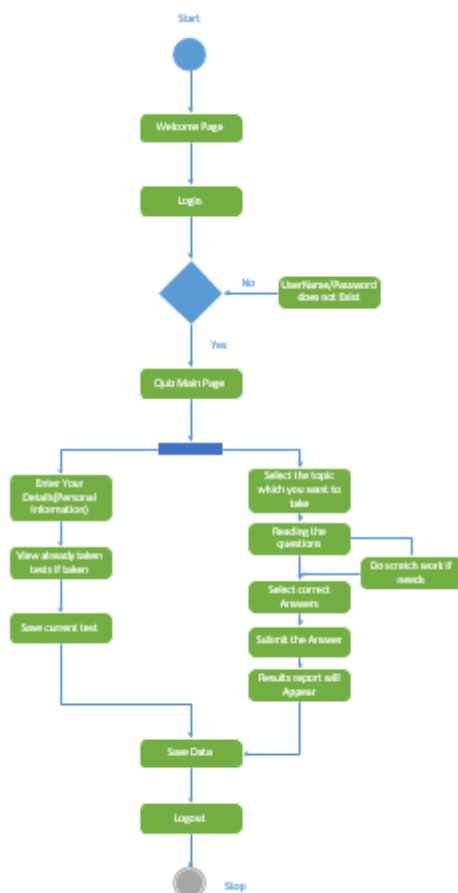
- **User story:**
  - Students/users can take online quizzes through this Interactive quiz application.
  - They can select any domain from the listed domains in the home page to take test.
  - Users can listen to the questions on clicking speak button.
  - Personal information can be edited in profile page.
  - Test score is provided immediately after the quiz is completed.
  - Users can assess their mistakes by the answers shown after the test.

- **Use case:**
  - User must register himself/herself in the web portal.
  - Upon successful registration user can login into the portal.
  - After logging in user has option to select domain among the domains listed, to take test.
  - Upon selecting domain, user can take tests and view scores after completing the tests.

- **Service description:**
  - Interactive quiz application provides quizzes to the users.
  - Users can take tests and view results after the test.
  - As results are provided instantly users can assess their mistakes.
  - Users can listen to questions in the quizzes.
  - Scribbling pad is provided for scratch work.
  - Timer is displayed on the screen.

Testing:

The following are the unit test cases and their results:

S.No	Test case	Description/Process	Expected result	Actual result	Pass/Fail
1	Registration	User has to register in registration page	Registration has to be successful	Registration is successful	Pass
2	Registration	Invalid email ID	Error has to be shown stating invalid email ID	Error has been shown stating invalid email ID	Pass
3	Registration	Password criteria has to be met	Error has to be shown when password length criteria is not met	Error has been shown when password length criteria is not met	Pass
4	Log in	User has to login with valid credentials	Login has to be successful	Login successful	Pass
5	Log in	User has to login with invalid credentials	Error has to be shown stating invalid credentials	Error has been shown stating invalid credentials	Pass
6	Quiz selection	User can select any topic among the topicz listed for quiz	Quiz has to get started on the selected topic	Quiz has got started on the selected topic	Pass

7	Quiz history	Users quizzez history is stored	Quizzes written by user has to get saved	Quizzes written by user has got saved	Pass
8	Tabs	List of options available in the app like login page, logout, profile, quizzes are shown in the tab icon	Login page, logout, profile, quiz has to be shown in the tab icon	Login page, logout, profile, quizzes are shown in the tab icon and they are redirected to respective pages on selecting them	Pass
9	Facebook login	User can login with Facebook	User has to be logged in using Facebook login	User has successfully logged in using Facebook login	Pass
10	Profile	User is able to view his/her profile	User has to be able to view his/her profile	User is able to view his/her profile	Pass

Implementation:

- **Mobile client implementation:** This app has been built on ionic framework and hence is compatible with both web and android mobiles.

Deployment:

Deployed code screenshots are attached below.

Index/start Page in web Screenshot

Index/start Page in mobile Screenshot
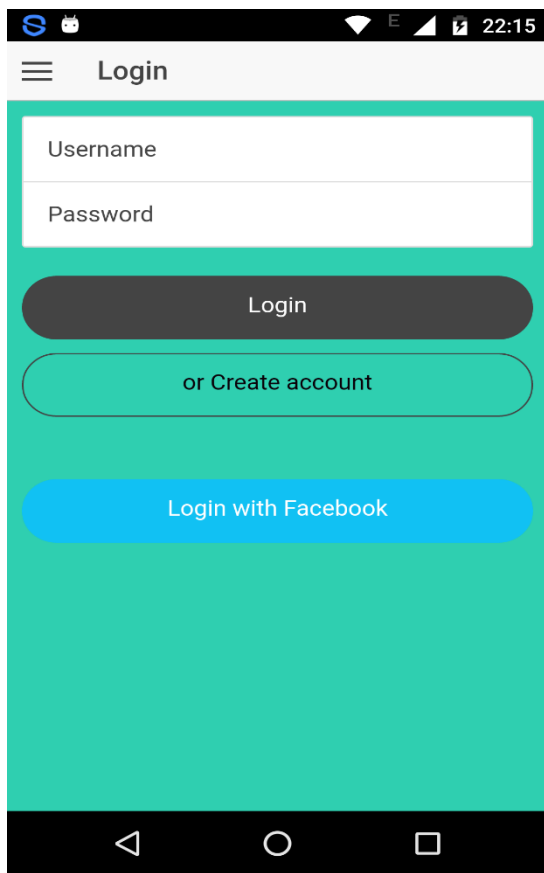
Login Page with Credentials in web Screenshot
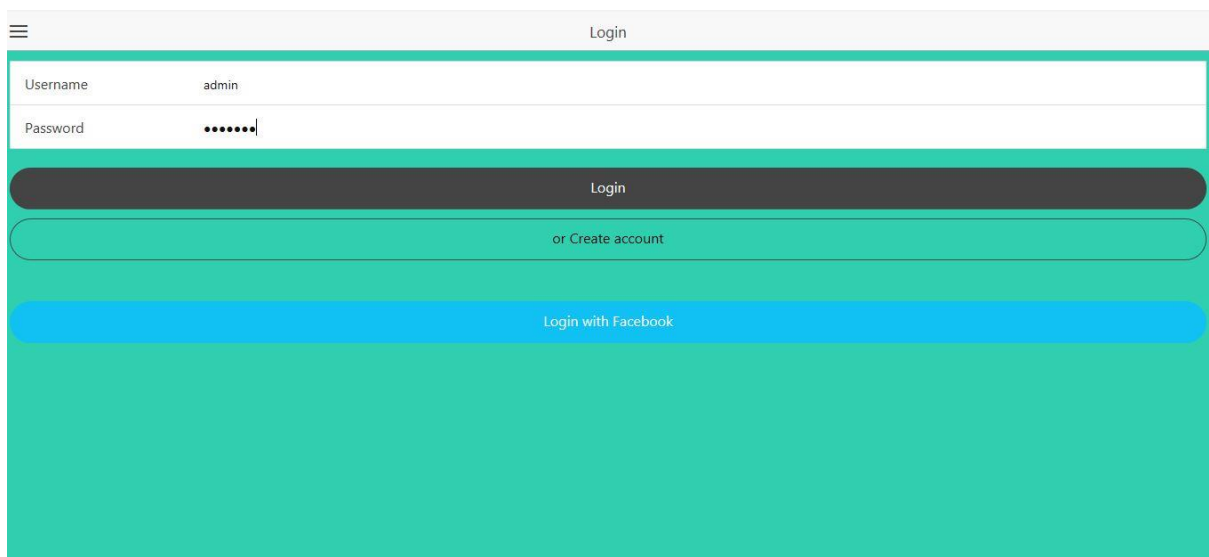
Login Page with Credentials in mobile Screenshot
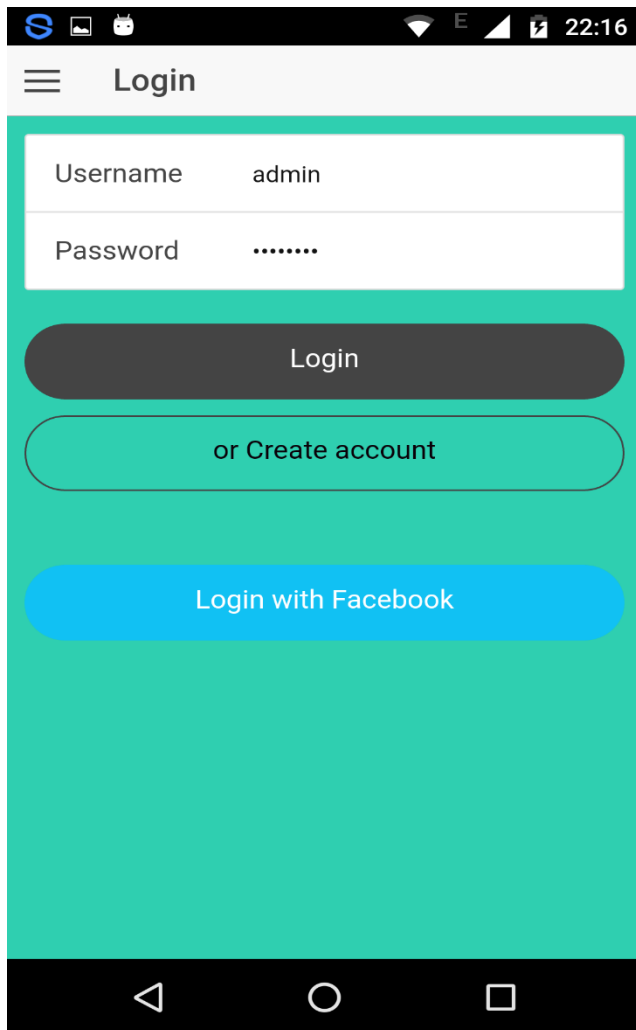
Login page invalid credentials error in web
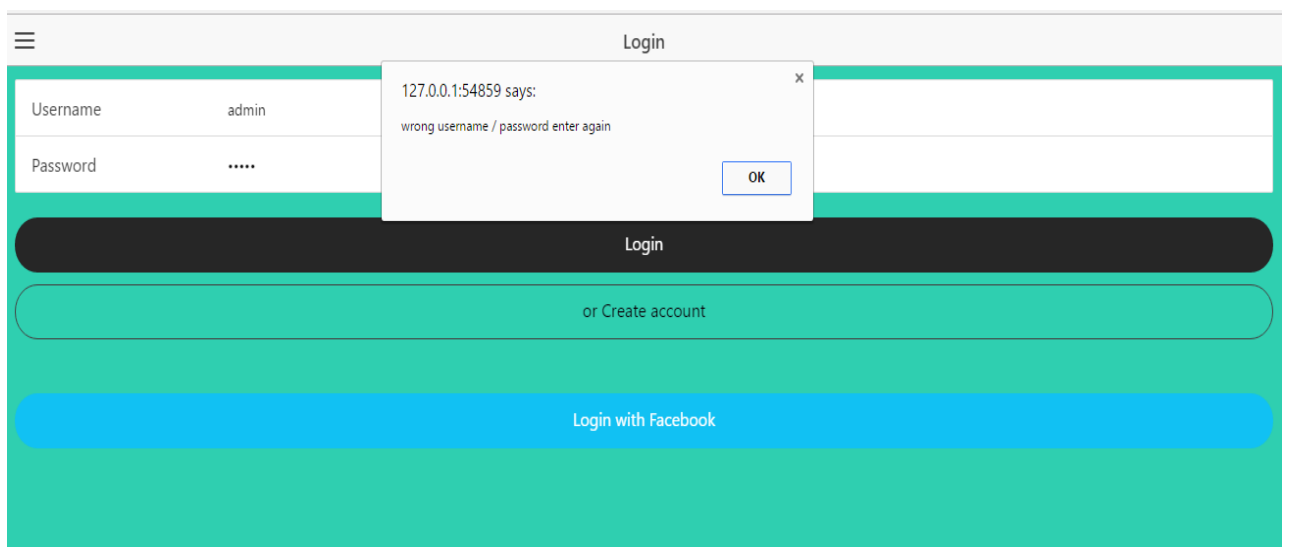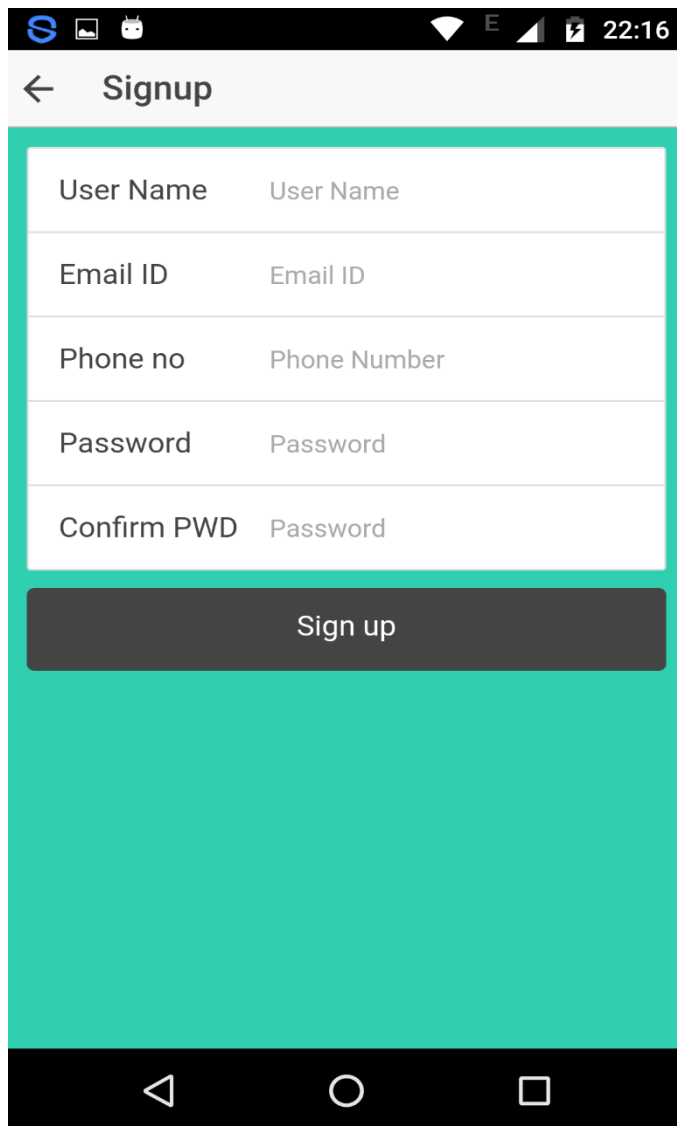
Login page invalid credentials error in mobile
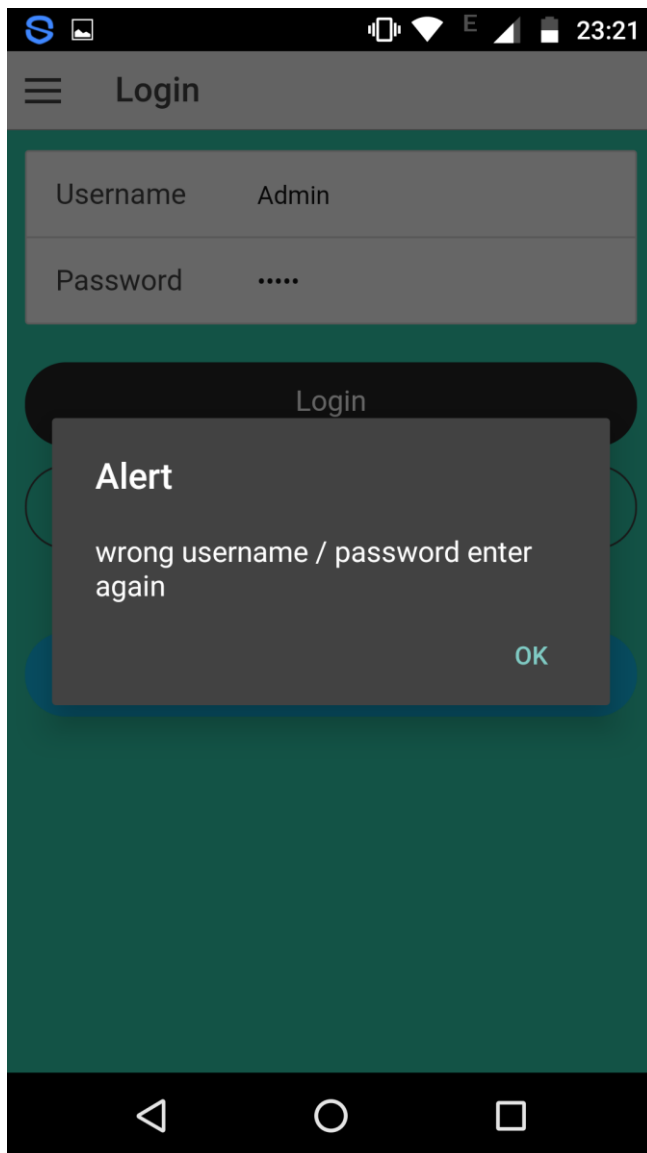

Signup Page in Web Screenshot

Signup Page in mobile Screenshot

Signup Page with Credentials in web Screenshot

Signup Page with Credentials in mobile


Registration successful message in web screenshot:

Registration successful message in mobile screenshot:
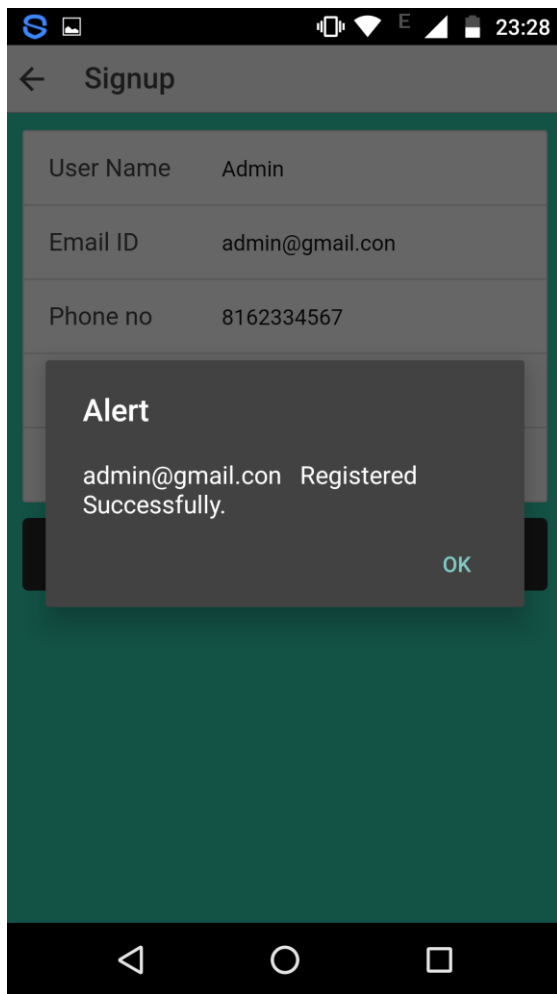
Passwords mismatch error in web screenshot:
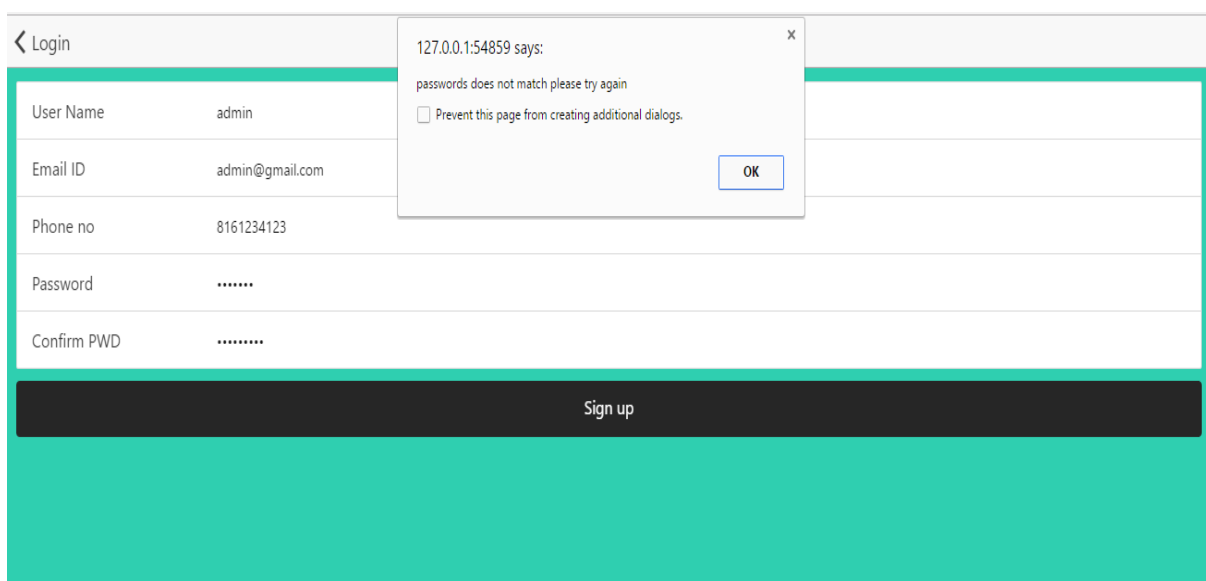
Passwords mismatch error in mobile screenshot:
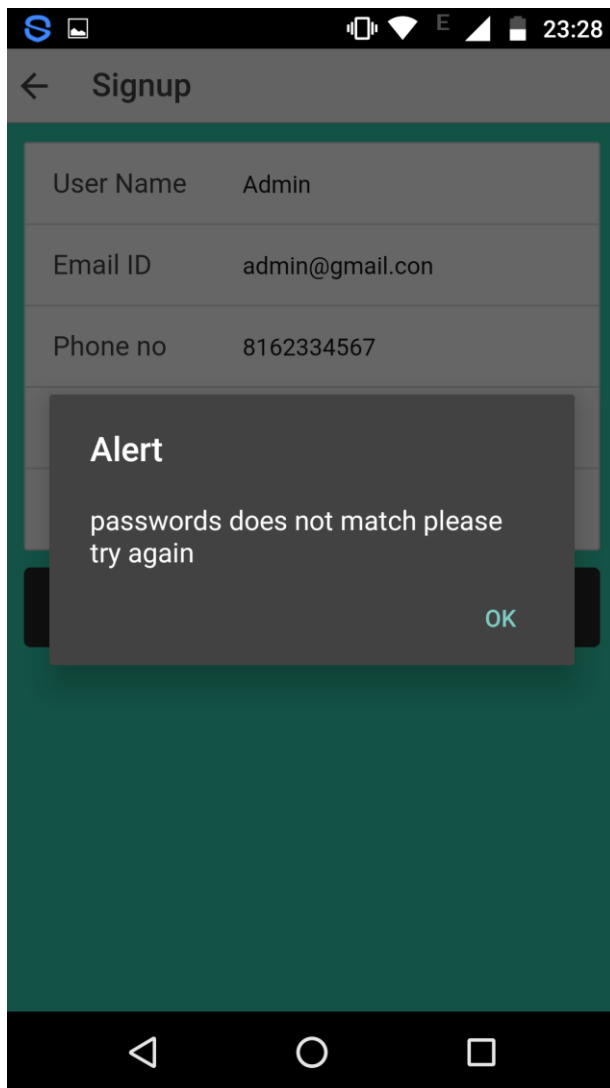
Home Page in Web Screenshot
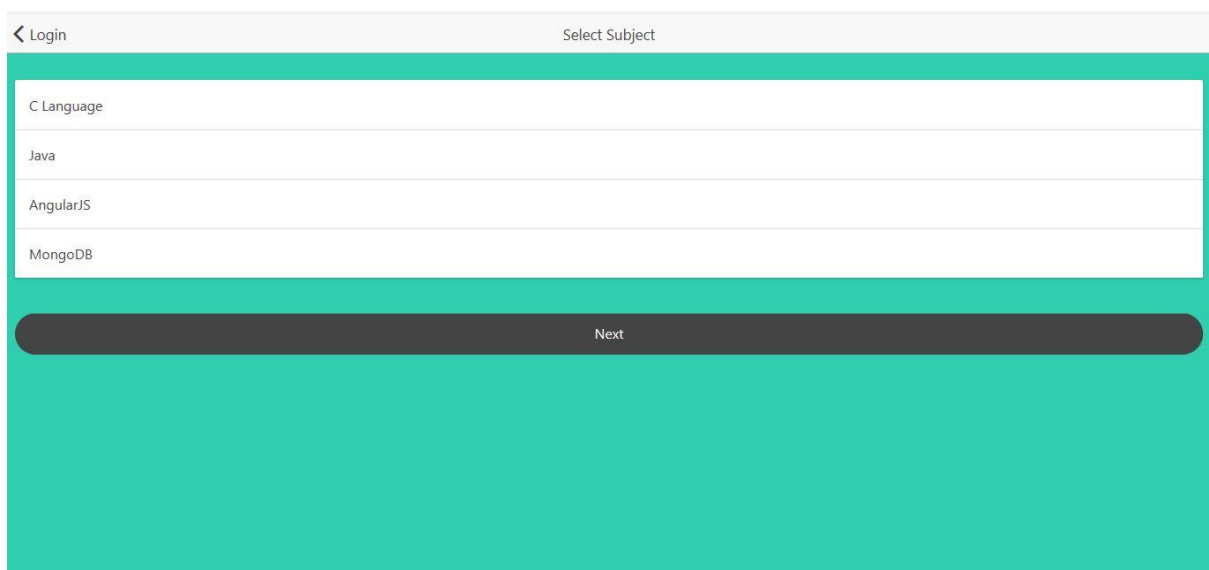
Home Page in mobile Screenshot
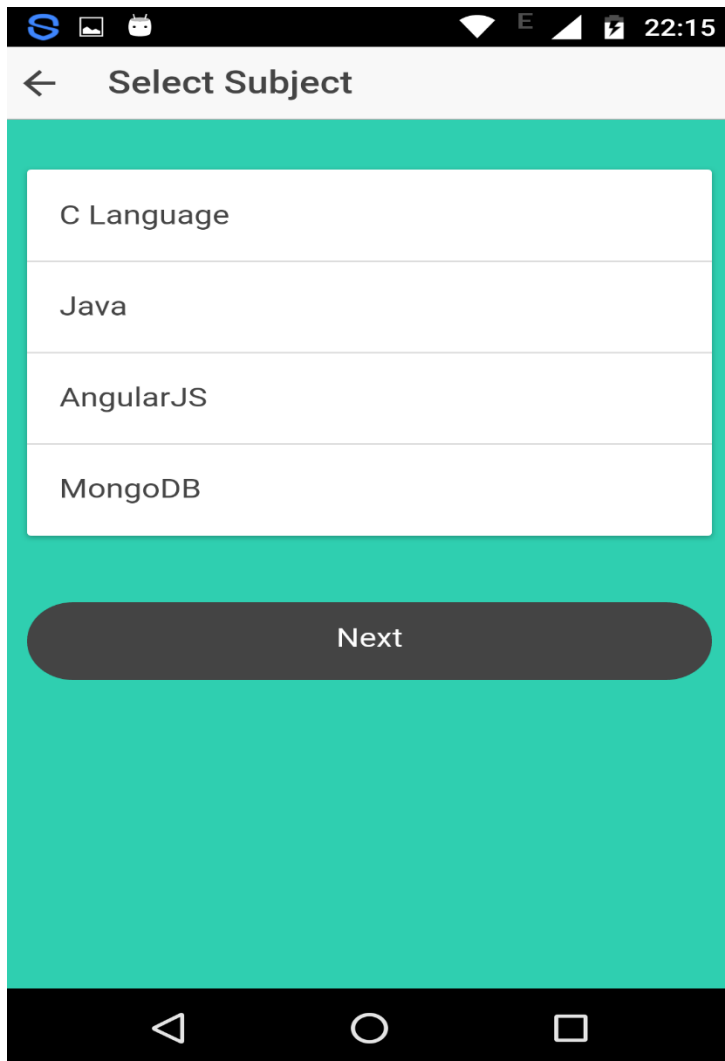
Profile Page in Web Screenshot
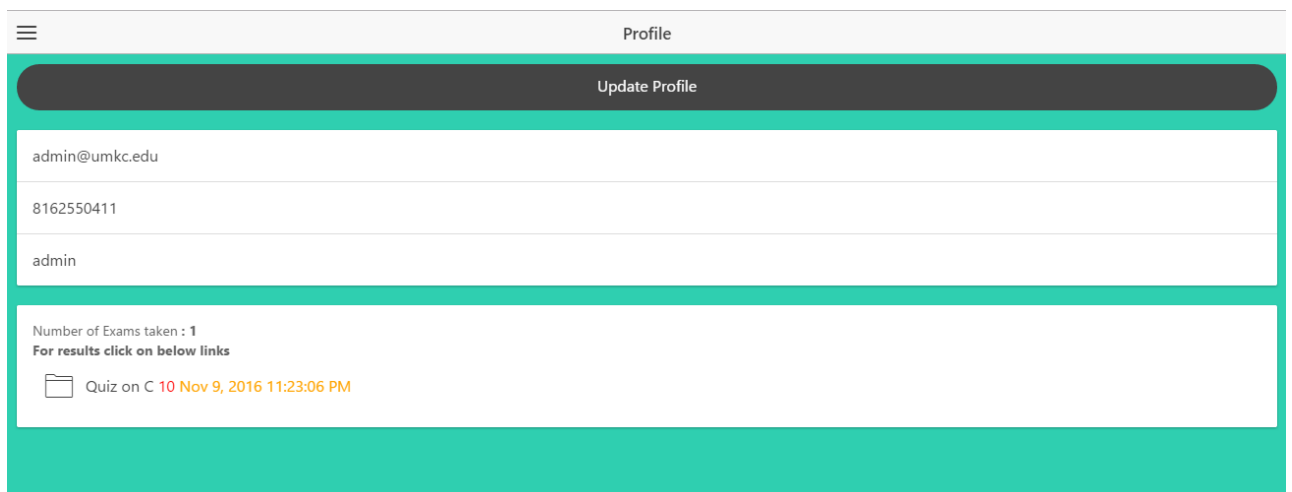
Profile Page in mobile Screenshot
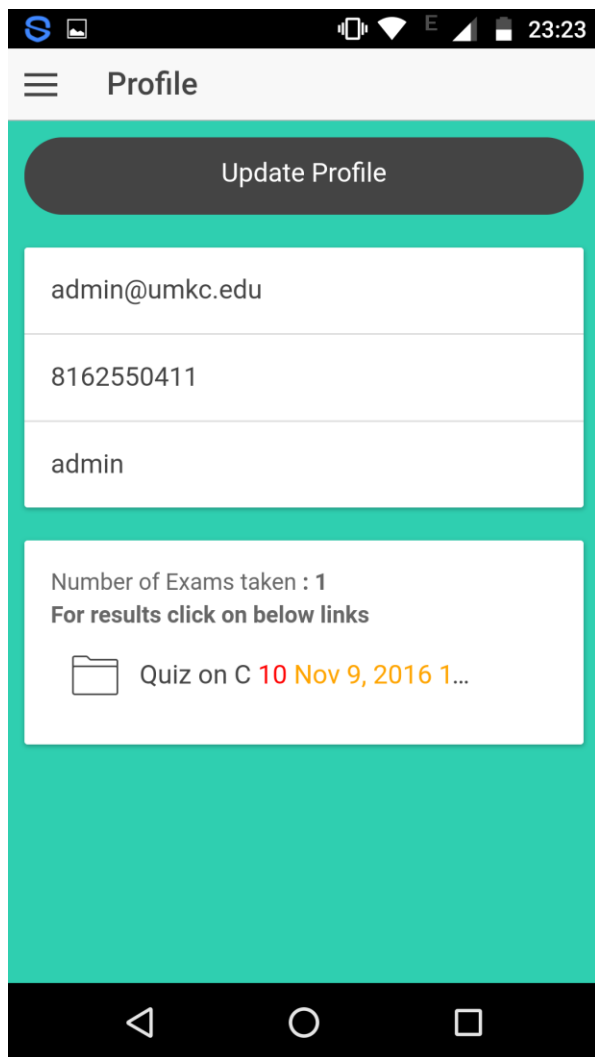
Tabs in Web Screenshot
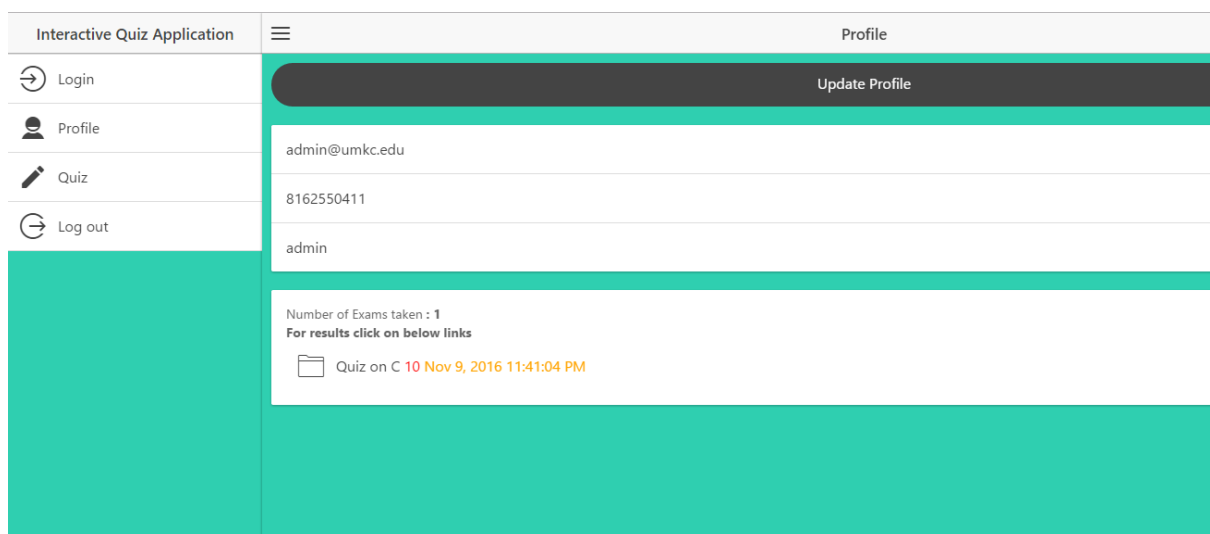
Tabs in mobile Screenshot
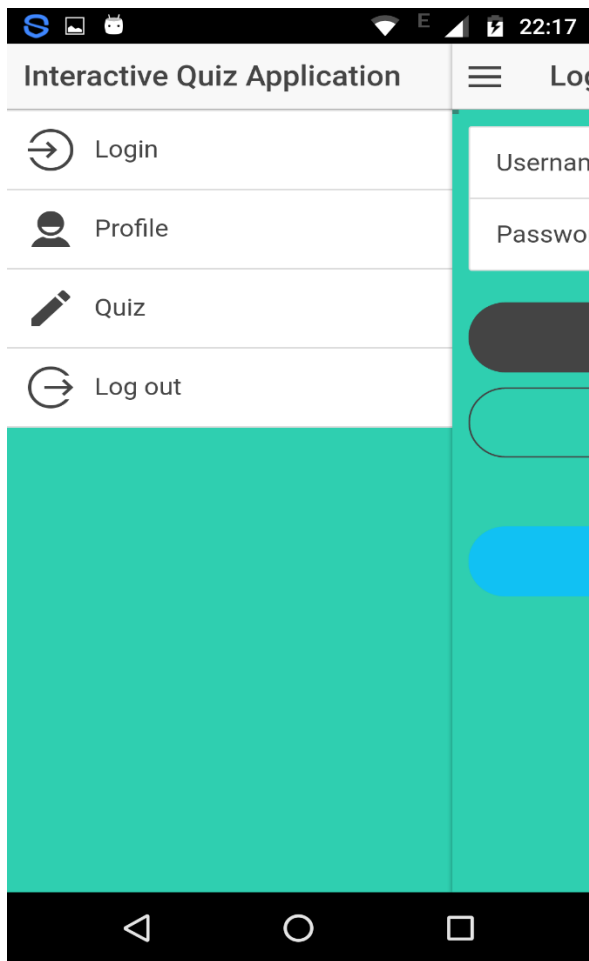

Selecting Topic from given Topics in web Screenshot
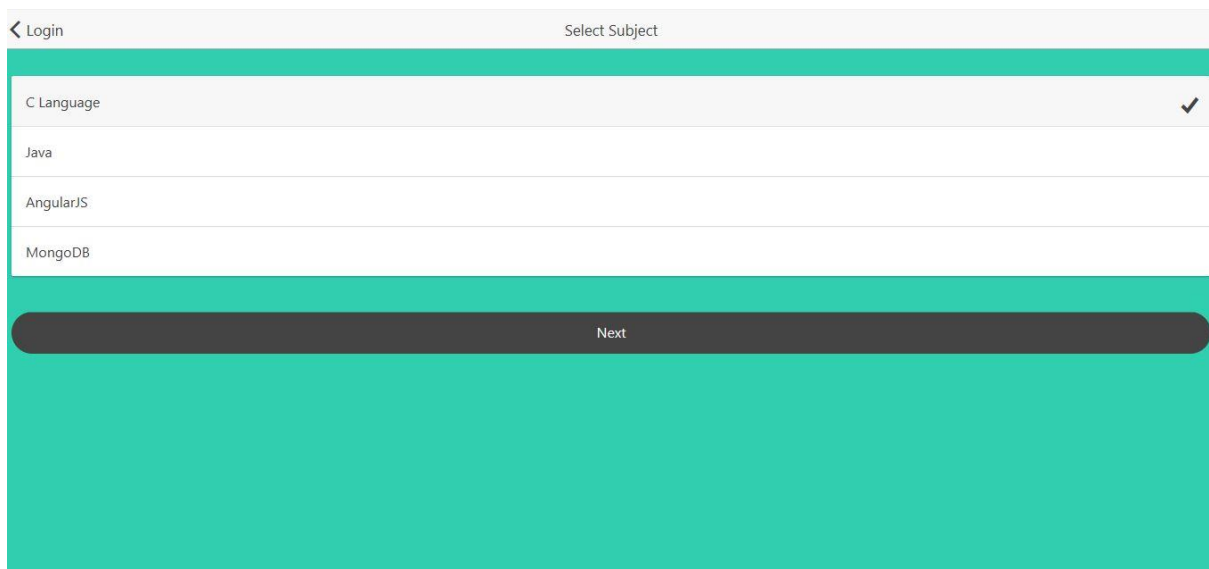
Selecting Topic from given topics in mobile Screenshot
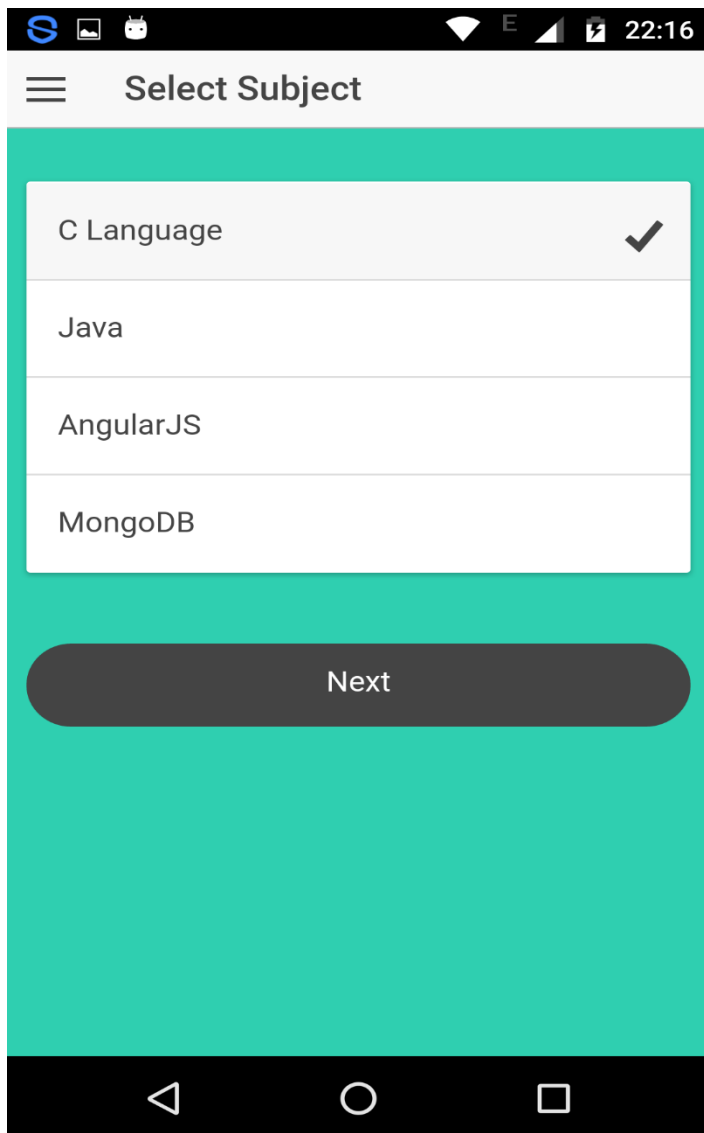

Quiz Questions Page in Web Screenshot
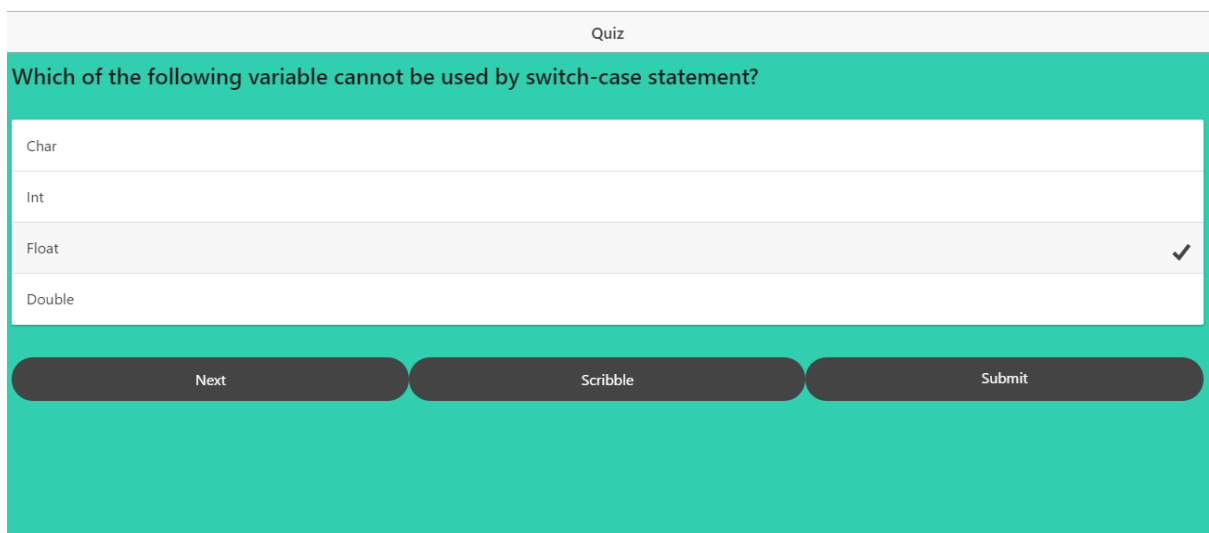
Quiz Question Page in Android Screenshot
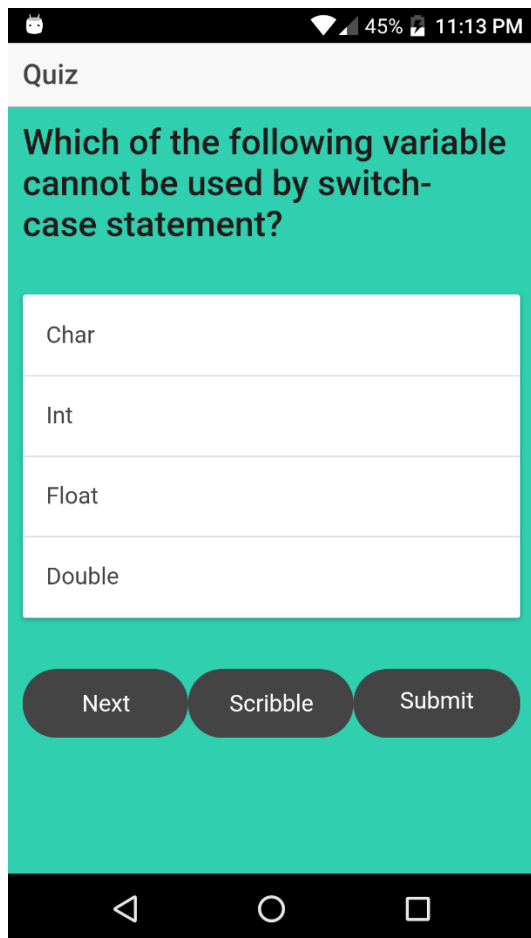
Scribbling pad on web:


Scribbling pad on android:
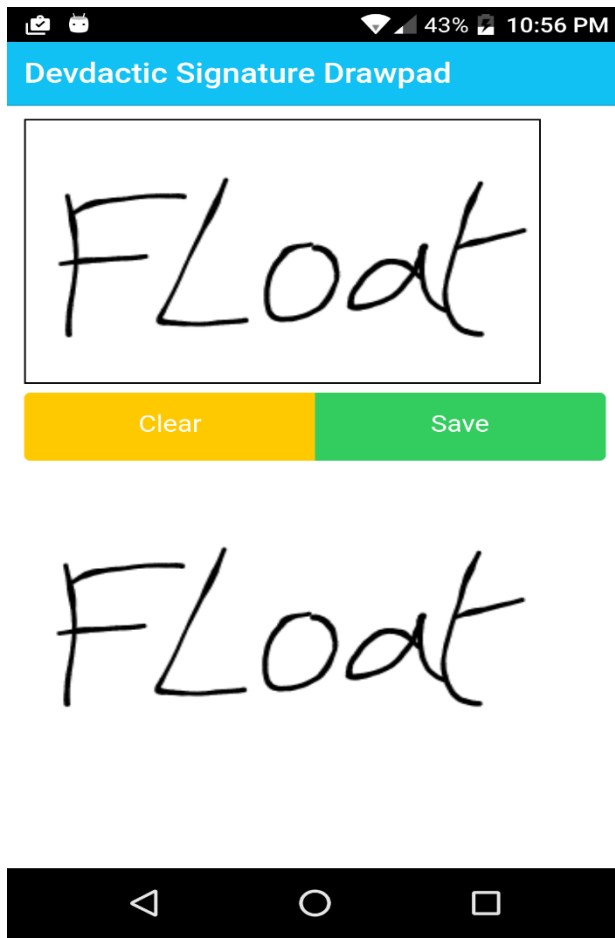
Displaying History on clicking taken quizzes option in home page
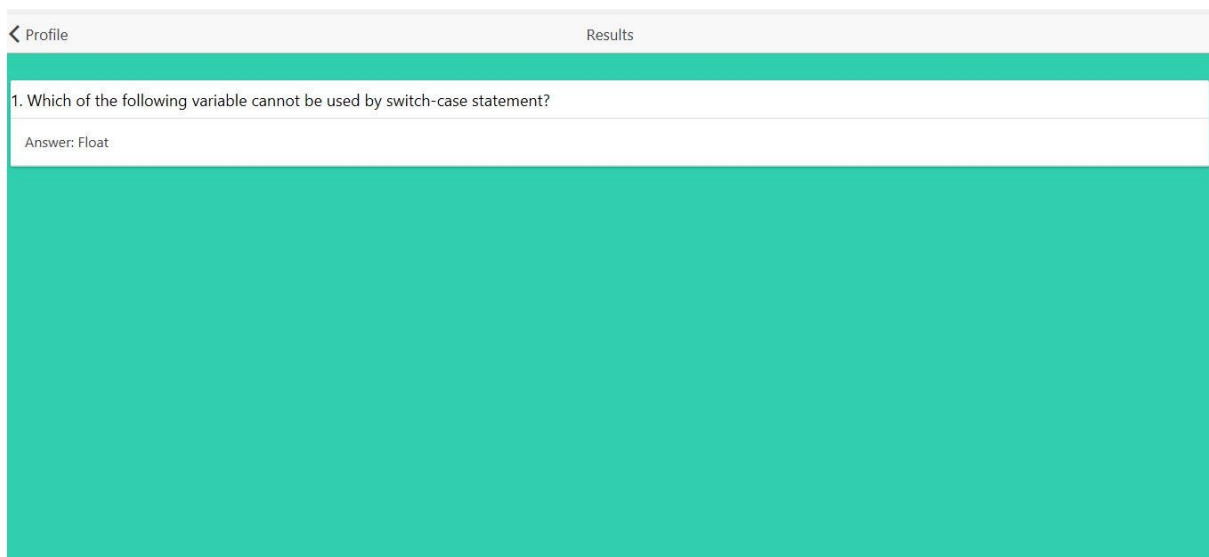
Displaying History Page in Android Screenshot
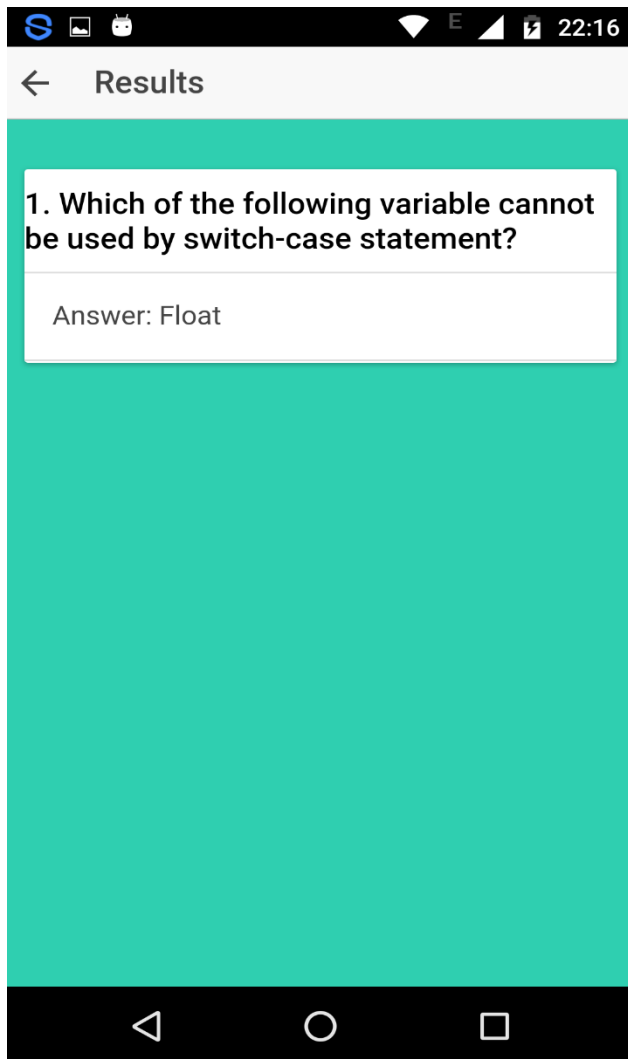
On clicking on question/options in the quiz, the app reads out the selected part. Sample recording is attached below:

QuizQuestion.m4a

Project Management:

Work completed:

| S.No	Description	Responsibility	Time taken	Contributions
1	Displaying quizzes/Reading data from Mongo DB, Documentation	Nikhila	10	100%
2	Facebook Login option, Text-to-Speech Implementation	Divya	10	100%
3	Creating quizzes Repository/Inserting data into Mongo DB, Mongo DB connections in Ionic	SaiTeja	10	100%
4	Completed Test Details, Test Score on completion of Test	Arun	10	100%

Burn down chart:

GitHub's burn down chart of the project is as follows:

Issues:

GitHub's issues for the project are as follows:

Contributors graph:

GitHub's contributors graph for the project is as follows:

Bibliography:

https://developer.mozilla.org/en-US/docs/Web/API/SpeechSynthesisUtterance

http://www.w3schools.com/angular/

http://www.w3schools.com/bootstrap/default.asp