

**MINI PROJECT  
(2020-21)**

**A Flutter based e-quizz android application**



**Institute of Engineering & Technology**

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## **Abstract**

This work deals with development of an android-based multiple-choice question examination system, namely: E- Quizz. This application is developed for educational purposes, allowing the users to prepare the multiple choice questions for different examinations conducted on provincial and national level. The main goal of the application is to enable users to practice for subjective tests conducted for admissions and recruitment, with focus on the Computer science field. This quiz application includes three main modules, namely (i) computer science, (ii) verbal, and (iii) analytical. The computer science and verbal modules contain various types of sub categories. It shows progress feedback during quiz play, and at the end, the app also shows the result.

## **Introduction**

### **1.1 General Introduction to the topic**

Development of android-based Quiz application is mainly required by students and learners to prepare themselves for different examinations directly through smartphones and tablets in hand. One of the major goals of our project is to facilitate students in learning, gaining and improving their knowledge skills. At the same time, our app provides them fun so that the users can prepare for interviews, entrance tests or any other corresponding purposes in a fresh mood and can't get bored or frustrated due to dullness of the app. We designed the application to facilitate the users to be able to take short quizzes using portable devices such as smartphones and tablets.

### **About E-Quizz App: -**

Educational Technology is constantly evolving and growing, and this progression will continually offer new and interesting advances in the 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 networks we can design a system which can be used to check the knowledge level of students in the classroom. Since mobile networks are available in large geographical areas 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 project is to develop an interactive mobile application based on android framework to conduct quiz sessions in the classroom for the various technical topics. This project 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 eliminate unwanted candidates to appear for personal interview by travelling a long distance.

## **How E-Quizz App Works: -**

- First of All, it will take the email and password to sign in the App. If the User is not signed up, Then It would take the user to the Sign Up Page where the User can Sign Up using his Email ID and creating a strong Password.
- Then the home page of the app will be opened for the user which Signed in. The user has many options to solve any of the quizzes. We have planned to create lists of the quizzes based on various topics to be displayed on the homepage.
- Users can click on any quiz, after clicking the examination screen will get opened. This screen contains a top bar which will display the no of attempts, no of corrects answers, no of incorrect answers, etc. Then it has a whole screen which shows the questions and the options for the same. Users can choose the options as per their choices. The correct or incorrect is shown directly there.
- There is also a finish button which takes you to the result screen which shows you the result of the quiz.
- After Completion of the Examination, the Application will take the user to the Result Page where the results will be shown and the user will get to know his/her performance in the examination.

## **What is Flutter**

Flutter is an open-source UI software development kit created by Google. It is used to develop

applications for Android, iOS, Linux, Mac, Windows, Google Fuchsia, and the web from a single codebase.

The first version of Flutter was known as codename "Sky" and ran on the Android operating system. It was unveiled at the 2015 Dart developer summit, with the stated intent of being able to render consistently at 120 frames per second. During the keynote of Google Developer Days in Shanghai, Google announced Flutter Release Preview 2, which is the last big release before Flutter 1.0. On December 4, 2018, Flutter 1.0 was released at the Flutter Live event, denoting the first "stable" version of the Framework. On December 11, 2019, Flutter 1.12 was released at the Flutter Interactive event.

On May 6, 2020, the Dart SDK in version 2.8 and the Flutter in version 1.17.0 were released, where support was added to the Metal API, improving performance on iOS devices (approximately 50%), new Material widgets, and new network tracking tools.

## **What is Dart**

Dart is an open-source general-purpose programming language. It was originally developed by Google and later approved as a standard by ECMA. Dart is a new programming language meant for the server as well as the browser. Introduced by Google, the Dart SDK ships with its compiler – the Dart VM. The SDK also includes a utility -dart2js, a transpiler that generates JavaScript equivalent of a Dart Script. This tutorial provides a basic level understanding of the Dart programming language.

## **Area of Computer Science**

Our Project falls under the Category of App Development of Computer Science. App development means the process of designing, creating, testing and finally launching an app that is meant to satisfy the needs of many users. However, App development does not refer strictly to

smartphone mobile applications. It can broadly go to installing the App in the Machine for a specific purpose like ATM machines.

An app is the common slang term for a software application or software program that can be run on a computer device to accomplish a task easier and more efficiently than we could do it ourselves as mere mortals. If you have a smartphone or computer tablet, you probably have used some game apps, news apps or even map apps to help you find the local coffee shop. Application development is the name of the profession that employs people who design, develop and deploy these computer applications.

### **1.3 Hardware Requirements**

- Memory [8 GB RAM (or higher)]
- Intel core i5 64-bit Processor (or higher)

### **1.3 Software requirements**

- Android Studio
- VS Code
- Flutter SDK
- Android Emulator

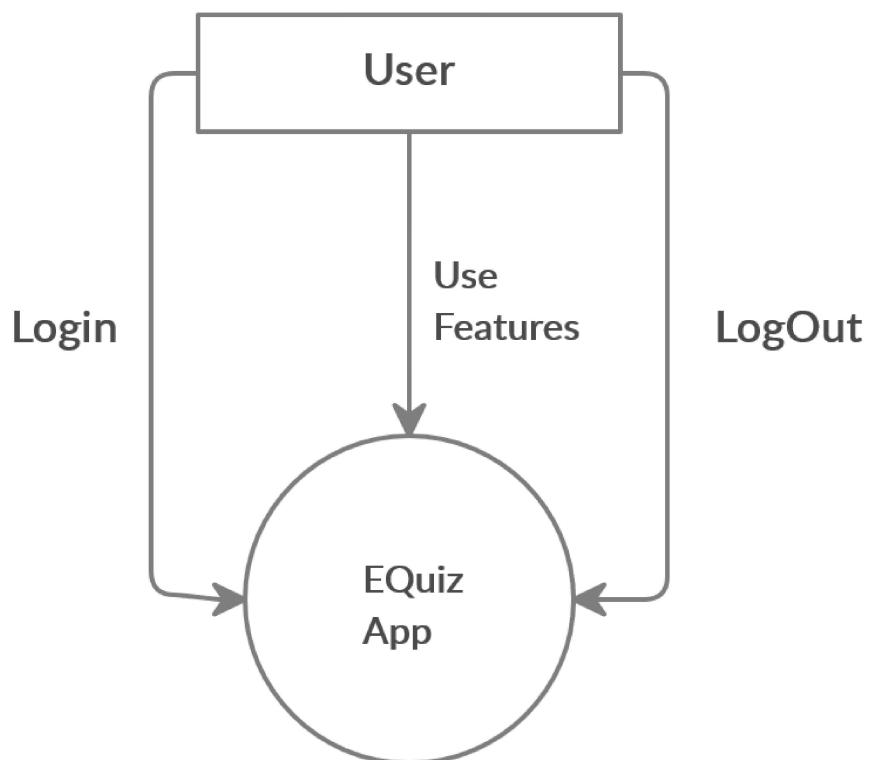
## **Objective**

The objective and scope of the Project E-Quizz App is to record the details of various activities of the user. It will simplify the task and reduce the paperwork. The new E-Quizz App rolled out to your area of responsibility. The system is very user friendly and it is anticipated that functions of the system will be easily accessed by administrators "academics" students and applicants. Hence the application for the college management has been designed to remove all the deficiency from which the present system is suffering and to ensure. The purpose of the project is to build an application to reduce the manual work for managing the MCQ quiz and we will follow to achieve these objectives in this project.

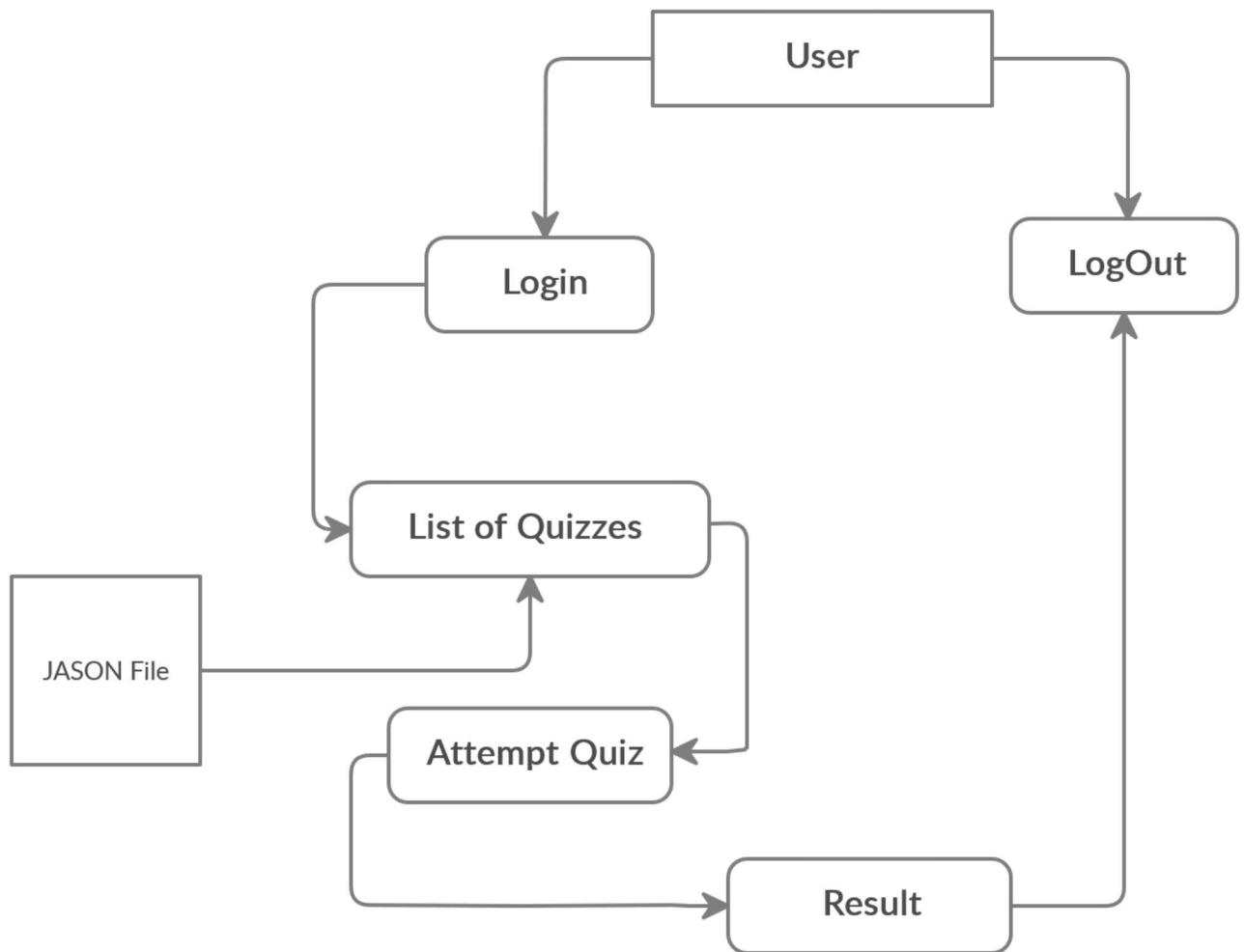
- To create an appropriate platform for best managing of MCQ test;
- To overcome the time consuming issues and taking MCQ tests;
- To release the marks of the test taker as soon as possible;
- To manage the information of different tests.

## Data Flow Diagram

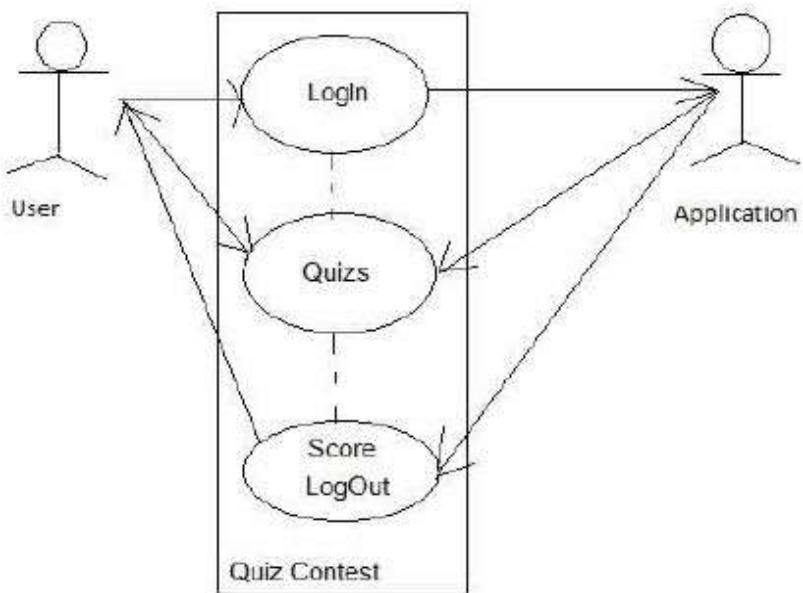
### DFD Level-0



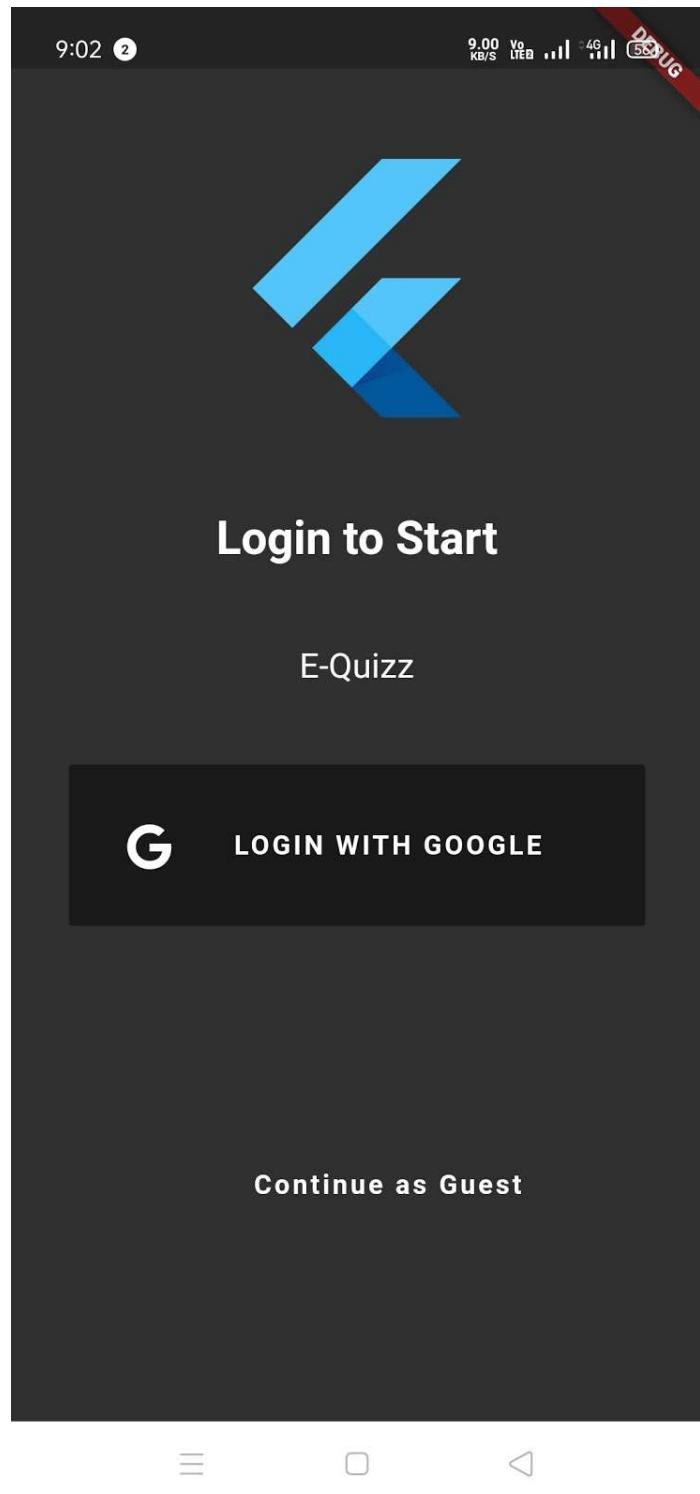
## DFD Level-1

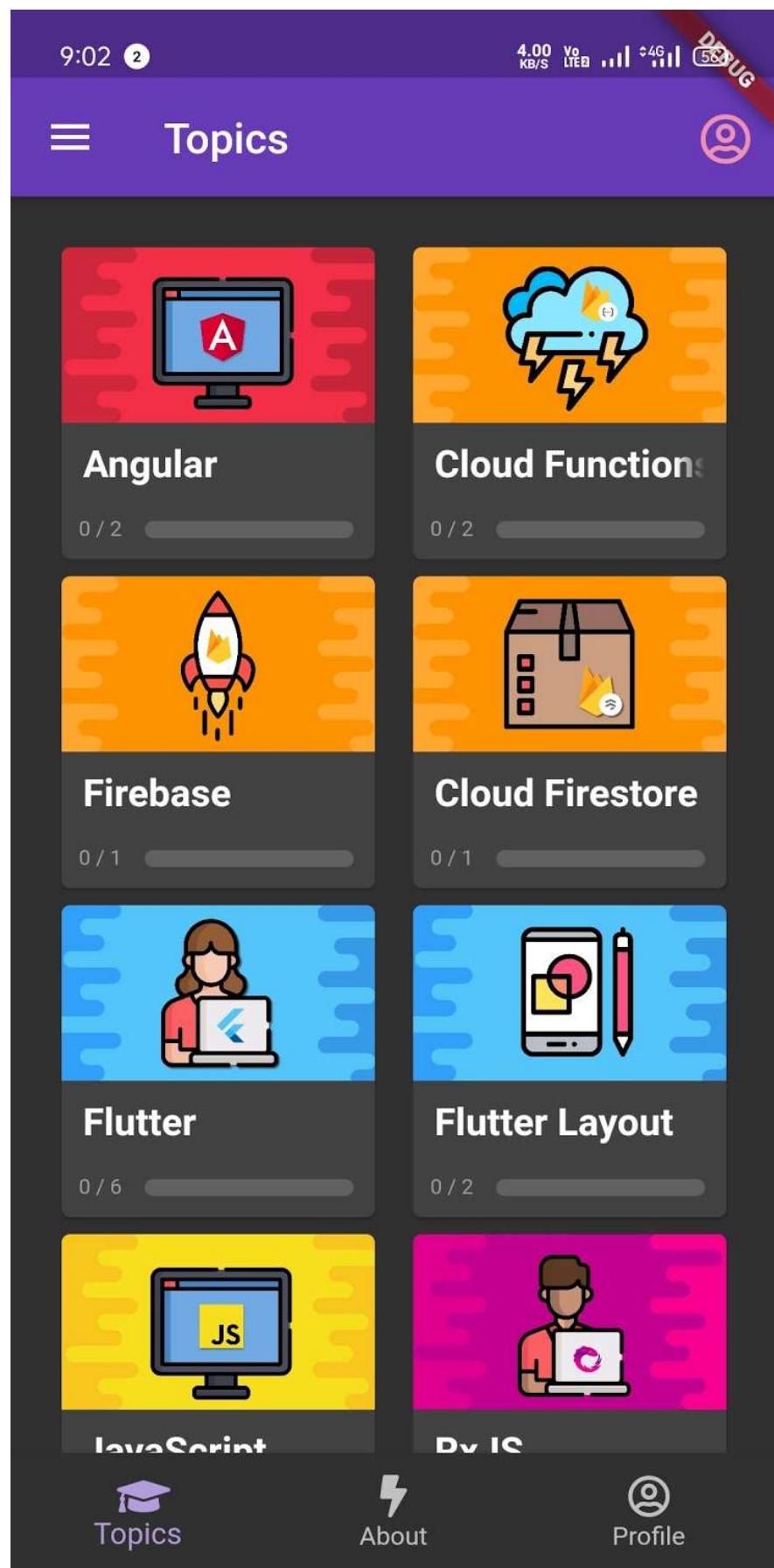


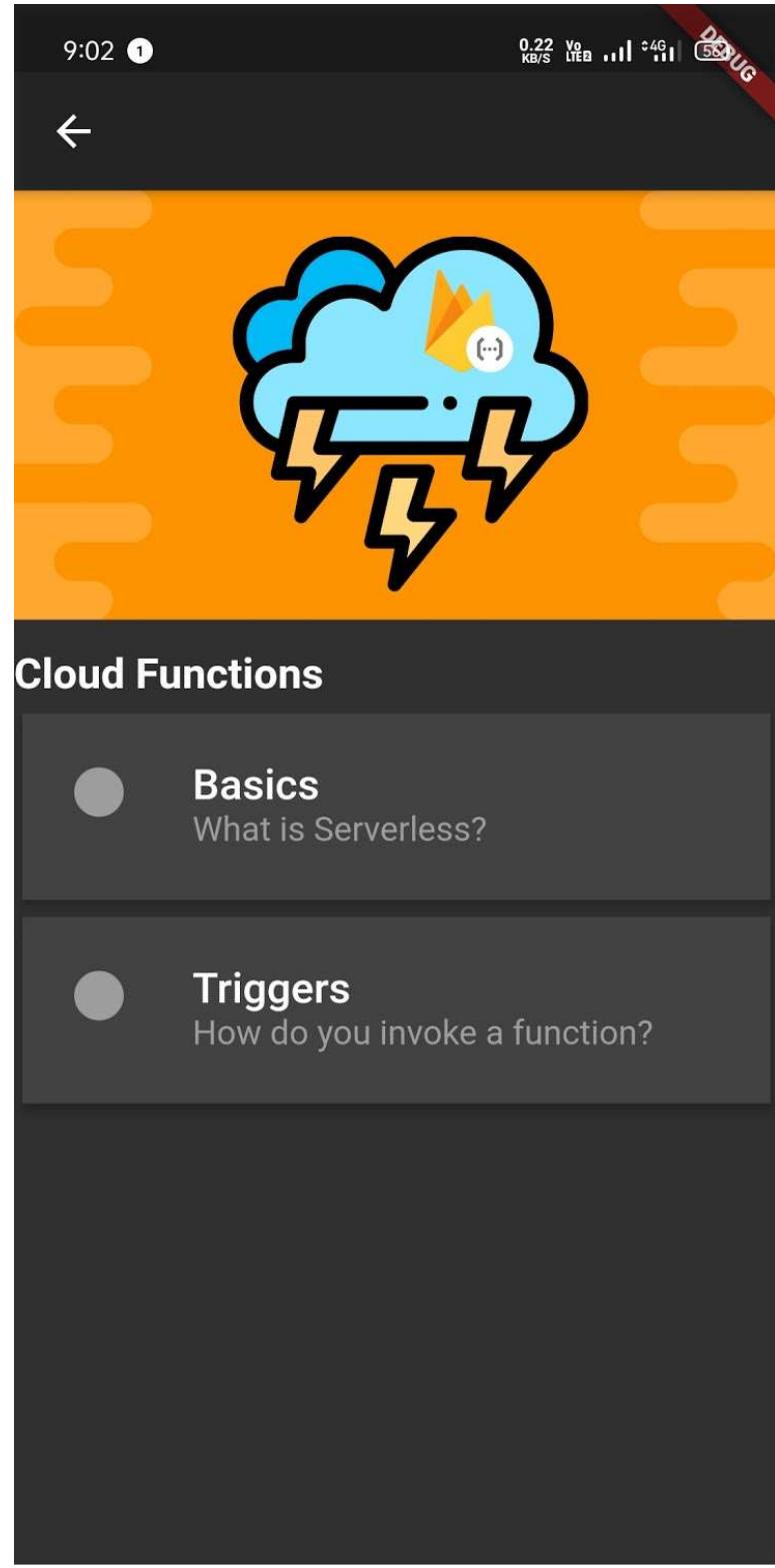
## Use Case Diagram

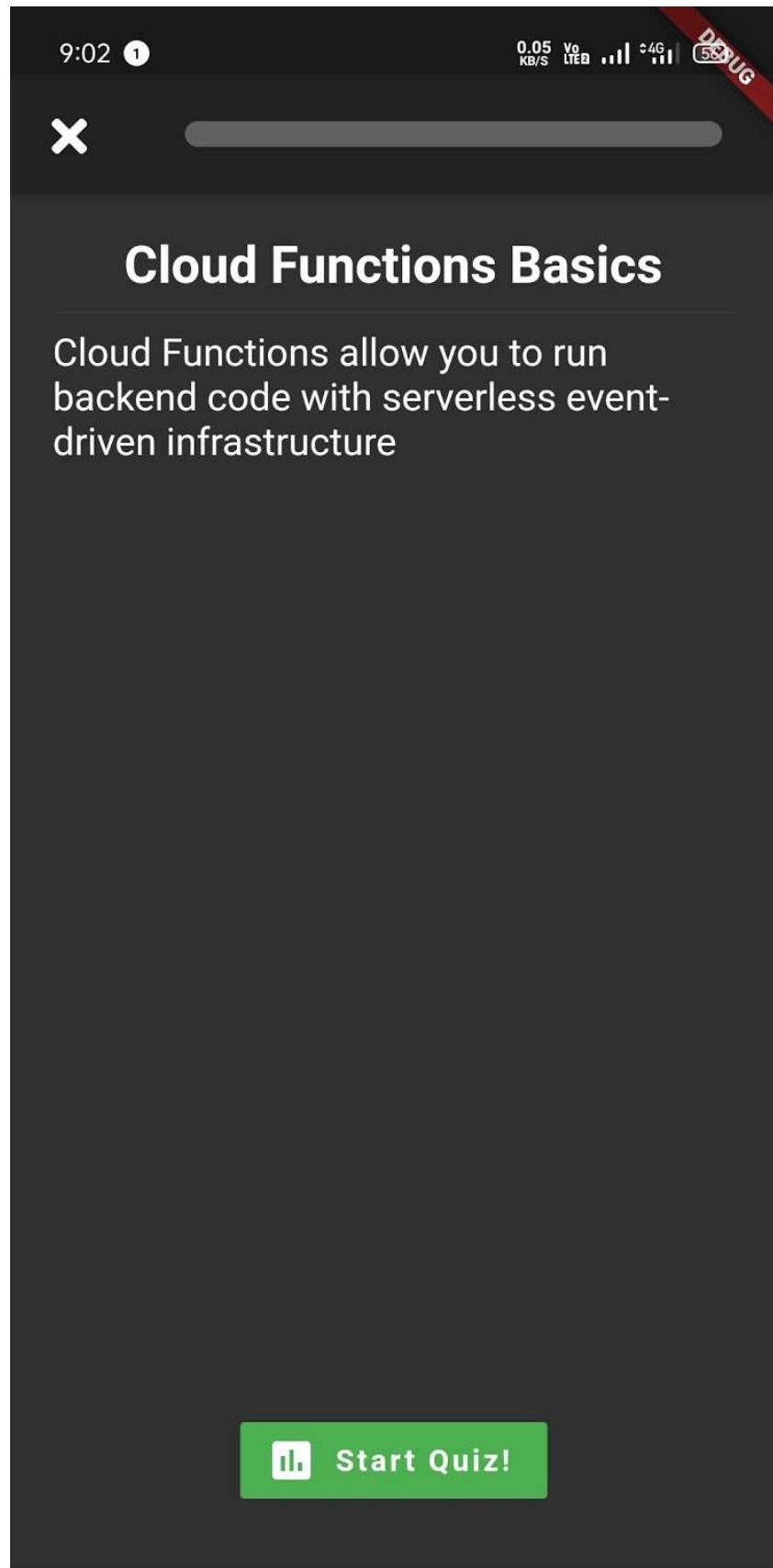


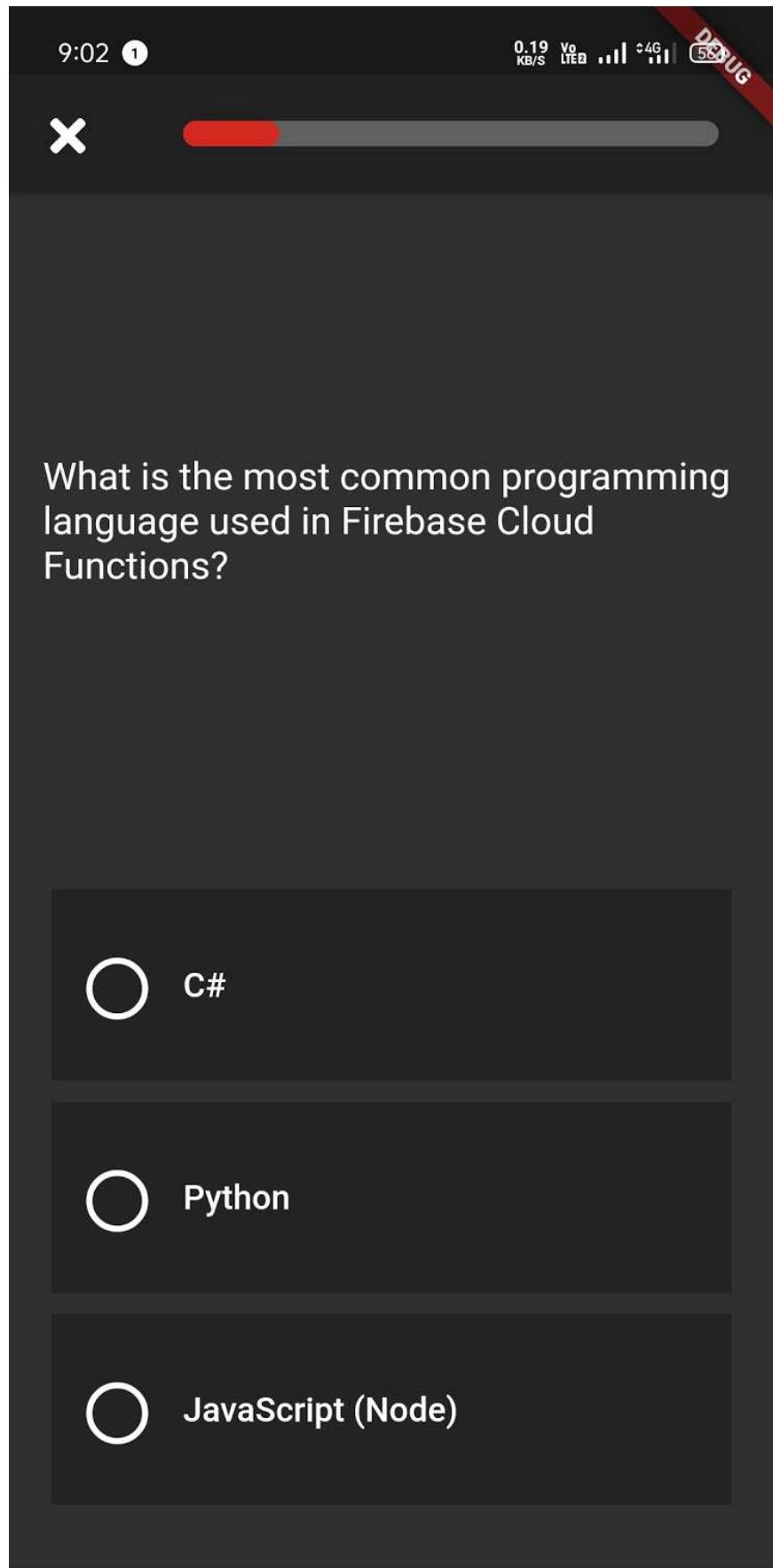
## **SCREENSHOTS**

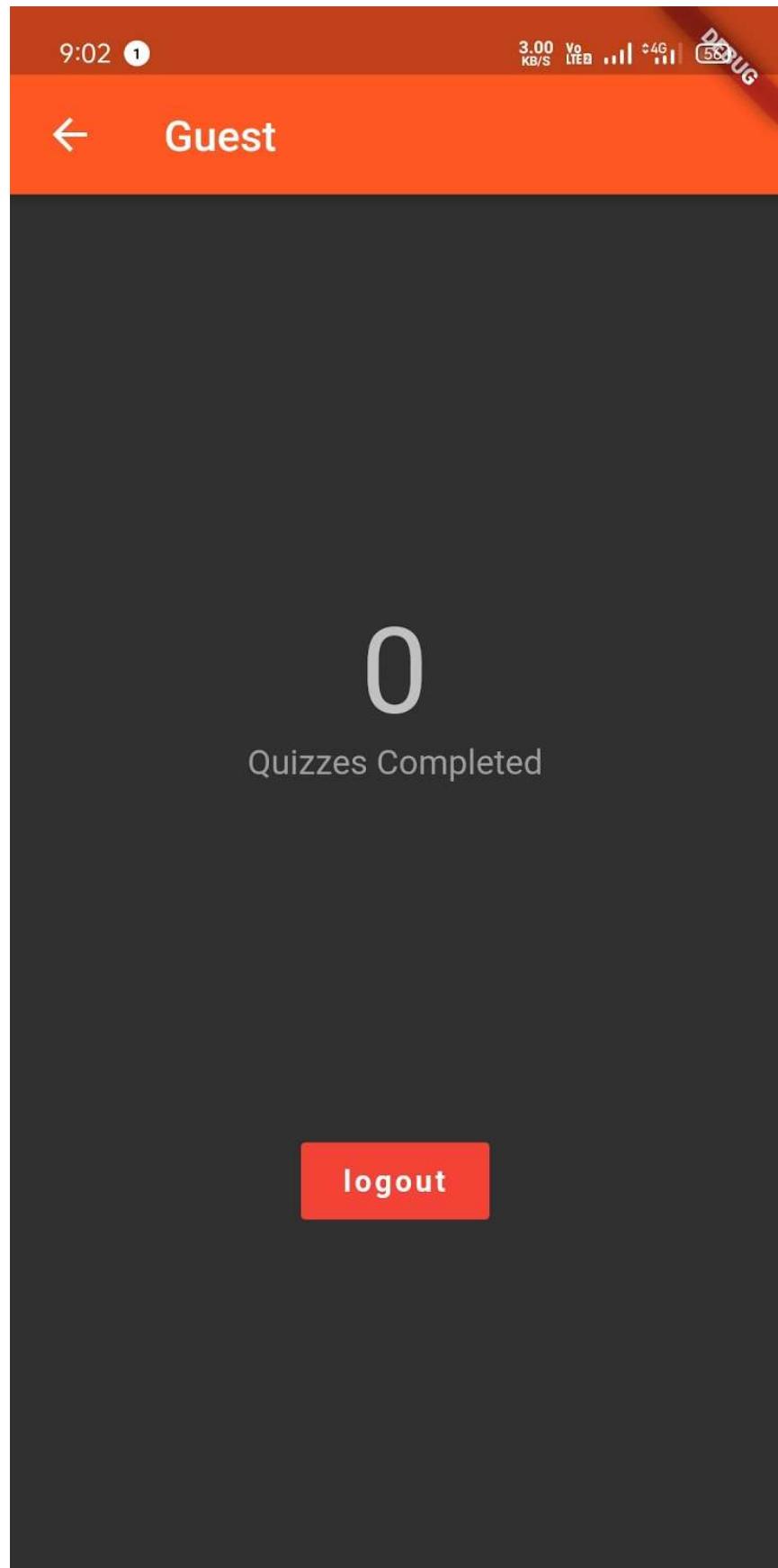












The screenshot shows a mobile application interface with a dark theme. At the top, there is a header bar with the time "9:03" and a notification icon. Below the header, there is a navigation menu with the following sections:

- Angular**
  - Basics**  
What is Angular?
  - Templates**  
Angular's template syntax
- Cloud Functions**
  - Basics**  
What is Serverless?
  - Triggers**  
How do you invoke a function?
- Firebase**
  - Performance Monitoring**  
Trace performance on any platform
- Cloud Firestore**
  - Basics**

At the bottom of the screen, there are three navigation icons: a menu icon (three horizontal lines), a square icon, and a back arrow icon.

## Code:-

### Main.dart

```
import 'package:flutter/material.dart';
import 'package:firebase_analytics/observer.dart';
import 'package:firebase_analytics/firebase_analytics.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'services/services.dart';
import 'screens/screens.dart';
import 'package:provider/provider.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MultiProvider(
      providers: [
        StreamProvider<Report>.value(value: Global.reportRef.documentStream),
        StreamProvider<FirebaseUser>.value(value: AuthService().user),
      ],
      child: MaterialApp(
        // Firebase Analytics
        navigatorObservers: [
          FirebaseAnalyticsObserver(analytics: FirebaseAnalytics()),
        ],
        // Named Routes
        routes: {
          '/': (context) => LoginScreen(),
          '/topics': (context) => TopicsScreen(),
          '/profile': (context) => ProfileScreen(),
          '/about': (context) => AboutScreen(),
        },
        // Theme
      ),
    );
  }
}
```

```

        theme: ThemeData(
            fontFamily: 'Nunito',
            bottomAppBarTheme: BottomAppBarTheme(
                color: Colors.black87,
            ),
            brightness: Brightness.dark,
            textTheme: TextTheme(
                body1: TextStyle(fontSize: 18),
                body2: TextStyle(fontSize: 16),
                button: TextStyle(letterSpacing: 1.5, fontWeight: FontWeight.bold),
                headline: TextStyle(fontWeight: FontWeight.bold),
                subhead: TextStyle(color: Colors.grey),
            ),
            buttonTheme: ButtonThemeData(),
        ),
    ),
);
}
}

```

## Quiz.dart

```

import 'package:flutter/material.dart';
import '../shared/shared.dart';
import '../services/services.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
import 'package:cloud_firestore/cloud_firestore.dart';
import 'package:provider/provider.dart';

// Shared Data
class QuizState with ChangeNotifier {
    double progress = 0;
    Option selected;

    final PageController controller = PageController();
}

```

```

get progress => _progress;
get selected => _selected;

set progress(double newValue) {
    _progress = newValue;
    notifyListeners();
}

set selected(Option newValue) {
    _selected = newValue;
    notifyListeners();
}

void nextPage() async {
    await controller.nextPage(
        duration: Duration(milliseconds: 500),
        curve: Curves.easeOut,
    );
}

class QuizScreen extends StatelessWidget {
    QuizScreen({this.quizId});
    final String quizId;

    @override
    Widget build(BuildContext context) {
        return ChangeNotifierProvider(
            create: () => QuizState(),
            child: FutureBuilder(
                future: Document<Quiz>(path: 'quizzes/$quizId').getData(),
                builder: (BuildContext context, AsyncSnapshot snap) {
                    var state = Provider.of<QuizState>(context); // k

                    if (!snap.hasData || snap.hasError) {
                        return LoadingScreen();
                    } else {

```



```

@Override
Widget build(BuildContext context) {
    var state = Provider.of<QuizState>(context);

    return Container(
        padding: EdgeInsets.all(20),
        child: Column(
            mainAxisAlignment: MainAxisAlignment.spaceBetween,
            children: [
                Text(quiz.title, style: Theme.of(context).textTheme.headline),
                Divider(),
                Expanded(child: Text(quiz.description)),
                ButtonBar(
                    alignment: MainAxisAlignment.center,
                    children: <Widget>[
                        FlatButton.icon(
                            onPressed: state.nextPage,
                            label: Text('Start Quiz!'),
                            icon: Icon(Icons.poll),
                            color: Colors.green,
                        ),
                    ],
                ),
            ],
        );
}

class CongratsPage extends StatelessWidget {
    final Quiz quiz;
    CongratsPage({this.quiz});

    @override
    Widget build(BuildContext context) {
        return Padding(

```

```

padding: EdgeInsets.all(8),
child: Column(
  mainAxisAlignment: MainAxisAlignment.center,
  children: [
    Text(
      'Congrats! You completed the ${quiz.title} quiz!',
      textAlign: TextAlign.center,
    ),
    Divider(),
    Image.asset('assets/congrats.gif'),
    Divider(),
    FlatButton.icon(
      color: Colors.green,
      icon: Icon(FontAwesomeIcons.check),
      label: Text('Mark Complete!'),
      onPressed: () {
        updateUserReport(quiz);
        Navigator.pushNamedAndRemoveUntil(
          context,
          '/topics',
          (route) => false,
        );
      },
    ),
  ],
);
}

/// Database write to update report doc when complete
Future<void> updateUserReport(Quiz quiz) {
  return Global.reportRef.upsert(
    (),
    {
      'total': FieldValue.increment(1),
      'topics': {
        '${quiz.topic}': FieldValue.arrayUnion([quiz.id]),
      }
    }
  );
}

```

```
        },
    );
}

}

class QuestionPage extends StatelessWidget {
    final Question question;
    QuestionPage({this.question});

    @override
    Widget build(BuildContext context) {
        var state = Provider.of<QuizState>(context);

        return Column(
            mainAxisAlignment: MainAxisAlignment.end,
            children: [
                Expanded(
                    child: Container(
                        padding: EdgeInsets.all(16),
                        alignment: Alignment.center,
                        child: Text(question.text),
                    ),
                ),
                Container(
                    padding: EdgeInsets.all(20),
                    child: Column(
                        mainAxisAlignment: MainAxisAlignment.spaceEvenly,
                        children: question.options.map((opt) {
                            return Container(
                                height: 90,
                                margin: EdgeInsets.only(bottom: 10),
                                color: Colors.black26,
                                child: InkWell(
                                    onTap: () {
                                        state.selected = opt;
                                        bottomSheet(context, opt, state);
                                    },
                                );
                            );
                        }).toList(),
                    ),
                ),
            ],
        );
    }
}
```

```

        child: Container(
            padding: EdgeInsets.all(16),
            child: Row(
                children: [
                    Icon(
                        state.selected == opt
                            ? FontAwesomeIcons.checkCircle
                            : FontAwesomeIcons.circle,
                        size: 30),
                    Expanded(
                        child: Container(
                            margin: EdgeInsets.only(left: 16),
                            child: Text(
                                opt.value,
                                style: Theme.of(context).textTheme.body2,
                            )));
                ],
            ),
        );
    );
}

/// Bottom sheet shown when Question is answered
bottomSheet(BuildContext context, Option opt, QuizState state) {
    bool correct = opt.correct;

    showModalBottomSheet(
        context: context,
        builder: (BuildContext context) {

```

```

    return Container(
      height: 250,
      padding: EdgeInsets.all(16),
      child: Column(
        mainAxisAlignment: MainAxisAlignment.spaceAround,
        crossAxisAlignment: CrossAxisAlignment.center,
        children: <Widget>[
          Text(correct ? 'Good Job!' : 'Wrong'),
          Text(
            opt.detail,
            style: TextStyle(fontSize: 18, color: Colors.white54),
          ),
          FlatButton(
            color: correct ? Colors.green : Colors.red,
            child: Text(
              correct ? 'Onward!' : 'Try Again',
              style: TextStyle(
                color: Colors.white,
                letterSpacing: 1.5,
                fontWeight: FontWeight.bold,
              ),
            ),
            onPressed: () {
              if (correct) {
                state.nextPage();
              }
              Navigator.pop(context);
            },
          ),
        ],
      );
    );
  }
}

```

## Topics.dart

```
import 'package:flutter/material.dart';
import '../services/services.dart';
import '../shared/shared.dart';
import '../screens/screens.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';

class TopicsScreen extends StatelessWidget {

  @override
  Widget build(BuildContext context) {
    return FutureBuilder(
      future: Global.topicsRef.getData(),
      builder: (BuildContext context, AsyncSnapshot snap) {
        if (snap.hasData) {
          List<Topic> topics = snap.data;
          return Scaffold(
            appBar: AppBar(
              backgroundColor: Colors.deepPurple,
              title: Text('Topics'),
              actions: [
                IconButton(
                  icon: Icon(FontAwesomeIcons.userCircle),
                  color: Colors.pink[200],
                  onPressed: () => Navigator.pushNamed(context, '/profile'),
                ),
              ],
            ),
            drawer: TopicDrawer(topics: snap.data),
            body: GridView.count(
              primary: false,
              padding: const EdgeInsets.all(20.0),
              crossAxisSpacing: 10.0,
              crossAxisCount: 2,
              children: topics.map((topic) => TopicItem(topic: topic)).toList(),
            ),
          );
        }
      },
    );
  }
}
```

```

        ),
        bottomNavigationBar: AppBottomNav(),
    );
} else {
    return LoadingScreen();
}
},
),
);
}

class TopicItem extends StatelessWidget {
final Topic topic;
const TopicItem({Key key, this.topic}) : super(key: key);

@override
Widget build(BuildContext context) {
    return Container(
        child: Hero(
            tag: topic.img,
            child: Card(
                clipBehavior: Clip.antiAlias,
                child: InkWell(
                    onTap: () {
                        Navigator.of(context).push(
                            MaterialPageRoute(
                                builder: (BuildContext context) => TopicScreen(topic: topic),
                            ),
                        );
                    },
                ),
            ),
        ),
        child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            mainAxisAlignment: MainAxisAlignment.spaceBetween,
            children: [
                Image.asset(
                    'assets/covers/${topic.img}',
                    fit: BoxFit.contain,
                ),

```

```
        ),
        Row(
          mainAxisAlignment: MainAxisAlignment.spaceBetween,
          children: [
            Expanded(
              child: Padding(
                padding: EdgeInsets.only(left: 10, right: 10),
                child: Text(
                  topic.title,
                  style: TextStyle(
                    height: 1.5, fontWeight: FontWeight.bold),
                  overflow: TextOverflow.fade,
                  softWrap: false,
                ),
              ),
            ),
            // Text(topic.description),
          ],
        ),
      )));
}
//)
TopicProgress(topic: topic),
),
),
),
),
),
),
),
),
),
);
}
}

class TopicScreen extends StatelessWidget {
final Topic topic;

TopicScreen({this.topic});

@Override
Widget build(BuildContext context) {
```

```

    return Scaffold(
      appBar: AppBar(
        backgroundColor: Colors.transparent,
      ),
      body: ListView(children: [
        Hero(
          tag: topic.img,
          child: Image.asset('assets/covers/${topic.img}'),
          width: MediaQuery.of(context).size.width,
        ),
        Text(
          topic.title,
          style: TextStyle(height: 2, fontSize: 20, fontWeight: FontWeight.bold),
        ),
        QuizList(topic: topic),
      ],
    );
  }

  class QuizList extends StatelessWidget {
    final Topic topic;
    QuizList({Key key, this.topic});

    @override
    Widget build(BuildContext context) {
      return Column(
        children: topic.quizzes.map((quiz) {
          return Card(
            shape: RoundedRectangleBorder(borderRadius: BorderRadius.zero),
            elevation: 4,
            margin: EdgeInsets.all(4),
            child: InkWell(
              onTap: () {
                Navigator.of(context).push(

```

```
MaterialPageRoute(  
    builder: (BuildContext context) => QuizScreen(quizId: quiz.id),  
)  
,  
,  
},  
child: Container(  
padding: EdgeInsets.all(8),  
child: ListTile(  
title: Text(  
quiz.title,  
style: Theme.of(context).textTheme.title,  
),  
subtitle: Text(  
quiz.description,  
overflow: TextOverflow.fade,  
style: Theme.of(context).textTheme.subhead,  
),  
leading: QuizBadge(topic: topic, quizId: quiz.id),  
,  
,  
,  
);  
,  
).toList());  
}  
  
class TopicDrawer extends StatelessWidget {  
final List<Topic> topics;  
TopicDrawer({Key key, this.topics});  
  
@override  
Widget build(BuildContext context) {  
return Drawer(  
child: ListView.separated(  
shrinkWrap: true,  
itemCount: topics.length,  
itemBuilder: (BuildContext context, int idx) {
```

```

Topic topic = topics[idx];
return Column(
  crossAxisAlignment: CrossAxisAlignment.start,
  children: [
    Padding(
      padding: EdgeInsets.only(top: 10, left: 10),
      child: Text(
        topic.title,
        // textAlign: TextAlign.left,
        style: TextStyle(
          fontSize: 20,
          fontWeight: FontWeight.bold,
          color: Colors.white70,
        ),
      ),
    ),
    Container(
      child: QuizList(topic: topic),
    ),
  ],
);
}

Widget separatorBuilder(BuildContext context, int idx) => Divider(),
);
}
}

```

## Profile.dart

```

import 'package:flutter/material.dart';
import 'package:firebase_auth/firebase_auth.dart';
import '../services/services.dart';
import '../shared/shared.dart';
import 'package:provider/provider.dart';

class ProfileScreen extends StatelessWidget {
  final AuthService auth = AuthService();

```

```


@override
Widget build(BuildContext context) {
    Report report = Provider.of<Report>(context);
    FirebaseUser user = Provider.of<FirebaseUser>(context);

    if (user != null) {

        return Scaffold(
            appBar: AppBar(
                backgroundColor: Colors.deepOrange,
                title: Text(user.displayName ?? 'Guest'),
            ),
            body: Center(
                child: Column(
                    mainAxisAlignment: MainAxisAlignment.spaceEvenly,
                    crossAxisAlignment: CrossAxisAlignment.center,
                    children: [
                        if (user.photoUrl != null)
                            Container(
                                width: 100,
                                height: 100,
                                margin: EdgeInsets.only(top: 50),
                                decoration: BoxDecoration(
                                    shape: BoxShape.circle,
                                    image: DecorationImage(
                                        image: NetworkImage(user.photoUrl),
                                    ),
                                ),
                            ),
                        ],
                    ),
                    Text(user.email ?? '', style:
Theme.of(context).textTheme.headline),
                    Spacer(),
                    if (report != null)
                        Text('${report.total ?? 0}!',
                            style: Theme.of(context).textTheme.display3),
                    Text('Quizzes Completed',
                            style: Theme.of(context).textTheme.subhead),
                ],
            ),
        );
    }
}


```

```
        Spacer(),
        FlatButton(
            child: Text('logout'),
            color: Colors.red,
            onPressed: () async {
                await auth.signOut();
                Navigator.of(context).pushNamedAndRemoveUntil('/' , (route) =>
false);
            },
        ),
        Spacer(),
        Container(
            height: 1.,
            width: 1.,
            child: Center(
                child: CircularProgressIndicator(),
            ),
        );
    } else {
        return LoadingScreen();
    }
}
```

## About.dart

```
import 'package:flutter/material.dart';

class AboutScreen extends StatelessWidget {
    @override
    Widget build(BuildContext context) {
        return Scaffold(
            appBar: AppBar(title: Text('about'), backgroundColor: Colors.blue),
            body: Center(child: Text('About this app...')),
        );
    }
}
```

## Screens.dart

```
export 'login.dart';
export 'topics.dart';
export 'quiz.dart';
export 'profile.dart';
export 'about.dart';
```

## Login.dart

```
import 'package:firebase_auth/firebase_auth.dart';
import 'package:flutter/material.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
import '../services/services.dart';
import 'package:apple_sign_in/apple_sign_in.dart';

class LoginScreen extends StatefulWidget {
    createState() => LoginScreenState();
}

class LoginScreenState extends State<LoginScreen> {
    AuthService auth = AuthService();

    @override
    void initState() {
        super.initState();
        auth.getUser.then(
            (user) {
                if (user != null) {
                    Navigator.pushReplacementNamed(context, '/topics');
                }
            },
        );
    }

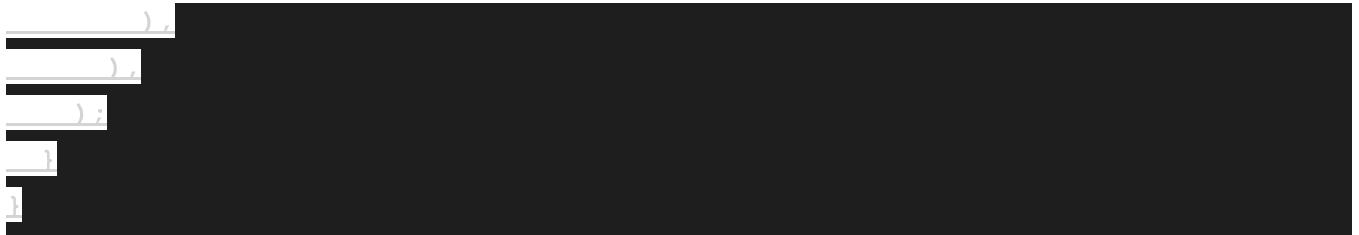
    @override
    Widget build(BuildContext context) {
```

```

return Scaffold(
  body: Container(
    padding: EdgeInsets.all(30),
    decoration: BoxDecoration(),
    child: Column(
      mainAxisAlignment: CrossAxisAlignmentAlignment.center,
      mainAxisSize: MainAxisSize.spaceEvenly,
      children: [
        FlutterLogo(
          size: 150,
        ),
        Text(
          'Login to Start',
          style: Theme.of(context).textTheme.headline,
          textAlign: TextAlign.center,
        ),
        Text('E-Quizz'),
        LoginButton(
          text: 'LOGIN WITH GOOGLE',
          icon: FontAwesomeIcons.google,
          color: Colors.black45,
          loginMethod: auth.googleSignIn,
        ),
        FutureBuilder<Object>(
          future: auth.appleSignInAvailable,
          builder: (context, snapshot) {
            if (snapshot.data == true) {
              return AppleSignInButton(
                onPressed: () async {
                  FirebaseUser user = await auth.appleSignIn();
                  if (user != null) {
                    Navigator.pushReplacementNamed(context, '/topics');
                  }
                },
              );
            } else {
              return Container();
            }
          },
        ),
      ],
    ),
  ),
);

```

```
  
    }  
  }  
  
)  
),  
LoginButton(text: 'Continue as Guest', loginMethod: auth.anonLogin)  
],  
,  
,  
,  
);  
});  
  
class LoginButton extends StatelessWidget {  
  final Color color;  
  final IconData icon;  
  final String text;  
  final Function loginMethod;  
  
  const LoginButton(  
    Key key, this.text, this.icon, this.color, this.loginMethod)  
    : super(key: key);  
  
  @override  
  Widget build(BuildContext context) {  
    return Container(  
      margin: EdgeInsets.only(bottom: 10),  
      child: FlatButton.icon(  
        padding: EdgeInsets.all(30),  
        icon: Icon(icon, color: Colors.white),  
        color: color,  
        onPressed: () async {  
          var user = await loginMethod();  
          if (user != null) {  
            Navigator.pushReplacementNamed(context, '/topics');  
          }  
        },  
        label: Expanded(  
          child: Text('$text', textAlign: TextAlign.center),  
        ),  
      ),  
    );  
  }  
}
```



## **Summary**

The Project is developed in flutter by using "Visual Studio Code" Integrated Development Environment(IDE).

Android Development Tool(ADT) and Android Software Development kit(SDK) integrated to develop mobile applications on Android platform.

We use Dart programming language for making this app.

This app is useful at school and college level to test the knowledge of students of various subjects.

# References

- <https://flutter.dev>
- <https://pub.dev/>
- <https://udemy.com>
- <https://stackoverflow.com>
- <https://coursera.org>