**Project Phase IVReport**

Created by- PRANAV UPPAL

**ABSTRACT:**

Educational Technology is constantly evolving and growing, and this progression will continually offer new and interesting advances in learning environment.

Traditional E-Learning systems developed for laptop and desktop computers were based on

stand-alone software application and web based application architecture. These applications have many limitations to use efficiently or we cannot use them easily

since these applications need a computing device and network connectivity. With the

advancement in mobile technology and availability of smart mobile devices and network we can design a system which can be used to check the knowledge level of students

in the class room. Since mobile network is available at large geographical area so

this can be used for the knowledge testing of any person specially candidates of software companies who need a specific skill for the job. Thus the main objective of the research

work is to develop an interactive mobile application based on android framework to conduct quiz sessions in the classroom for the various technical topics. This paper deals with the prototype development of an Mobile quiz system, comprehensive evaluation system

for the remote students or in a classroom. On further enhancement this app can be used for the recruitment process of software companies which will be able to save time and efforts

to illuminate unwanted candidates to appear for personal interview by travelling a long distance.

**A quiz** is a form of game or mind sport in which players attempt to answer questions correctly about a certain or variety of subjects. Quizzes can be used as a brief assessment in education and similar fields to measure growth in knowledge, abilities, or skills. A Quiz App contains a set of questions and its answers and checks for the correctness of the answer given by the user. It navigates through the questions using dynamic programming.

**This Project main purpose** is to develop Quiz system. The application will provide

online based quiz with multiple choice question (MCQ). This quiz application will

support android base operating system. With this application, users or any

organization can perform actions like

* Administrative Task

* Interview Task

Keywords:- Android, Mobile Learning, Mobile Evaluation, E- Learning.

1. INTRODUCTION

A learning environment is any environment in which students become totally involved in the learning process. Since the mobile devices support the anytime, anywhere learning,

m-learning can faster the growth of the learning. Andro Quiz application enables the learner to access the learning object and interact with the instructor and other learner seamlessly from the mobile / tablet / aakash tablet while in class, from his android mobile phone during

travelling or at home. Mobile learning provides the freedom from learning environments, learning devices and learning content format and rather emphasize on the constructivist

learning process and cognitive development among learners. With the use of smart mobile devices with wireless networks enables mobility and mobile learning, allowing teaching

and learning to extend to spaces beyond the traditional classroom. The evolution of today's

mobile devices increases the number of mobile applications developed, and among them

the mobile learning applications.

ANDROID PLATFORM:

Android Operating System: Android operating system is a project initiated by Google through the Open Handset Alliance, which includes over 30 companies in ICT. Android platform is an open source project, allowing its amendment by any manufacturer of mobile

Devices. The operating system is based on windows. The windows includes drivers

for the mobile device hardware: screen, keyboard, camera, USB, Bluetooth etc. Kernel provides interface hardware and memory management, processes and other resources. Android applications are developed using Java programming language. Applications require an environment to manage their life-cycle. Android studio which is an open

source SDK. This includes a Java virtual machine and Java class libraries that

provide basic support for applications. Android applications are not compatible

with Java ME or Java SE. The applications are optimized for mobile devices constraints

. The application programming interface allows accessing a framework that includes

components used by all Android applications. The application framework includes components for Android application management, windows management and user

interface graphical, event handling etc. Application level includes pre- installed applications

and user applications. Applications are based on Java technologies and use classes provided through application programming interface. Android operating system is multitasking, each application running in a separate thread.

Android Application Development:

Android applications are developed using one or more basic components

activities (Activity base class),

• services (base class Services),

• content providers (Content Provider base class)

• components that receive and act on messages sent to all applications (the base class Broadcast Receiver)

• messages (class Intent)

• activities (Activity base class),

• services (base class Services),

• content providers (Content Provider base class)

• components that receive and act on messages sent to all applications (the base class Broadcast Receiver)

• messages (class Intent)

A particular importance in application development is the resources that enable separation of interface code. Activities represent the screen associated to an application. An application

can have one or more activities. Services are routines that run in parallel with the main

thread and do not have GUI. They allow the development of actions in the background without blocking the main thread execution and interaction with such

application. Content providers are used for sharing data between applications. Data sharing

is done through files, databases or other means. An alternative to content providers is the use of communication between processes. Applications can respond to the occurrence of

events in the system by using classes derived from Broadcast Receiver. They do not GUI and an application can have several components of this type. In order to activate components like

activities, asynchronous messages encapsulated in objects of Intent type are used.

Android applications are developed mainly using Eclipse IDE with Android

Development Tools (ADT) plug-in. Android SDK and emulators are necessary for application development.

QUIZ APPLICATION:

A quiz application can be designed as client server style architecture, multi tier architecture or as an stand alone application. In case of application design with a client

server architecture which uses a server to send data continuously to the mobile application

system needs bandwidth to run application and load on the server will be depending on the

number of applicants using application. One of disadvantage is that we are dependent on network connectivity and in case of network failure complete system will be fail.

To overcome some of these issues this application have been designed with slight change in design. In this application data base is used and all questions and answers are stored in the

database. Each time a teacher wants to conduct a quiz. All subject / topic wise questions are stores in the application apk file and distributed to the participants. Distribution can be

done using blue tooth / google play / by pen

drive also. So dependency of network is reduced. One application apk is usable for once and for one subject / topic only. After the exam is finished user will have to install apk so there

is no harm. For the next topic the concern Instructor will set new questions and their answer

and will distribute it again. So a student can appear in the test at any time from remote also.

The roles of different users in this application are as under.

This architecture of application has three actors, which plays key role to run the application.

a. The roles of a trainer/instructor in the and quiz system are

To decide the subjects, topics, time and number of questions to be asked, marking scheme for the system, prepare tests, Quizzes and their answers for the system. Assess the quiz result

submitted by the students/learners. Interacting with students/learners and explain them how to

use the tool.

b. The roles of the learner/students in the and quiz are

Take the course and answer questions asked. Work on assignments related to the course send feedback and queries related to the quiz and inform about problems faced and suggestion about the system. Interact with the trainer and fellow learner/student concerned with the course.

c. The roles of the Application Developer in the and roquiz system are

Develop a framework where the content designed by the trainer can be presented in a pre-formatted manner to the learner when they launch the application. Provide pre- defined

templates for framing the tests and assignments. Design the user interfaces for accessing the tests related to that course. Calculate the awards and display the number of correct.

Software Requirements Specification Operating System:

* **Windows**
* **Database: Firebase**
* **Tools: Android studio**
* **Technologies Used: Java**
* **Network: Internet Connectivity Required**.

Objectives:

The basic objective of this project is to develop an android-based system with following features, namely:

1. **Questions bank**
2. **Time frame**
3. **Life lines**
4. **Data Storage**
5. **Multimedia support (pictures, snapshots, tables).**

The main objective to create this Quiz app is to help the users for the preparation of necessary educational purposes regarding Computer Science and IT field with an easy access to our app directly on their Android phones. Through our app, users can learn and prepare themselves for interviews, tests and exams on Android phones, and can also use this app for increasing their general knowledge about Computer Science, Verbal and Analytical everywhere and anytime.

Hardware Requirements( Specification For Mobile Device):

* RAM: 256 MB
* Disk Space: 250 MB

For Developer to develop, test the project:

* Processor: Intel Pentium IV or higher
* RAM: 4 GB or higher.
* Hard Disk: 160 GB or higher.

Android Application Framework :

The Android applications directly interact with the Android Framework to run and are managed here. Resource Management, Voice call management and activities like these are handled by the application framework.

The Android framework includes the following key services:

* Activity Manager – The activity stack and the application lifecycle are controlled by activity manager.
* Content Providers – The data is shared and published with other applications using this content providers.
* Resource Manager – The non-code embedded resources such as strings, color settings and user interface layouts are accessed using this resource manager.
* Notifications Manager – The display alerts and notifications to the user are given by this notifications manager.
* View System –The user interfaces of the application are created by using this view system.
* Package Manager – The other applications which are in the current device knows information about the other applications that are in the device using this package manager.
* Telephony Manager – The information such as status and subscriber is provided to the application using the telephony manager.
* Location Manager – The changes in the location and the updating of the location is done by this location manager.

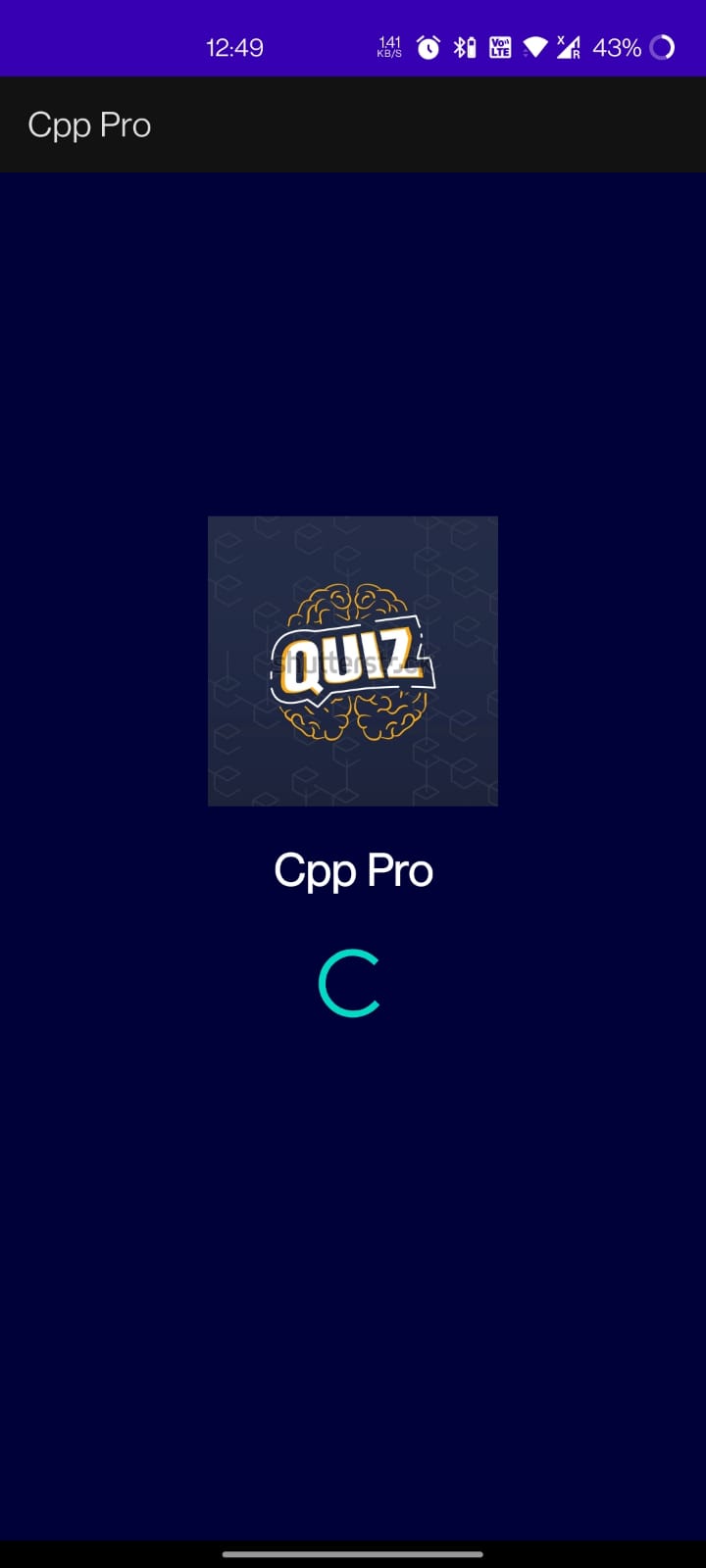
App Manifest:

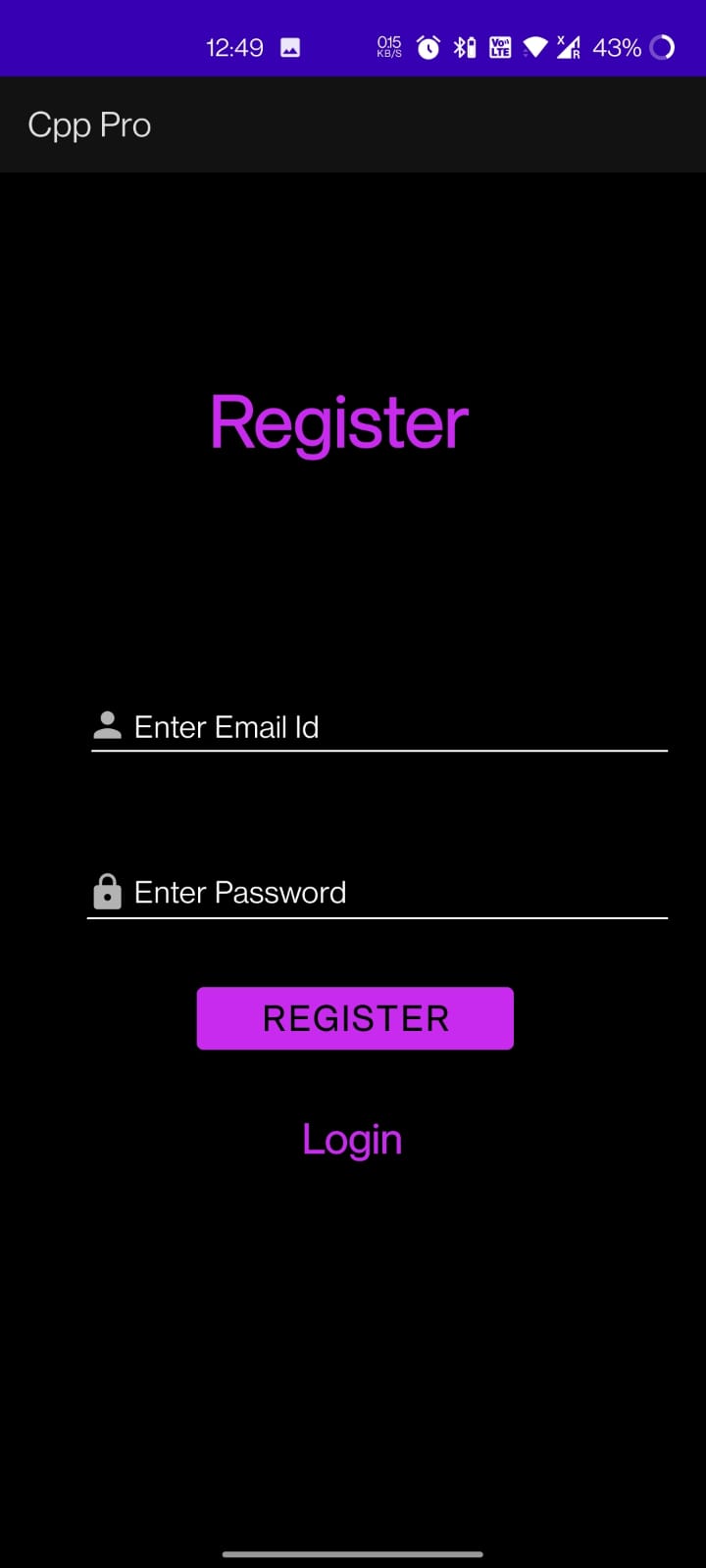
The essential information like Functionality and requirements of your android application are described in the app manifest file. The package name which serves as a unique identifier for the application is named by the app manifest. The host application component processes 18 are determined by the app manifest. The permission to interact with the applications are declared in the app manifest. This app manifest has the minimum API level that is required to host the application, permissions to access protected parts of that API and it also has the list of libraries that are to be linked. The activities, services, broadcast receivers, and content providers that the application is composed of are described in the app manifest this allows the application to know which screen is to be launched first.

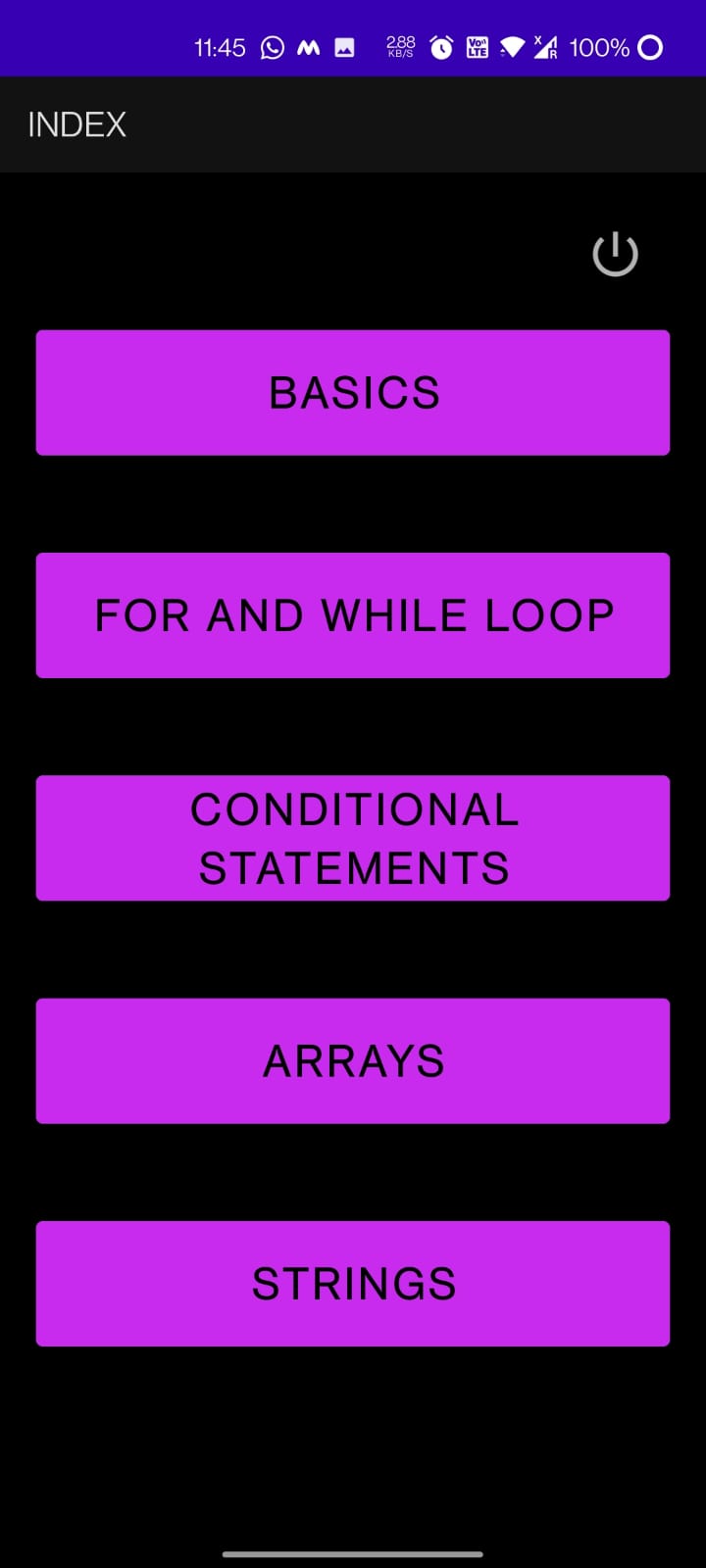
- Implementation:

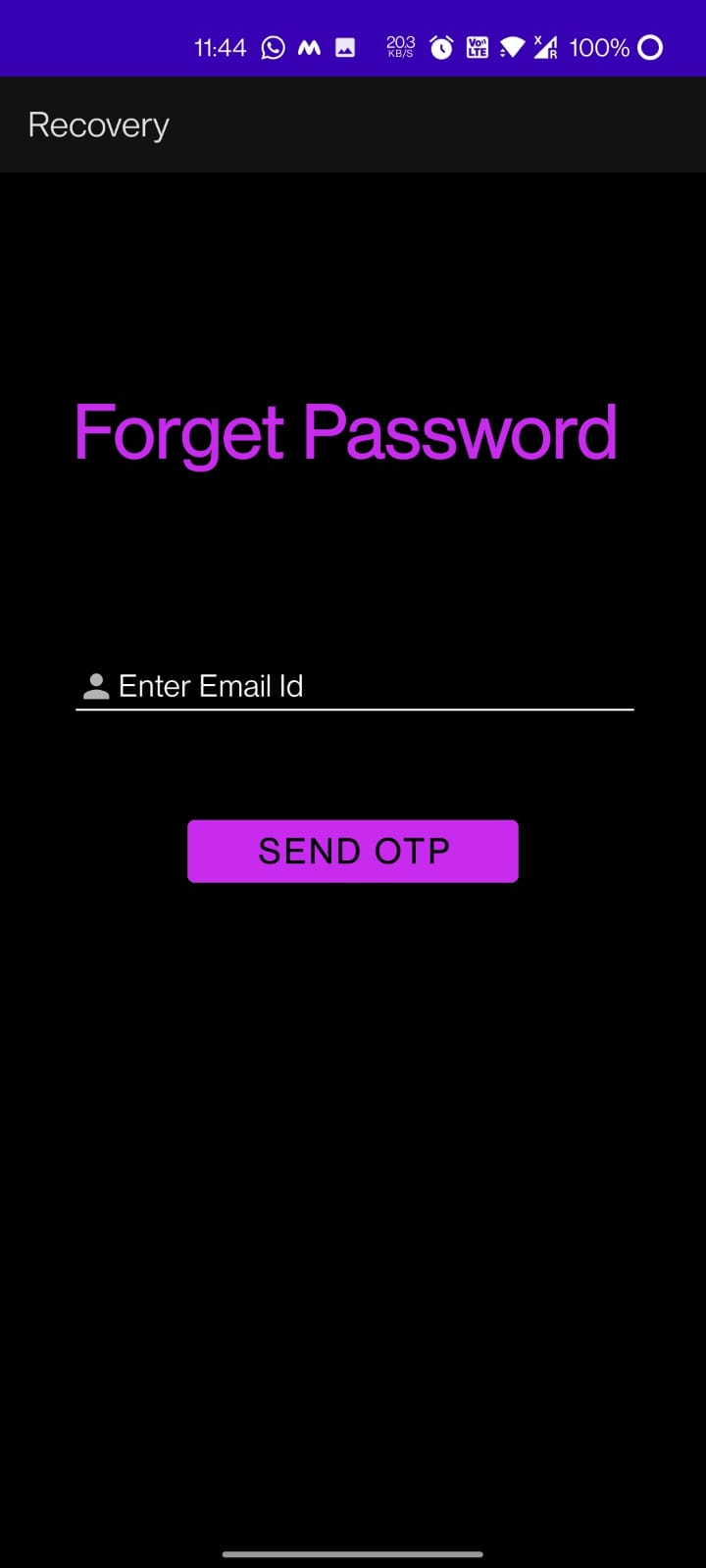
Screens:

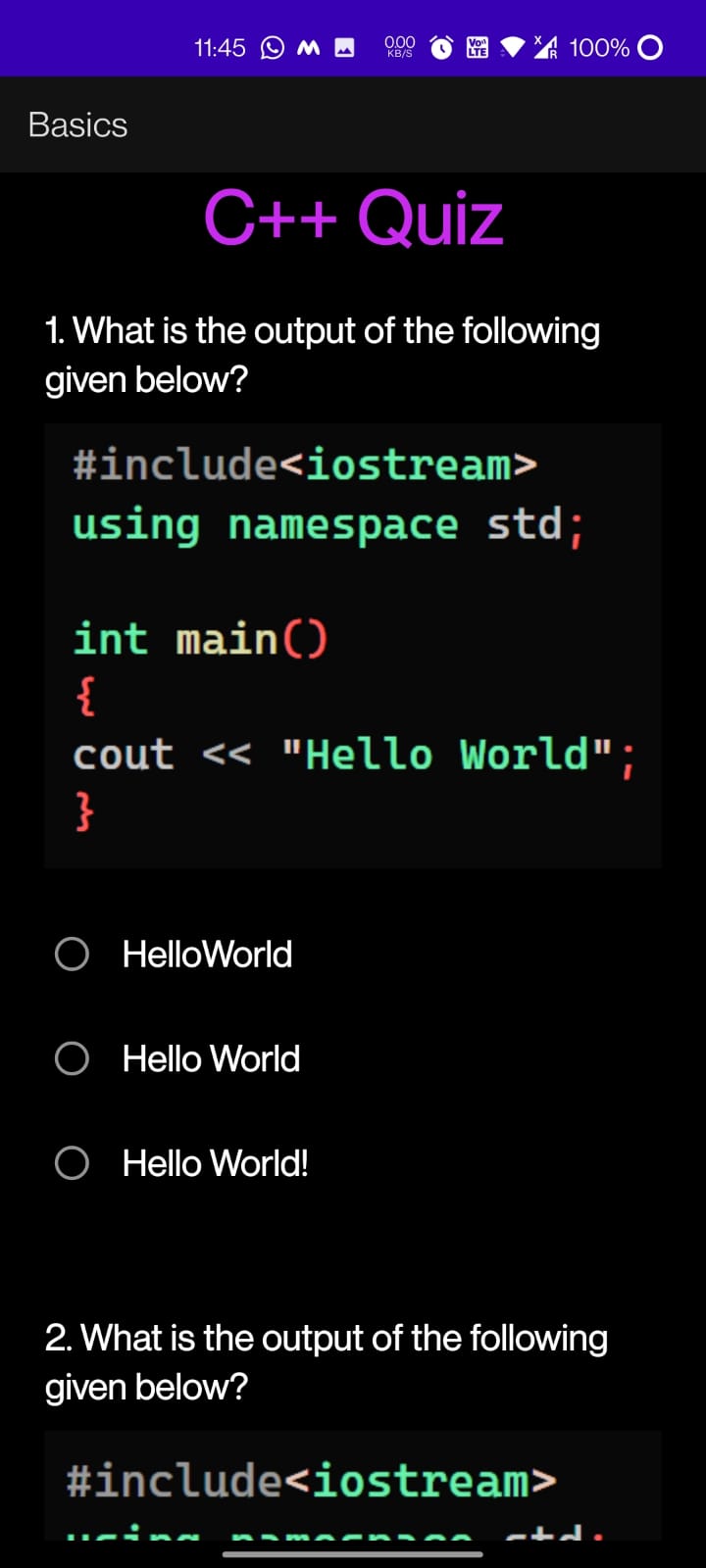
Start Page:

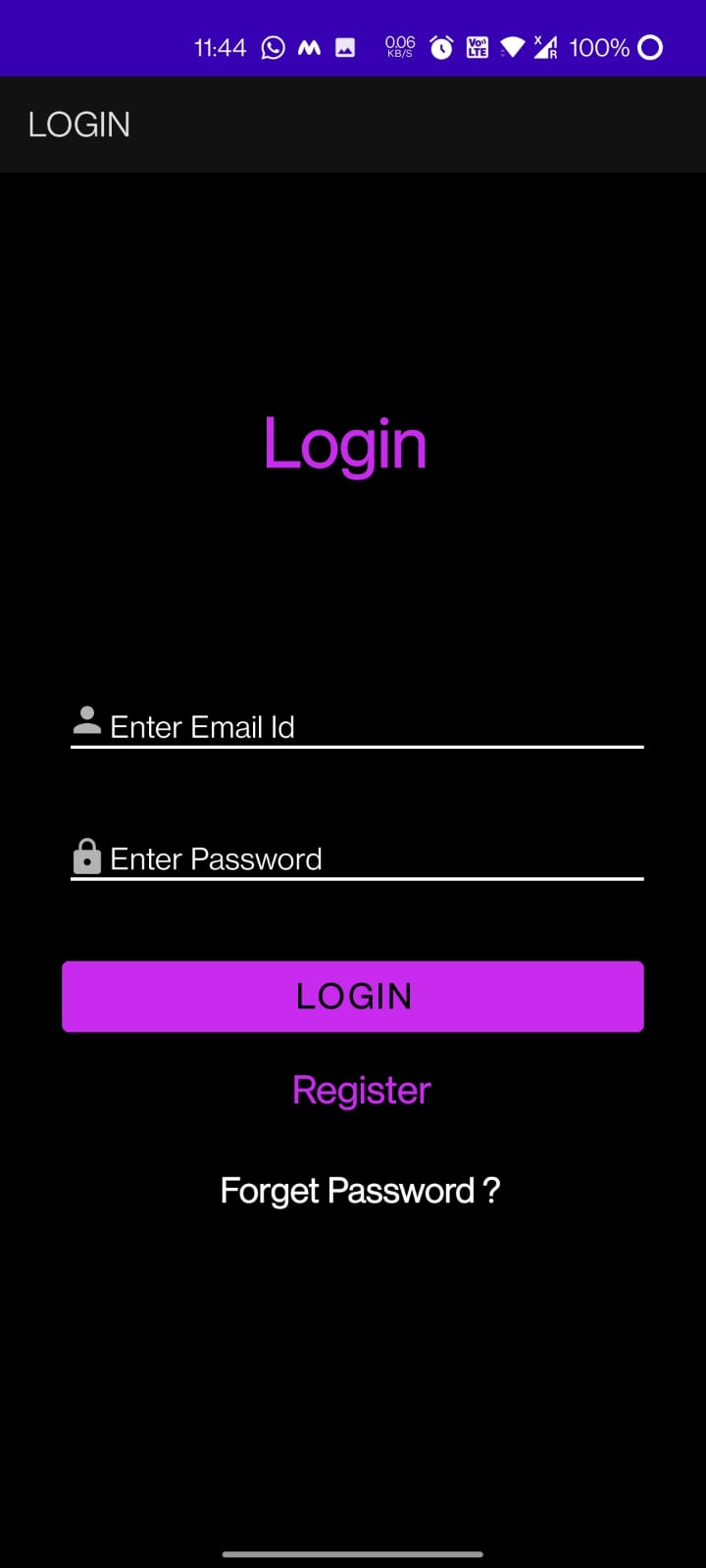


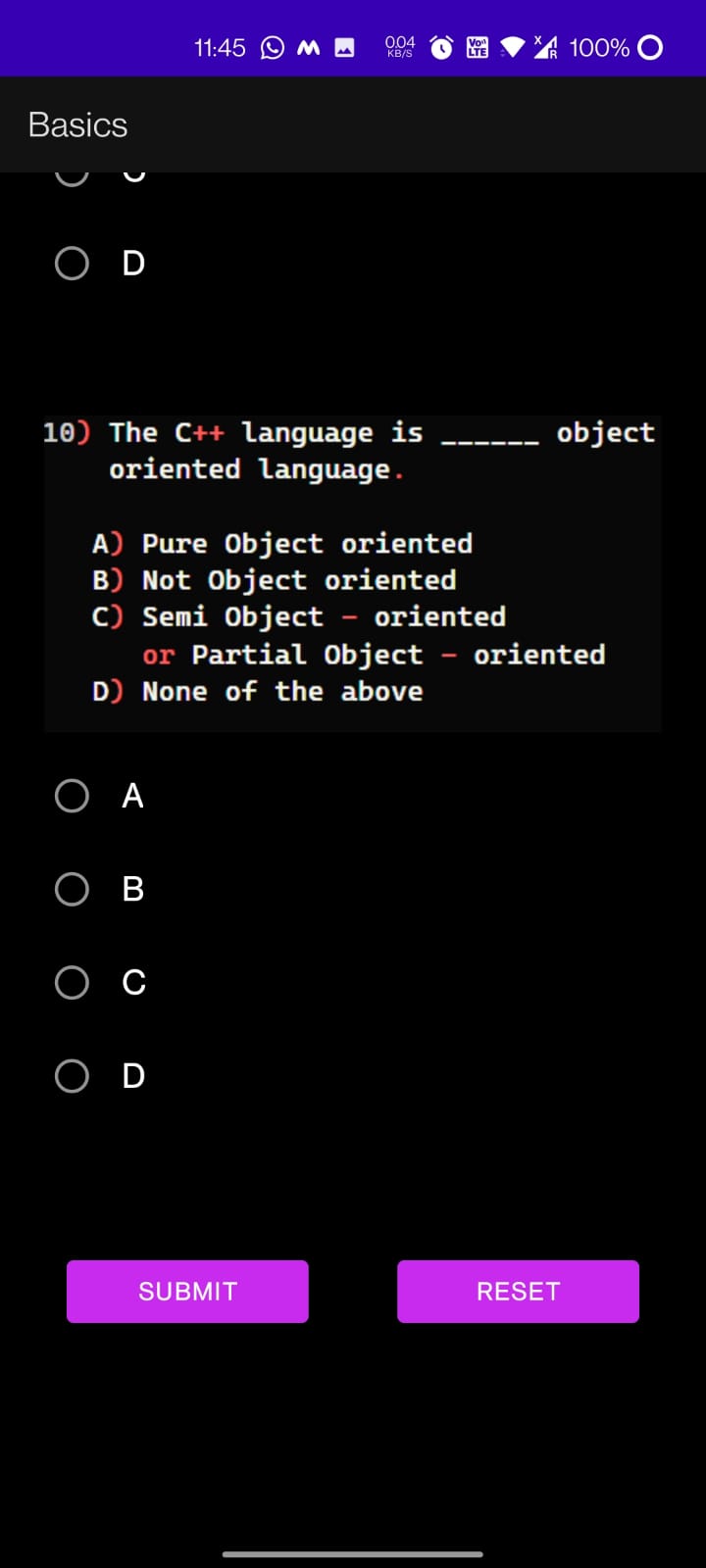
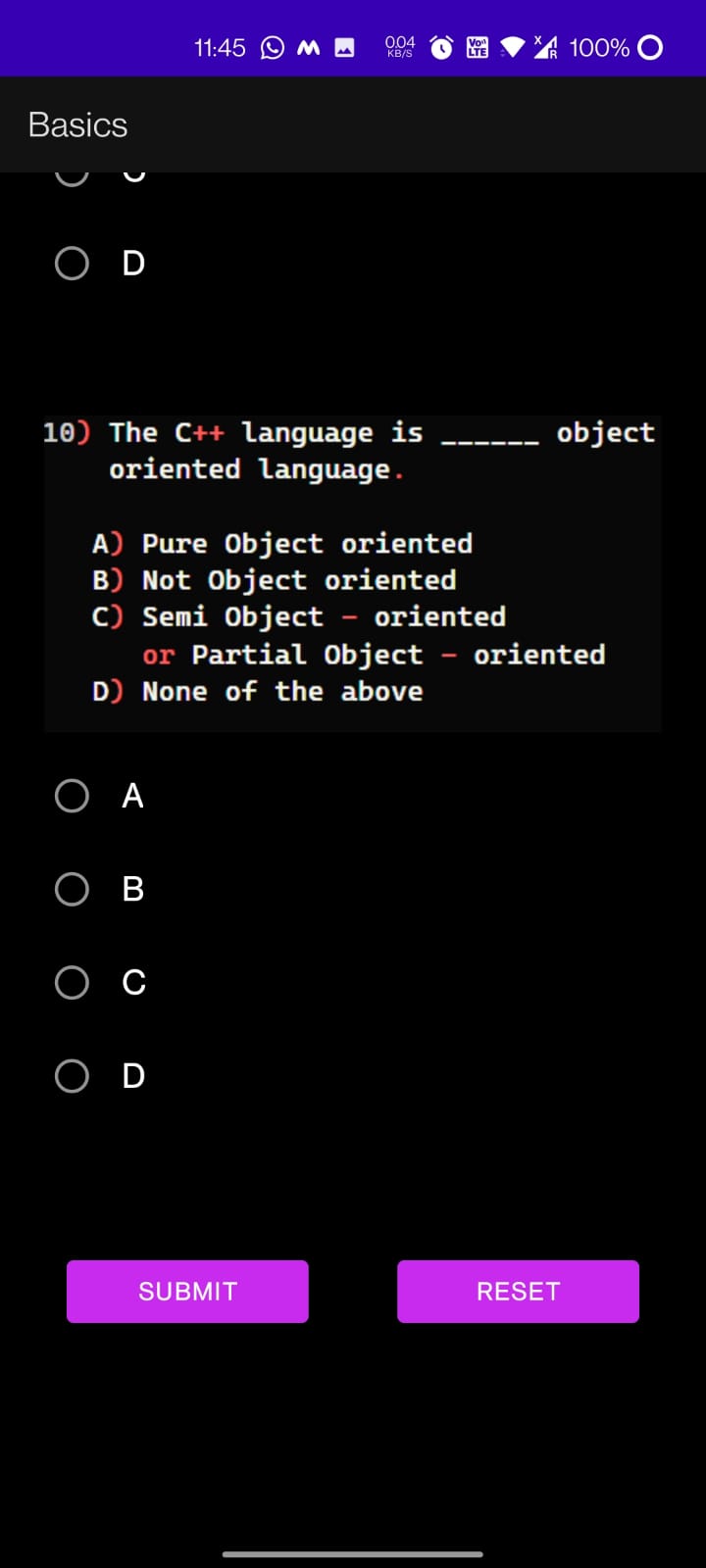
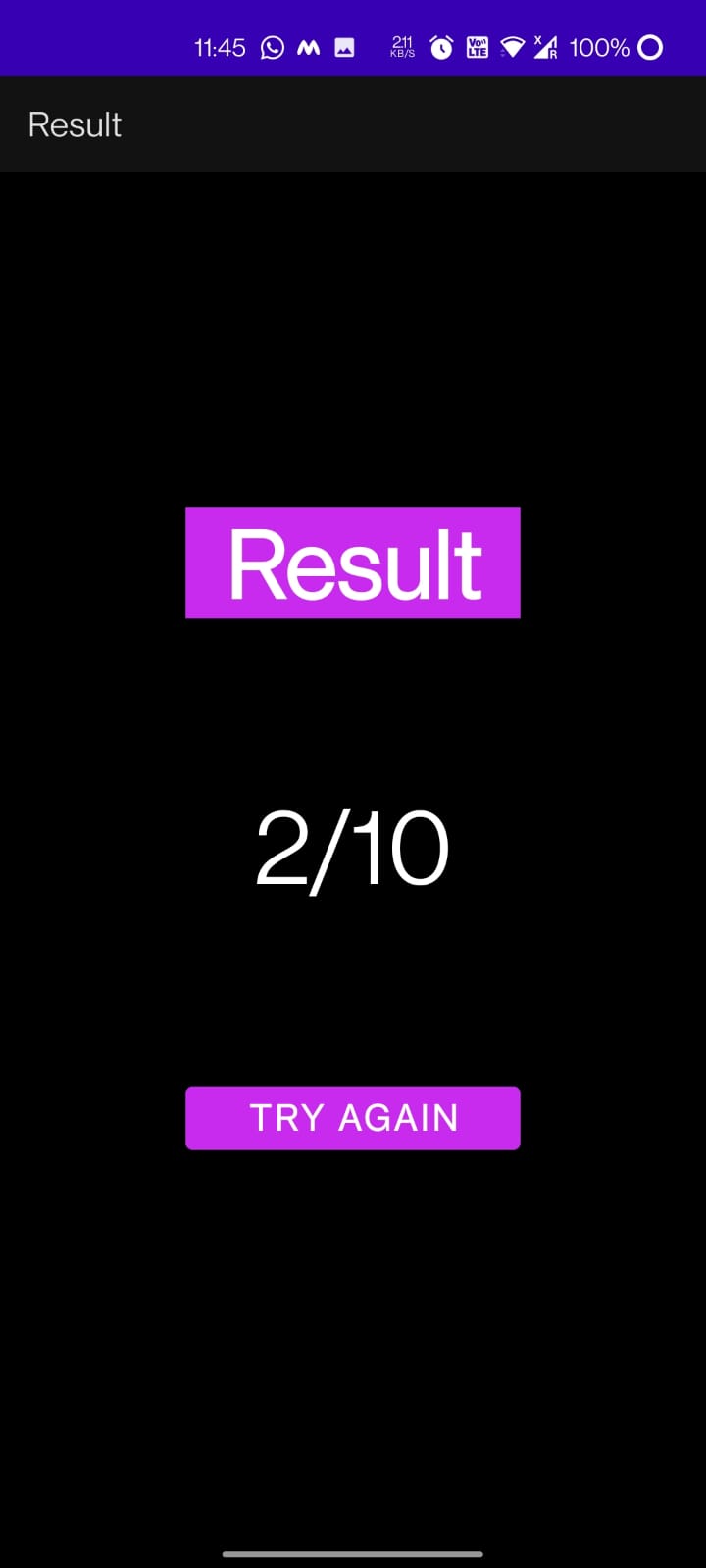












### 