MINI PROJECT

(2020-21)

Android based quiz application

"Quiz Master"

MID-TERM REPORT

Institute of Engineering & Technology

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ABSTRACT

As Android is rapidly getting famous day by day and the number of its users are increasing with every blink of eye, because it is easy to access the necessary android based applications on smart phones and tablets in your hands. Therefore, we found this idea interesting, easy and time efficient to facilitate the users in this way without any difficulty. There are many online quiz applications available on internet, but most of them are only for entertainment and fun. Moreover, if one is going to appear in any test, then it is difficult and time consuming for them to read the full books or articles related to specific fields for the preparation or revising their knowledge. But the most attractive feature of our app is that we take learning and fun side by side. Our app provides them the facility to revise their knowledge or to learn something advantageous at one place without wasting their time. This application deals with development of android-based multiple-choice question examination system, namely: Quiz Master.

Development of android-based Quiz application is mainly required by students and learners to prepare themselves for different examinations directly through smart phones and tablets in hands. One of the major goal of our project is to facilitate students in learning, gaining and improving their knowledge skills.

Introduction of the Project:

Online Learning has become the new normal. Smartphones are no longer a luxury. They have become a must-have as the COVID-19 pandemic has re-shaped education. Even during the toughest times, the world has never stopped learning.

Recent studies have shown that there is a drastic increase in the usage of technology by educational institutions to educate and assess the learnings of the students online.

It has been observed that Multiple Choice Questions (MCQ's) based assessments are an effective way to evaluate one's learnings. It motivates us to develop a 'want' to learn more and remember what we have learned.

An Online Quiz Application is a better alternative to paper-based offline evaluation techniques. It is user-friendly and reduces manual effort, thereby saving time & resources.

It is an application where user with admin privilege can do administrative tasks like add, delete and edit from application user interface and the user can participate for MCQ quiz with time limit. So, this project facilitates users to configure quizzes as well as giving quizzes using smart phone, tablet and laptop.

Technology used:

- Java Development Kit (JDK)
- Android SDK
- Firebase database

Hardware Requirements:

- Memory - 4 GB RAM (or higher)
- Intel core i3 64-bit Processor (or higher)

Software Requirements:

- Windows OS or Linux
- Android Studio

Problem Statement:

It is essentially required to assist students for the learning and preparation of different tests conducted. This is what we tried to address in the development of Quiz Master: Quiz Application Development using Android-Based Platform, which can provide candidates with the preparation of tests in both user friendly and interactive way. We designed the application to facilitate the users to be able to take short quizzes using portable devices such as smart phones and tablets.

Objectives:

This project proposes an idea to develop a user-friendly, android based application that can educate as well as entertain users with a quick quiz on any category.

The application will contain multiple sets of questions in each category. There will be a specific time limit set for answering each question. After completion of the contest, scores will be displayed which will help the user to improve their performance.

It provides a fun-loving way to learn, so it can be used by people of all age groups who wants to learn and assess their knowledge.

Features used:

- Select favorite topics for assessment
- Access to multiple sets within each category
- Time constraints in each question
- Display correct option upon answering the questions
- View scores after completing the quiz
- Admin login to the application
- Admin can customize the quiz

Implementation Details:

We have divided our project into two applications, one used by the user and one used by the admin.

Part 1:

Step 1 – We have first build splash activity to start the application.

Step 2 – Then, we have the main activity which consists of a start button.

Step 3 – We made a category layout of our quiz app which includes various topics on which we want to attempt the quiz.

Step 4 – After it, we created sets activity which have different number of sets.

Step 5 – Then, we have created question activity layout of our quiz app which consists of questions with a countdown set on it. Also, it shows the correct option with green color and the incorrect chosen option with red color.

Step 6 – We have created score activity of our quiz app which displays the total score gained by the user.

Step 7 – We have connected our android app to Google Firebase.

Step 8 – Then, we have created Firestore Cloud Database that will be used in our quiz app.

Step 9 – After it, we have fetched Categories List from Firestore Database.

Step 10 – Then, we have fetched no. of sets in a category from Firestore Database.

Step 11 – At last, we have fetched questions list from Firestore Database.

Part 2: (Admin App)

Step 1 – We will first create login activity for our admin app.

Step 2 – Then, we will make Category activity.

Step 3 – After it, we will add functionality for adding new category to app.

Step 4 – We will add delete category functionality to our quiz admin app.

Step 5 – Then, will add edit category functionality to our app.

Step 6 – We will create sets activity layout for the admin app.

Step 7 – Then, we will add new set to the app.

Step 8 – We will see how to delete sets.

Step 9 – After this, we will create questions activity for the app.

Step 10 – We will see how to delete questions in our app.

Step 11 – Then, we will see how to add new questions to the app.

Step 12 – We will see how to edit questions in our quiz admin app.

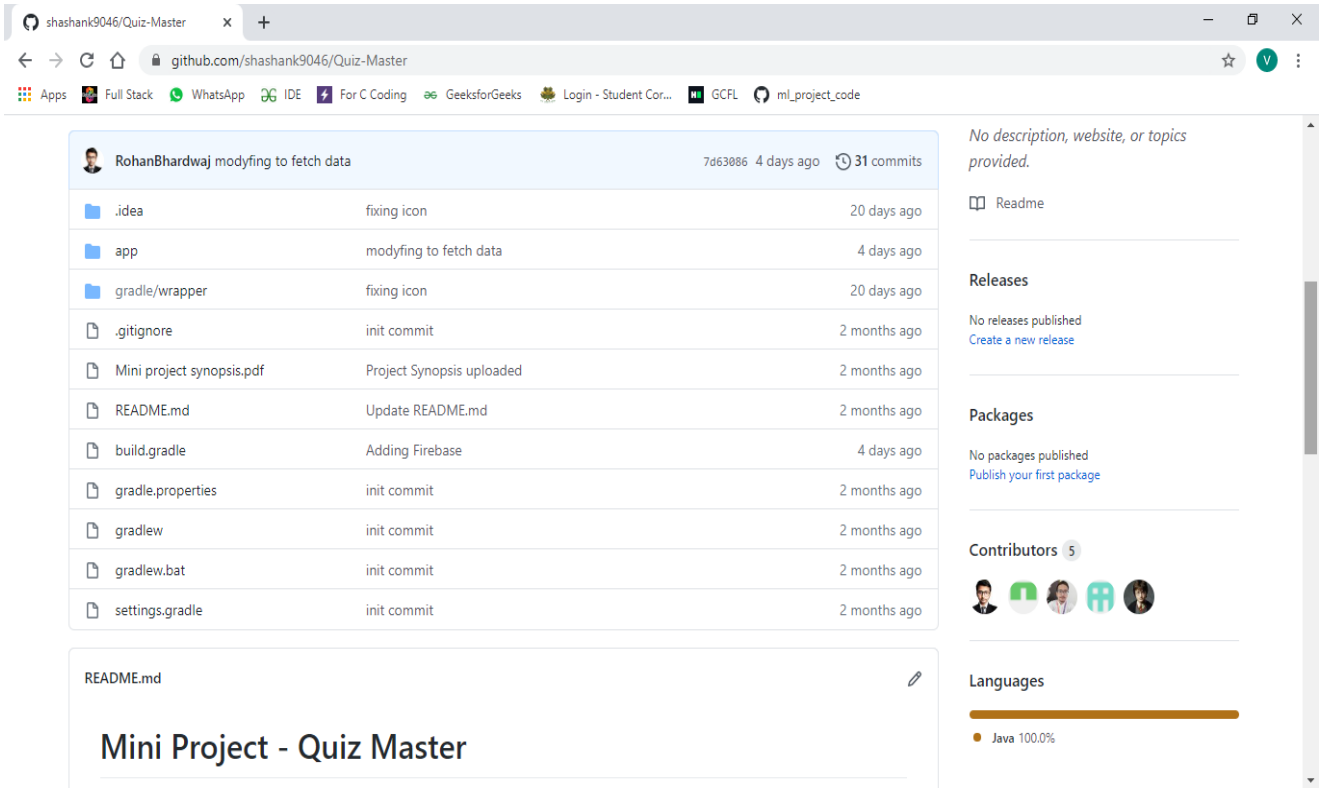
Step 13 – After it, we will secure our admin app database.

Progress till date:

Project completed in percentage – 50%

Project part completed in last days – We have completed part 1, that is, we have created quiz app for the user end.

No. of commits in GitHub by team – 31

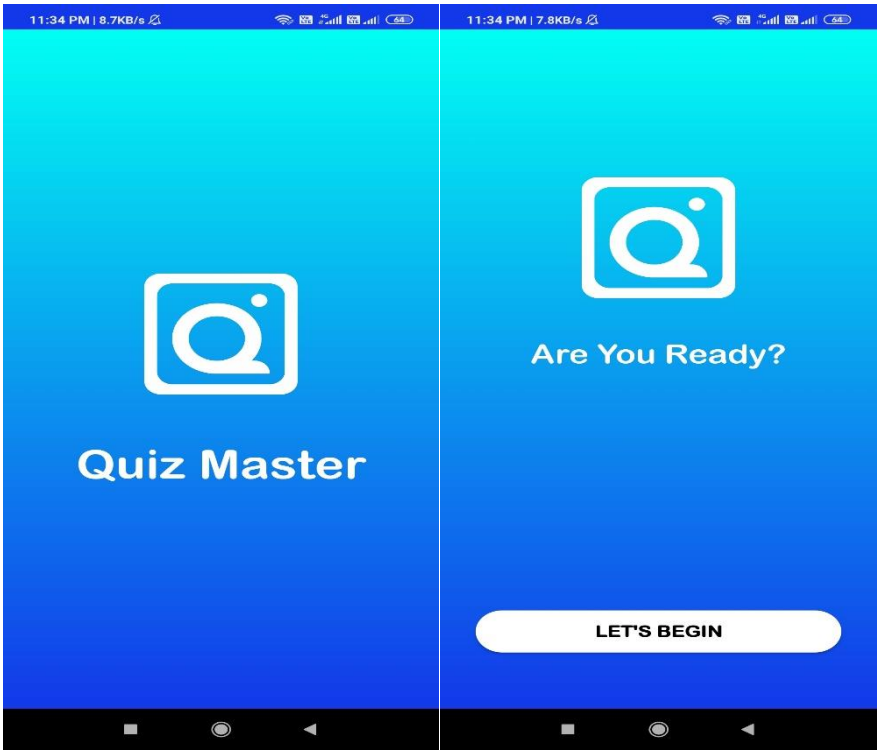


Remaining Work:

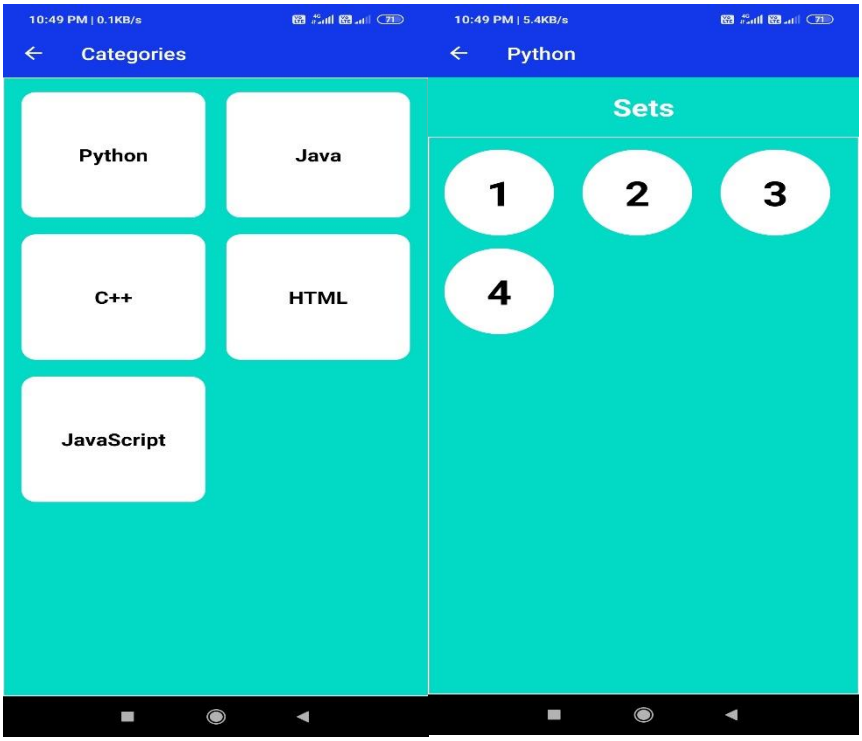
We will do complete part 2, that is, our quiz admin app as mentioned in implementation details in the upcoming days.

Some Screenshots:

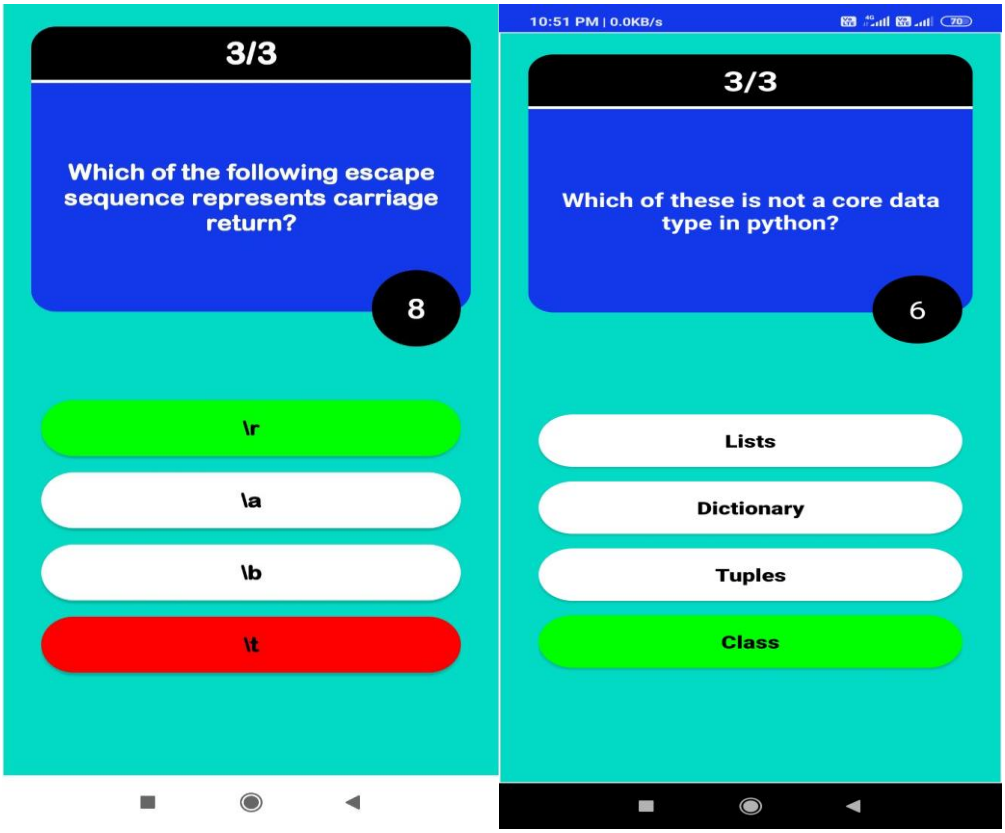
Splash screen and Main activity



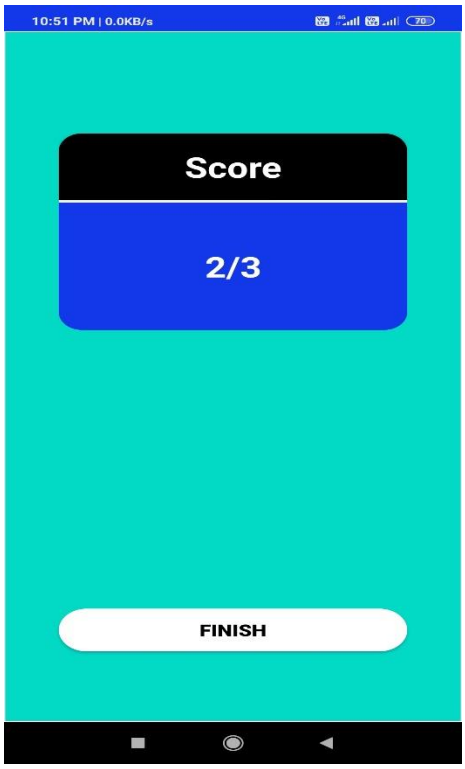
Category activity and Sets activity –



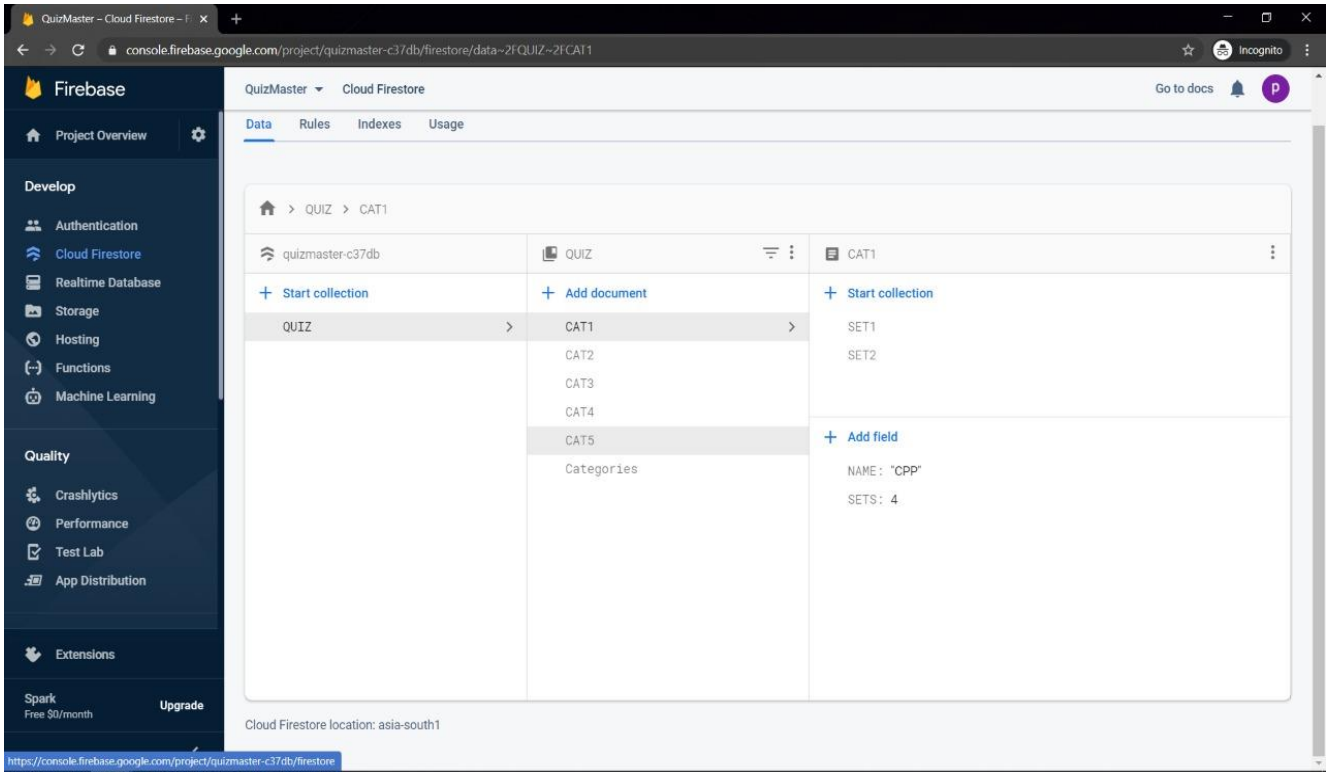
Question Activity –

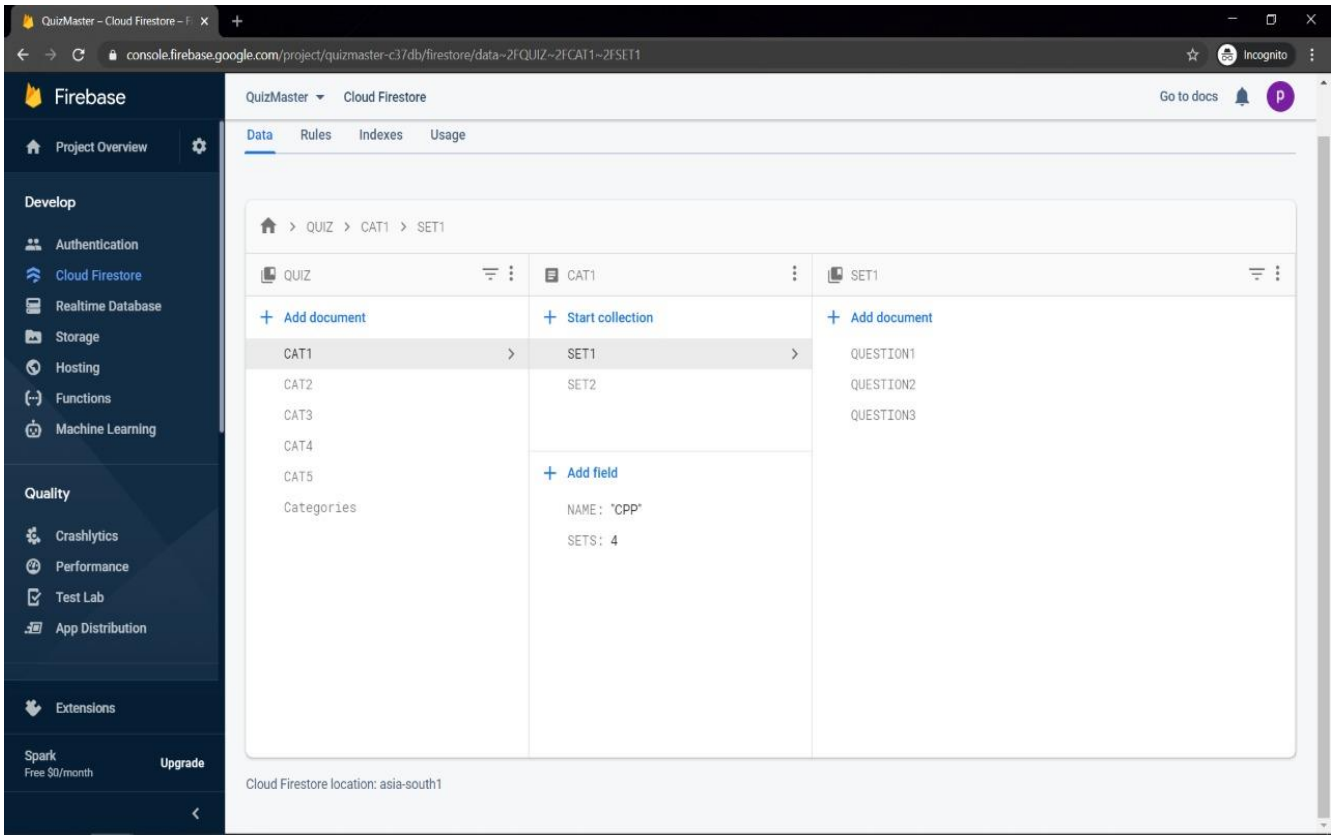


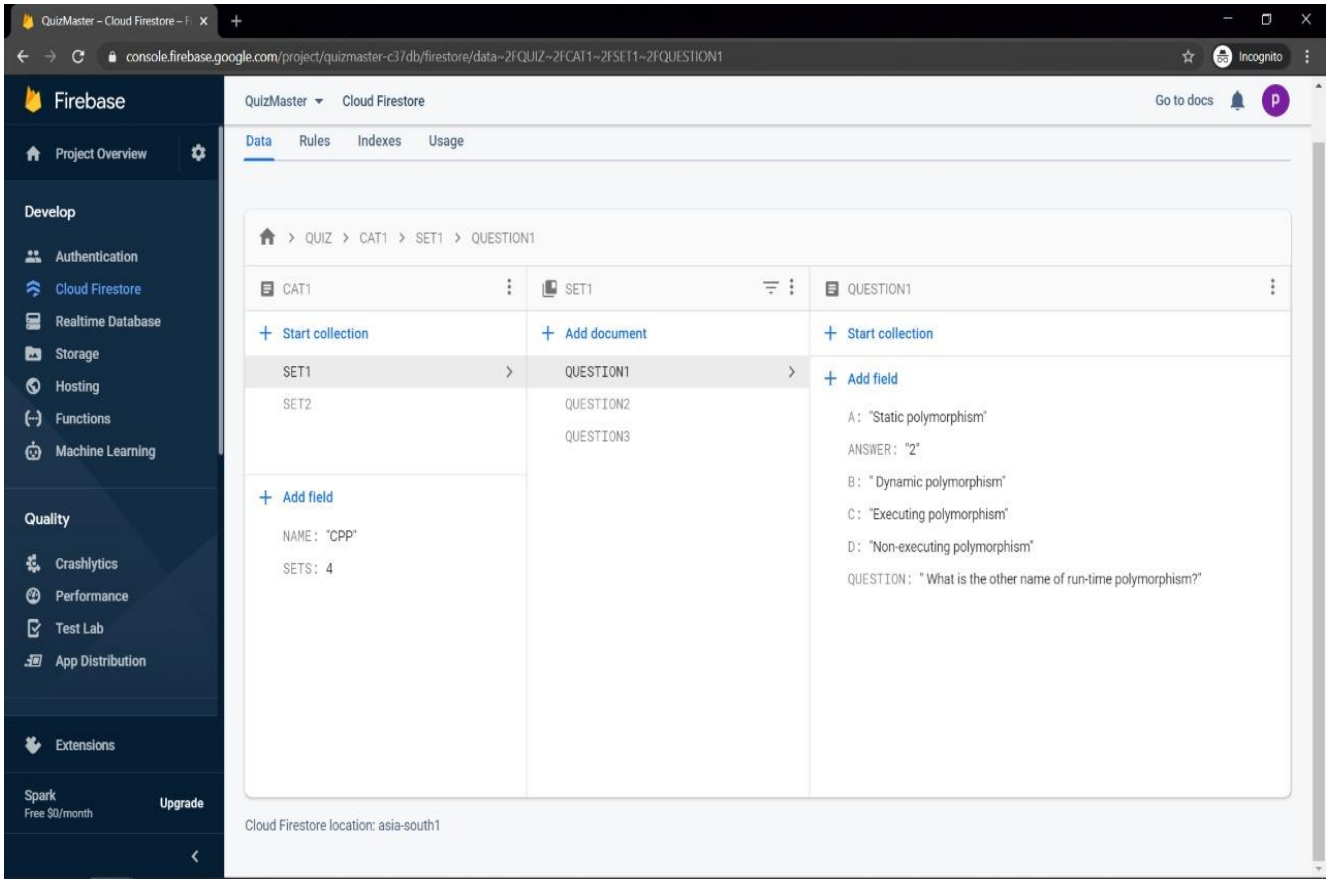
Score Activity –



Firebase Integration –






QuizMaster – Cloud Firestore
console.firebase.google.com/project/quizmaster-c37db/firestore/data~2FQUIZ~2FCAT1~2FSET1~2FQUESTION1
Incognito
Firebase
QuizMaster
Cloud Firestore
Go to docs
Project Overview
Data
Rules
Indexes
Usage
Develop
Authentication
Cloud Firestore
Realtime Database
Storage
Hosting
Functions
Machine Learning
QUIZ > CAT1 > SET1 > QUESTION1
Quality
Crashlytics
Performance
Test Lab
App Distribution
CAT1
SET1
QUESTION1
Start collection
Add document
Start collection
SET1
SET2
QUESTION1
QUESTION2
QUESTION3
Add field
Add field
NAME: "CPP"
SETS: 4
A: "Static polymorphism"
ANSWER: "2"
B: " Dynamic polymorphism"
C: "Executing polymorphism"
D: "Non-executing polymorphism"
QUESTION: " What is the other name of run-time polymorphism?"
Extensions
Spark
Free $0/month
Upgrade
Cloud Firestore location: asia-south1

References:

- https://developer.android.com/docs /
- https://docs.oracle.com/en/java/
- https://www.youtube.com/
- https://www.google.com/
- https://firebase.google.com/docs
- https://developer.android.com/guide/