

Lab handout 14

Mobile Application Development (CSE-426), Fall 2022, BE-EE(CS)-VIII			
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Section: A Lab group: NA	Department: Electrical Engineering	Marks obtained	out of 100%
NOTE: Must follow submission instructions			

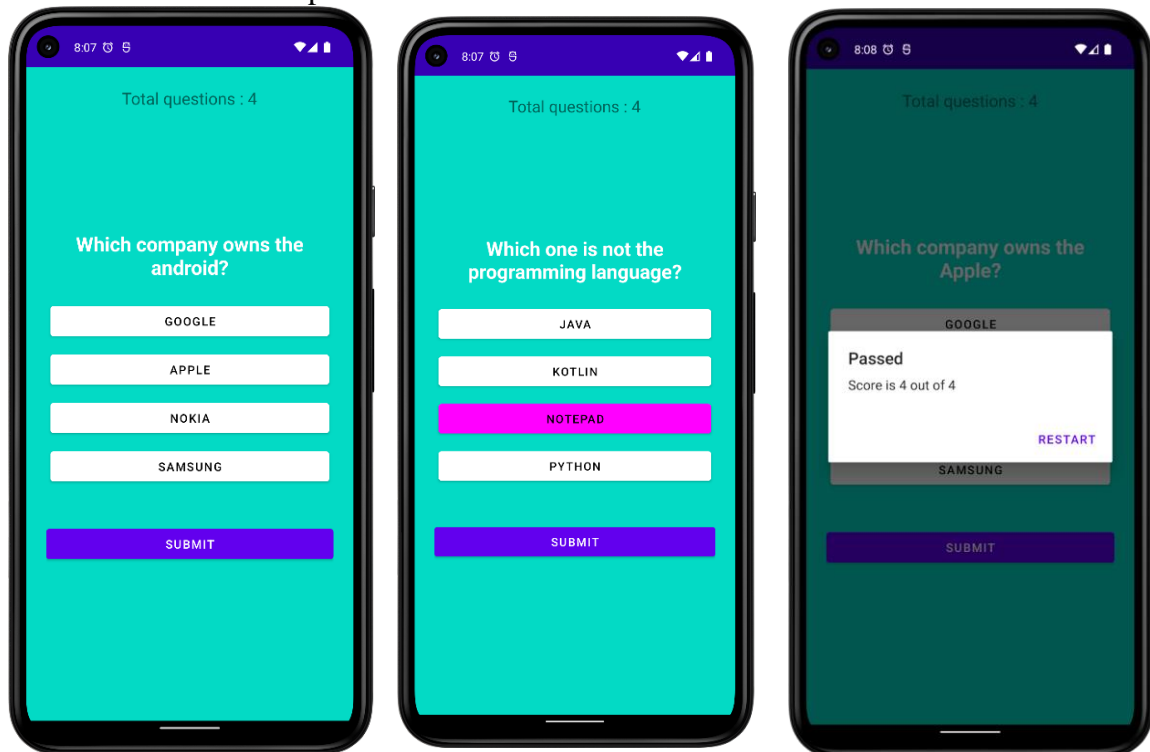
Design and Develop an application of your choice using concepts learned in the course

Lab Exercise and Submission

Exercise 1

Design and Develop an application of your choice using concepts learned in the course.
(Quiz App)

Screenshot of AVD output here:



Insert XML code for layout here:

```
<?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>

```

Insert Activity code here: (MainActivity)

```

package com.example.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();
    }
}

```

```

    }

    @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[currentQuestionIndex])){
            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]);

    }

    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();
    }
}

```

Any other relevant data:

Insert Activity code here: (QuestionAnswer.java)

```

package com.example.myquizapplication;

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"
    };
}

```