VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, MACHHE BELAGAVI – 590018

KARNATAKA

A Mini-Project Report
On
"ONLINE QUIZ APPLICATION"

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MAD LABORATORRY WITH MINI PROJECT (18CSMP68) COURSE OF VIth SEMESTER

Submitted by

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CERTIFICATE

This is to certify that the project entitled **"ONLINE QUIZ APPLICATION"** has been successfully carried out by **HEMANTH KUMAR S [1CG20IS019], L P SANJAY[1CG20IS023], RAKESH P [1CG20IS034]** in partial fulfillment for the VI semester during the academic year **2022 - 23**. It is certified that all the corrections / suggestions indicated for internal assessment have Been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the VI semester.

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DECLARATION

We **HEMANTH KUMAR S , L P SANJAY** and **RAKESH P** students of VI Semester, **B E.,** in **Information Science and Engineering, C.I.T Gubbi** here by declare hat the dissertation work entitled**"ONLINE QUIZ APPLICATION"** embodies the report of our project work carried out independently by us under the guidance of **Mr. Anil Kumar**, Assistant Professor Department ISE, CIT, Gubbi, as partial fulfillment of requirements for the VI Semester during the academic year **2022-23**. I further declare that the project has not been submitted for the award of any other degree.

Place: GUBBI
Date:

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ABSTRACT

In this report we will be presenting an android application developed in Android studio using the programming language java. The application itself is an app which enables users of it to complete quizzes based on different topics that they can choose between. In terms of goal and purpose of this application, it is meant to be a mean for educational purpose but also for the general purpose such as enjoyment and etc. So, it's not simulating an exam that is taken in university (involving grades and etc), but rather for learning purposes Currently most of the Examination like organizational recruitment, University class test are paper based, which is time consuming & expensive Questionnaire is developed, printed, and then collect data, entry, editing, cleaning, which time consuming and costly. Proposed application is the to avoid those circumstances which are currently faced by organizations.

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CHAPTER 1

INTRODUCTION

About the mini project

In today's world, Smart phones have changed our lives and have become an indispensable part of our lives because of its specialty to simplify our routine Work & thereby saving our time. A Smartphone with an Android OS offers excellent functionality to the users offering a distinct experience. Android is a Linux based operating system and it was bought by Google in 2007.There are tons of application available and one of the prime reason for this vast number is android being an open source. On the other hand, android based device like mobile, tab are very user friendly. A survey has done by "Light Castle Partners" research wing which indicates that though other operating system mobile users exist but the majority users are goes with android operating system. In this context, Project application is developed based on android platform.

After finalizing the preparation phase of the project , we could finally start building the app. we started by creating a project which uses minimum SDK JellyBean which enables the application to run on approximately 99.8% of all android based devices. Then we moved on to configuring my application to only use portrait mode in terms of orientation, because I really believe that this app is only suitable for using in this mode.

Of course, there are benefits of using landscape mode in terms of accessibility, but we really don't think that using landscape mode makes sense in this particular app where questions are being displayed sequentially and scrolling in landscape mode would just make the UX so cumbersome. In this step I also added my colors that I will be using

About Android

Android is the Linux-based open-source operating system for mobile devices like smartphones & tablets. However, nowadays, many other devices are incorporating android in them to turn them into smart devices such as Smart TVs, Smart car interface for GPS, electrical appliances, etc. This software was unveiled in 2007 & the first Android Device was launched in September 2008. Since then Google, the sponsor of Android has been releasing its software updates, versions almost every year.

Android also offers several features:

1. NFC (Near Field Communications): NFC Allows electric devices to easily

Interact across short distances.

2. Alternate keywords: It supports multiple keyboards & makes them easy to install.
3. Beautiful and Interactive UI
4. Storage: SQLite a lightweight relational DB is used for data storage.
5. Multi lang: Supports single direction & Bi-Directional.

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.The source code for Android is available under free and open source software licenses. Google publishes most of the code under the Apache License version 2.0 and the rest, Linux kernel changes, under the GNU General Public License version 2.

Scope and application of mini project

Currently most of the Examination like organizational recruitment, University class test are paper based, which costs time and resources. Questionnaire is developed, printed, and then collect data, entry, editing, cleaning, which time consuming and costly. Proposed application is the starting for avoid those circumstances which are been currently faced by organizations.

CHAPTER 2

HISTORICAL REVIEW

The use of online quizzes is highly recommended for any instructor teaching course that is either large in size (with a typical lecture format) or that requires that students to engage in a significant amount of assigned readings. Students appear to benefit from the use of such online quizzes as they become actively engaged in the course material and study with greater frequency throughout the semester. Additional, specific recommendations for the use of online quizzes canbe made including:

• Computerized settings can be designed to provide students with immediate feedback regarding their quiz grades, and allow them to take each quiz more than once to provide greater mastery of the material. It may be helpful to limit the number of quiz attempts to three.
‘

• Placing time limits on the online quizzes (e.g., 60 minutes) encourages students to read the material ahead of time and then take the online quiz.

• Automatic, computerized grading and entry of each student’s highest quiz grades into the course gradebook will generate significant time savings for the instructor, and provide students with immediate feedback on their quiz performance.

• To deter student cheating, the order of quiz questions as well as their multiple choice answers should be randomized. Settings also should not allow students to print the quiz questions or answers directly from the screen.

• To encourage students to engage in long-term learning, include some of the individual online quiz questions on midterm and final exams.

• Students can be allowed to review the quizzes and their answers a week before any comprehensive exams to promote better exam preparation.

CHAPTER 3

REQUIREMENT SPECIFICATION

SYSTEM REQUIREMENTS

Hardware Requirements

- Processor: Intel core Duo 2.0GHz or more
- RAM: 6GB or more.
- Hard disk: 80GB or more
- Monitor: 15” CRT or LCD monitor
- Keyboard: Normal or Multimedia
- Mouse: Compatible mouse

Software Requirements

- Operating system: Windows® Vista 64-Bit / Windows® 7 64-Bit / Windows® 8 64-Bit / Windows® 8.1 64-Bit.
- Java JDK 11.0.12(recommended)
- Android SDK: Android Studio and SDK tools

Functional Requirements

These requirements are implicit to the system and may be so fundamental that actor/gamer/relevant people does not explicitly state them .Their absence will be a cause for dissatisfaction.

1. Develop system within limited cost.
2. Maximum high definition.
3. Minimum hardware requirements which is relevant for this game.
4. Design whole system with efficient manner.

Development Tasks

1. Android Studio will bring all of the following codes together to create the game. It will also
handle AI and physics routines.
2. Graphics engine will be responsible for rendering text, 2D images, and 3D models on
screen.

- Drawing models
- Drawing sprites

- Drawing text
- Texturing models
- Animation

3. Sound engine will be responsible for playing music and sound effects.

- Multithreading
- Playing sounds

4. Input engine will be responsible for transferring mouse and keyboard input upon request
tothe game engine.

- Retrieving Input

5. Menu Engine will handle all menus in game.

CHAPTER 4

SYSTEM DESIGN

Flow chart

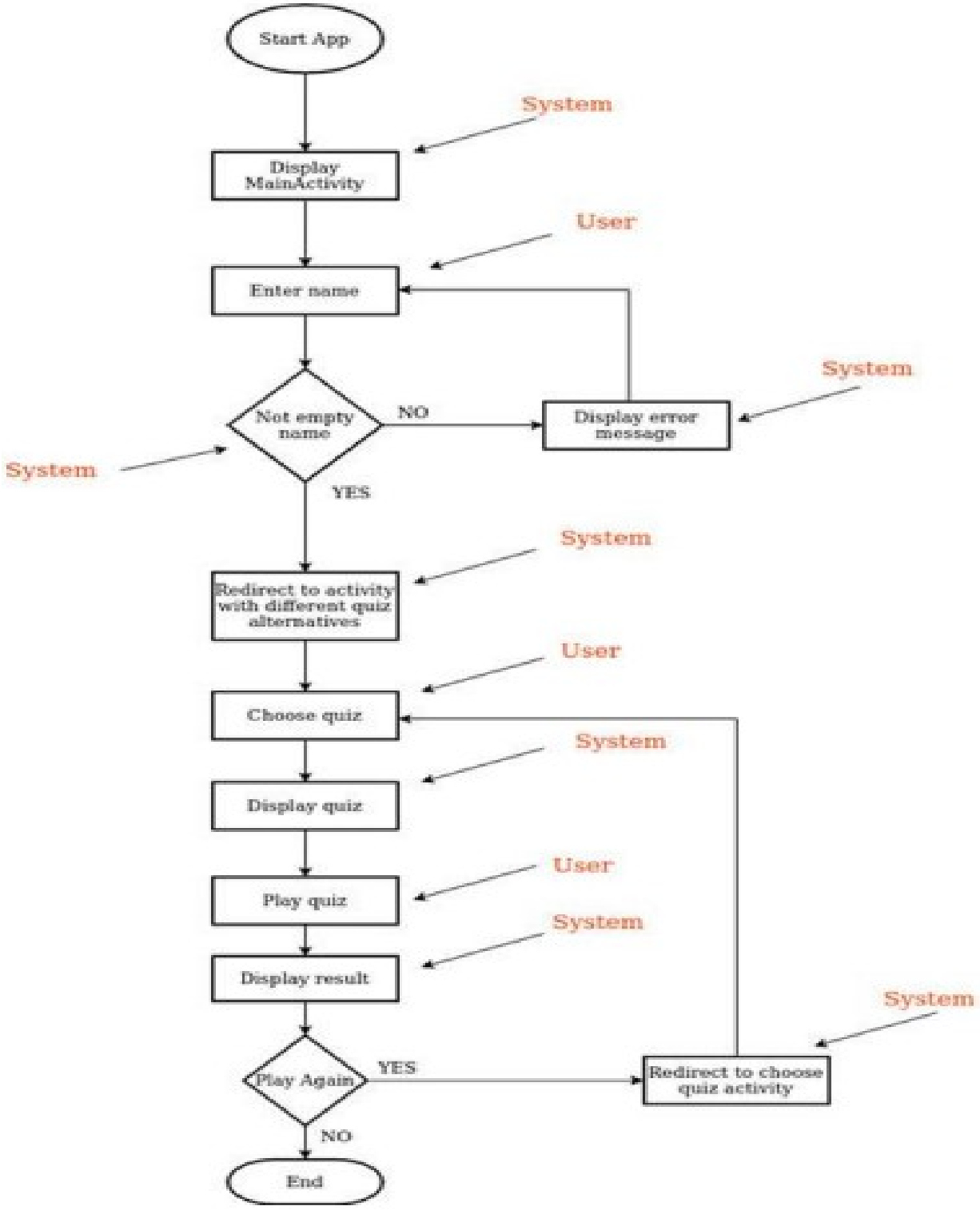


FIG 4.1 Flow chart

Using "Android Quiz App" source code package you can create amazing android quiz app. "Android Quiz App" source code package is built with latest android studio and is easy to use and configure. With little or no coding knowledge you can easily create quiz app with the help of this source code package.

SYSTEM DESIGN

System Design is the most creative and challenging phase in the system life cycle. Design is the first step into the development phase for any engineered product or system. Design is a creative process. A good design is the key to effective system. System design is a solution how to approach the creation of a new system. System design transforms a logic representation of what is required to do into the physical specification. The specification is converted into physical reality during development.

Logical design

The logical flow of a system and define the boundaries of a system. It includes the following steps:

• Reviews the current physical system – its data flows, file content, volumes, frequencies etc

.• Prepares output specifications – that is, determines the format, content and Frequency of reports.

• Prepares input specifications – format, content and most of the input functions.

• Prepares edit, security and control specifications.

• Specifies the implementation plan.

• Prepares a logical design walk through of the information flow, output, input, controls and implementation plan.

• Reviews benefits, costs, target dates and system constraints.

Physical design

Physical system produces the working systems by define the design specifications that tell the
programmers exactly what the candidate system must do. It includes the following steps.

• Design the physical system.

• Specify input and output media.

• Design the database and specify backup procedures.

• Design physical information flow through the system and a physical design Walk through.

• Plan system implementation.

• Prepare a conversion schedule and target date.

• Determine training procedures, courses and timetable.

• Devise a test and implementation plan and specify any new hardware/software

CHAPTER 5
SYSTEM IMPLEMENTATION

MAIN ACTIVITY XML CODE

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:background="@color/teal_200"
   android:padding="24dp"
   tools:context=".MainActivity">

   <TextView
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:id="@+id/total_question"
      android:text="Total Questions "
      android:layout_centerHorizontal="true"
      android:textSize="20dp"/>


   <TextView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:id="@+id/question"
      android:textStyle="bold"
      android:text="This will be the question"
      android:textColor="@color/white"
      android:textSize="24dp"
      android:textAlignment="center"
      android:layout_margin="20dp"
      android:layout_above="@id/choices_layout"/>


   <LinearLayout
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:id="@+id/choices_layout"
      android:layout_centerInParent="true"
      android:orientation="vertical">
```

```
<Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/ans_A"
        android:layout_margin="5dp"
        android:backgroundTint="@color/white"
        android:text="Ans A"
        android:textColor="@color/black"/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/ans_B"
        android:layout_margin="5dp"
        android:backgroundTint="@color/white"
        android:text="Ans B"
        android:textColor="@color/black"/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/ans_C"
        android:layout_margin="5dp"
        android:backgroundTint="@color/white"
        android:text="Ans C"
        android:textColor="@color/black"/>
    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/ans_D"
        android:layout_margin="5dp"
        android:backgroundTint="@color/white"
        android:text="Ans D"
        android:textColor="@color/black"/>

  </LinearLayout>

  <Button
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/submit_btn"
    android:text="Submit"
    android:layout_below="@id/choices_layout"
    android:layout_marginTop="40dp"/>

</RelativeLayout>
```

```
@Override
  public void onClick(View view) {

      ansA.setBackgroundColor(Color.WHITE);
      ansB.setBackgroundColor(Color.WHITE);
      ansC.setBackgroundColor(Color.WHITE);
      ansD.setBackgroundColor(Color.WHITE);

      Button clickedButton = (Button) view;
      if(clickedButton.getId()==R.id.submit_btn){

if(selectedAnswer.equals(QuestionAnswer.correctAnswers[currentQuestio
nIndex])){
            score++;
         }
         currentQuestionIndex++;
         loadNewQuestion();


      }else{
         //choices button clicked
         selectedAnswer  = clickedButton.getText().toString();
         clickedButton.setBackgroundColor(Color.MAGENTA);

      }

  }

  void loadNewQuestion(){

      if(currentQuestionIndex == totalQuestion ){
         finishQuiz();
         return;
      }


questionTextView.setText(QuestionAnswer.question[currentQuestionIndex
]);
      ansA.setText(QuestionAnswer.choices[currentQuestionIndex][0]);
      ansB.setText(QuestionAnswer.choices[currentQuestionIndex][1]);
      ansC.setText(QuestionAnswer.choices[currentQuestionIndex][2]);
      ansD.setText(QuestionAnswer.choices[currentQuestionIndex][3]);

  }
```

MAIN ACTIVITY JAVA CODE

```
package easy.tuto.myquizapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.app.AlertDialog;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements
View.OnClickListener{

    TextView totalQuestionsTextView;
    TextView questionTextView;
    Button ansA, ansB, ansC, ansD;
    Button submitBtn;

    int score=0;
    int totalQuestion = QuestionAnswer.question.length;
    int currentQuestionIndex = 0;
    String selectedAnswer = "";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        totalQuestionsTextView = findViewById(R.id.total_question);
        questionTextView = findViewById(R.id.question);
        ansA = findViewById(R.id.ans_A);
        ansB = findViewById(R.id.ans_B);
        ansC = findViewById(R.id.ans_C);
        ansD = findViewById(R.id.ans_D);
        submitBtn = findViewById(R.id.submit_btn);

        ansA.setOnClickListener(this);
        ansB.setOnClickListener(this);
        ansC.setOnClickListener(this);
        ansD.setOnClickListener(this);
        submitBtn.setOnClickListener(this);
        totalQuestionsTextView.setText("Total questions : "+totalQuestion);
        loadNewQuestion();
}
```

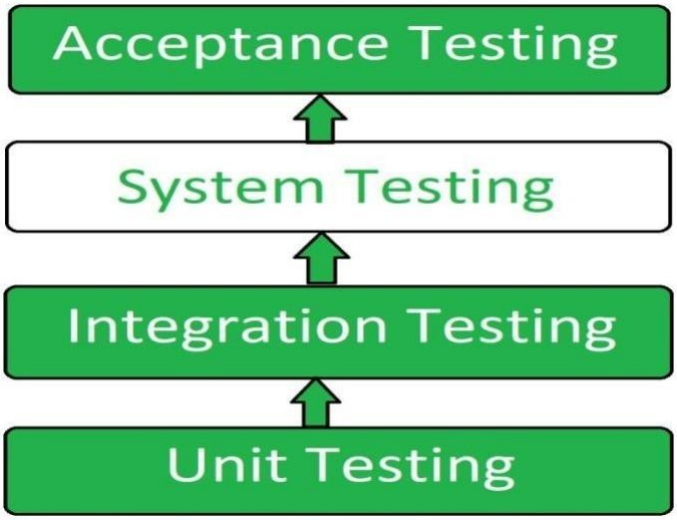
```
    void finishQuiz(){
        String passStatus = "";
        if(score > totalQuestion*0.60){
            passStatus = "Passed";
        }else{
            passStatus = "Failed";
        }

        new AlertDialog.Builder(this)
                .setTitle(passStatus)
                .setMessage("Score is "+ score+" out of "+ totalQuestion)
                .setPositiveButton("Restart",(dialogInterface, i) ->
restartQuiz() )
                .setCancelable(false)
                .show();


    }

    void restartQuiz(){
        score = 0;
        currentQuestionIndex =0;
        loadNewQuestion();
    }

}
```

```
public class QuestionAnswer {

    public static String question[] ={
            "Which company owns the android?",
            "Which one is not the programming language?",
            "Where you are watching this video?",
            "Which company owns the Apple?"
    };

    public static String choices[][] = {
            {"Google","Apple","Nokia","Samsung"},
            {"Java","Kotlin","Notepad","Python"},
            {"Facebook","Whatsapp","Instagram","Youtube"},
            {"Google","Apple","Nokia","Samsung"}
    };

    public static String correctAnswers[] = {
            "Google",
            "Notepad",
            "Youtube",
            "Apple"
    };
```

CHAPTER 6

TESTING

Before a piece of software can be used, it needs to be tested**.** Some testing is done by the programmer as the code is written. Other testing is more structured and involves a test plan being written and the software being tested with a variety of types of data to check that the outputs are as expected. When a problem with the software is identified, the cause will need to be identified. This is called debugging**.**



Unit Testing is a software testing technique by means of which individual units of software i.e. group of computer program modules, usage procedures, and operating procedures are tested to determine whether they are suitable for use or not. It is a testing method using which every independent module is tested to determine if there is an issue by the developer himself. It is correlated with the functional correctness of the independent modules. Unit Testing is defined as a type of software testing where individual components of a software are tested. Unit Testing of the software product is carried out during the development of an application. An individual component may be either an individual function or a procedure. Unit Testing is typically performed by the developer. In SDLC or V Model, Unit testing is the first level of testing done before integration testing. Unit testing is such a type of testing technique that is usually performed by developers. Although due to the reluctance of developers to test, quality assurance engineers also do unit testing.

Integration testing is the process of testing the interface between two software units or modules. It focuses on determining the correctness of the interface. The purpose of

integration testing is to expose faults in the interaction between integrated units. Once all the modules have been unit tested, integration testing is performed.

Integration testing is a software testing technique that focuses on verifying the interactions and data exchange between different components or modules of a software application. The goal of integration testing is to identify any problems or bugs that arise when different components are combined and interact with each other. Integration testing is typically performed after unit testing and before system testing. It helps to identify and resolve integration issues early in the development cycle, reducing the risk of more severe and costly problems later on.

Integration testing can be done by picking module by module. This can be done so that there should be a proper sequence to be followed. And if you don't want to miss out on any integration scenarios then you have to follow the proper sequence. Exposing the defects is the major focus of the integration testing and the time of interaction between the integrated units.

System Testing is a type of software testing that is performed on a complete integrated system to evaluate the compliance of the system with the corresponding requirements. In system testing, integration testing passed components are taken as input. The goal of integration testing is to detect any irregularity between the units that are integrated together. System testing detects defects within both the integrated units and the whole system. The result of system testing is the observed behavior of a component or a system when it is tested. System Testing is carried out on the whole system in the context of either system requirement specifications or functional requirement specifications or in the context of both. System testing tests the design and behavior of the system and also the expectations of the customer. It is performed to test the system beyond the bounds mentioned in the software requirements specification (SRS).

Acceptance testing is formal testing based on user requirements and function processing. It determines whether the software is conforming specified requirements and user requirements or not. It is conducted as a kind of Black Box testing where the number of required users involved testing the acceptance level of the system. It is the fourth and last level of software testing. (UAT) is a type of testing, which is done by the customer before accepting the final product.

CHAPTER 7

OUTPUT

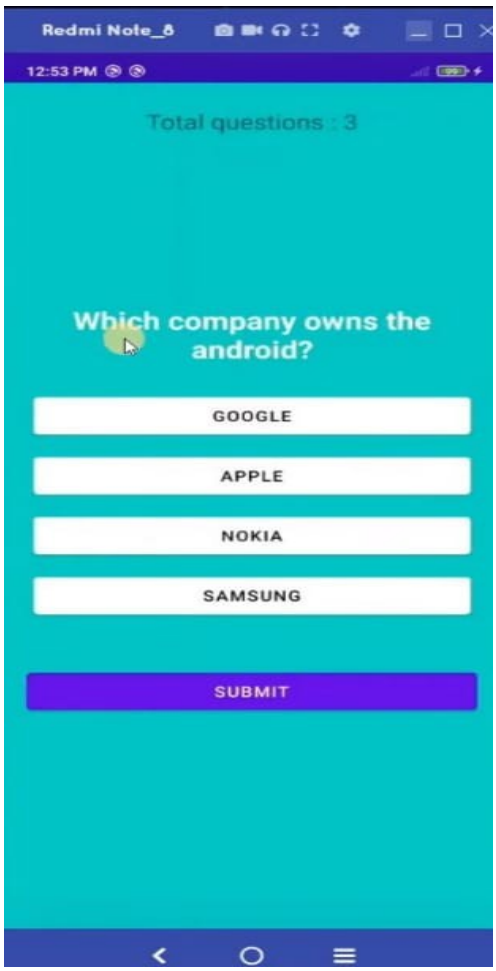


Fig 6.1 INITIAL VIEW OF QUIZ PAGE

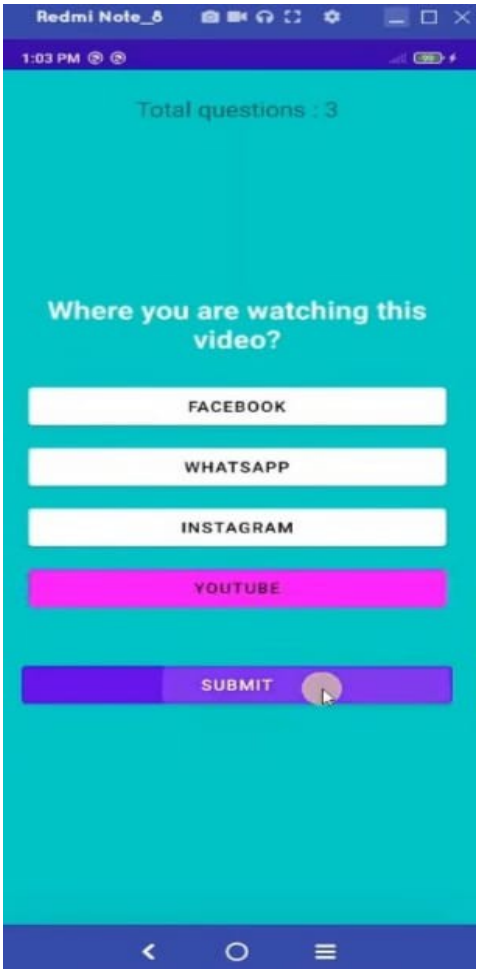


Fig 6.2 CHOOSING A ANSWER

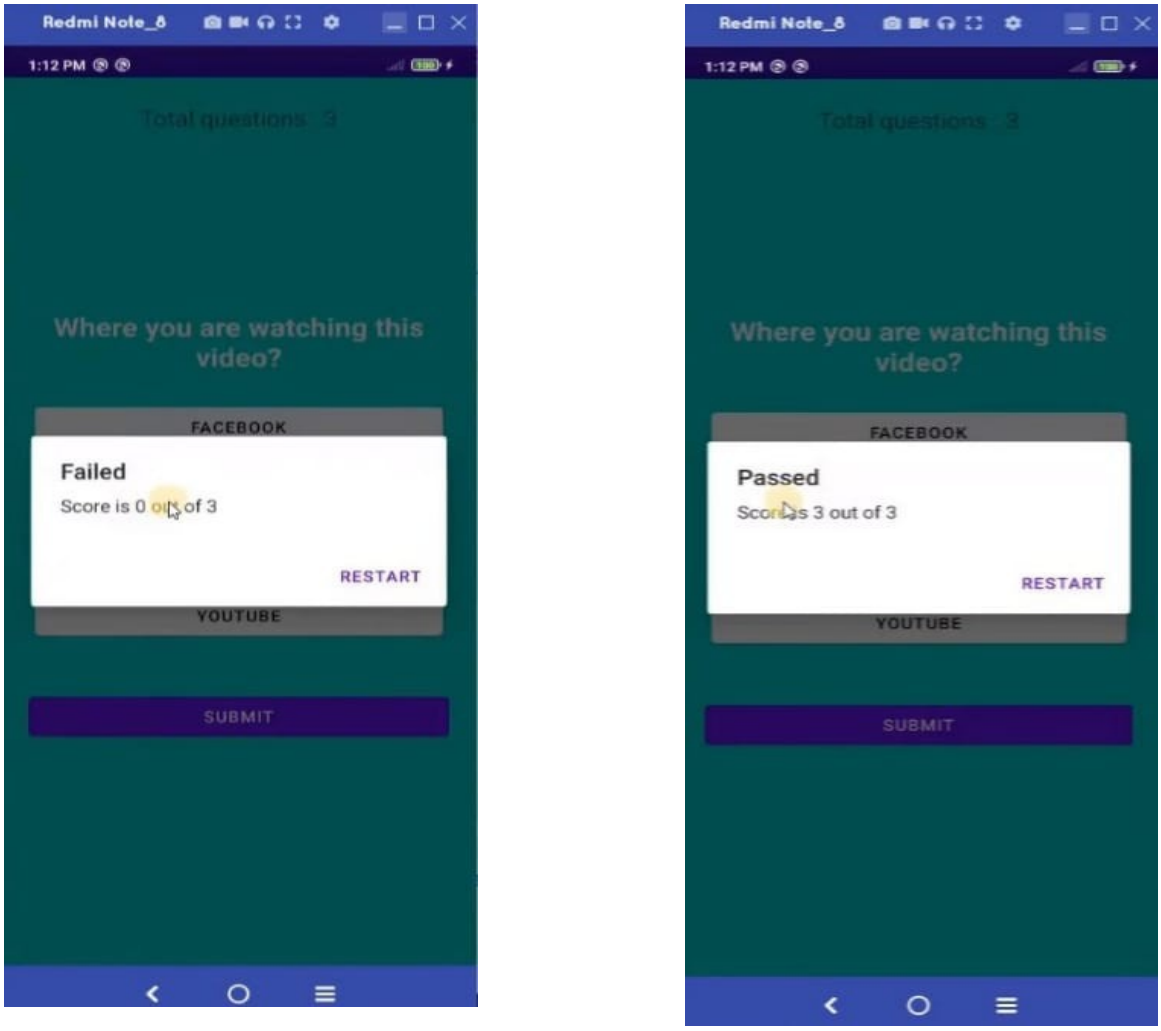


Fig 6.3 FAILED & PASSED VIEW

CHAPTER 8

CONCLUSION

To conclude the description about the project, this was developed using Android Studio IDE and Java programming language, with flexibility for future enhancement. This android application is useful for people. This application is designed and developed for people which helps them to take online quiz of the desired topic. Structured & Modular technique & Menu oriented interface. I have tried to design the software in such a way that user may not have any difficulty in using this package & further expansion is possible without much effort. Even though I cannot claim that this work to be entirely exhaustive. As every game has some limitations so my project is not exceptional, but I will try to short out them very shortly and deliver a defective less product to client. I am confident that this software package can be readily used by non-programming personal avoiding human handled chance of error.

CHAPTER 9

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