IS433 : Mobile Computing Application

Bank Questions Project

Supervised By

Dr Diaa Ibrahim Nasr

Presented By

Saif Mohamed Bakry 17106233

Khaled Ashraf Mohamed 17105969

George Mamdouh 16105426

<u>Introduction</u>

Our project is about Bank of questions application consist of two parts a first part is about student , the student open the application for solving many questions such as (multiple choice , true & false) and another type of the questions ,

Second part for the Admin of the application , the Admin has a control for putting the questions to the student at the application for answering this questions and admin also has control for classifying the questions according to the age of the student and according also to his level as (primary or preparatory) and also have a control for delete any question from the app ,

When we rum our project we can login as admin by open the login activity to login then the admin has 3 choices for adding true & false question or MCQ Question and any questions will add by admin the questions will be added to database to be stored and if he want to delete it the question automatic will be deleted

(1) Activity_Main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".MainActivity">


    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:background="#ECEBE5"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="105dp"
        tools:layout_editor_absoluteY="157dp">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">


            <TextView
                android:id="@+id/textView"
                android:layout_width="119dp"
                android:layout_height="32dp"
                android:layout_marginStart="16dp"
                android:text="@string/user_name1"
                app:layout_constraintStart_toStartOf="parent"
                tools:layout_editor_absoluteY="123dp"
                tools:ignore="HardcodedText" />

            <EditText
                android:id="@+id/tname"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:ems="10"
                android:inputType="textPersonName"
                android:text="" />

        </LinearLayout>

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">

            <TextView
```

```xml
                android:id="@+id/textView2"
                android:layout_width="119dp"
                android:layout_height="32dp"
                android:layout_marginStart="16dp"
                android:text="@string/password"
                app:layout_constraintStart_toStartOf="parent"
                tools:layout_editor_absoluteY="211dp" />

            <EditText
                android:id="@+id/tpass"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:ems="10"
                android:inputType="textPassword" />
        </LinearLayout>


        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">

            <Button
                android:id="@+id/blogin"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="@string/login"
                app:layout_constraintBottom_toBottomOf="parent"
                app:layout_constraintTop_toTopOf="parent"
                tools:layout_editor_absoluteX="59dp" />

            <Button
                android:id="@+id/bsignup"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="@string/sign_up"
                app:layout_constraintBottom_toBottomOf="parent"
                app:layout_constraintTop_toTopOf="parent"
                tools:layout_editor_absoluteX="208dp" />
        </LinearLayout>

        <TextView
            android:id="@+id/error"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/invalid_username_password"
            android:textColor="@color/design_default_color_error"
            tools:visibility="invisible" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_Main.java

```java
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import java.io.File;


public class MainActivity extends AppCompatActivity {
    SQLiteDatabase db;

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

        EditText username=(EditText)findViewById(R.id.tname);
        EditText password=(EditText)findViewById(R.id.tpass);
        Button bsignin=(Button)findViewById(R.id.blogin);
        Button lsingup=(Button)findViewById(R.id.bsignup);
        TextView error=(TextView)findViewById(R.id.error);
        error.setVisibility(View.INVISIBLE);
        File storagePath = getApplication().getFilesDir();
        String myDbPath = storagePath + "/" + "dataBase";

        try {
            db = SQLiteDatabase.openDatabase(myDbPath, null,
                    SQLiteDatabase.CREATE_IF_NECESSARY);
            db.execSQL("create table if not exists student (id INTEGER PRIMARY KEY
autoincrement, image TEXT,score1 INTEGER,score2 INTEGER,score3 INTEGER,score4
INTEGER,noofExams INTEGER, name TEXT NOT NULL UNIQUE, username TEXT,age
INTEGER,password TEXT NOT NULL)");
            db.execSQL("create table if not exists trueFalse(id INTEGER PRIMARY KEY
autoincrement,question TEXT,answer TEXT,level TEXT);");
            db.execSQL("create table if not exists MCQ(id INTEGER PRIMARY KEY
autoincrement,question TEXT,answer1 TEXT,answer3 TEXT,answer2 TEXT,correctanswer
TEXT,level TEXT);");

            db.close();
        } catch (SQLiteException e) {
error.setText("Cannot open database");
error.setVisibility(View.VISIBLE);
        }
        bsignin.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override
            public void onClick(View v) {
                String uname=username.getText().toString();

                String pass=password.getText().toString();
                if(uname.equals("admin")&&pass.equals("12345"))
                {
                    Intent i = new Intent(MainActivity.this, ADMIN.class);
                    startActivity(i);
                }
                else{

                    try {
        db = SQLiteDatabase.openDatabase(myDbPath, null,
                SQLiteDatabase.CREATE_IF_NECESSARY);
    }catch  (SQLiteException e) {
    error.setVisibility(View.VISIBLE);
    }
                Cursor c = null;
        c = db.rawQuery("SELECT name,id,age,noofExams FROM student WHERE
username='"+uname+"' AND password='"+ pass+"'", null);

                if (c.getCount()!=0) {
                        c.moveToFirst();

                    StudentForm.name=c.getString(0);
                    StudentForm.id=c.getInt(1);
                    StudentForm.age=c.getInt(2);
                    StudentForm.noOfExams=c.getInt(3);
                        Intent i = new Intent(MainActivity.this,
StudentForm.class);

                        startActivity(i);
                }
                else{
                        error.setText("Invalid username/password");
                        error.setVisibility(View.VISIBLE);
                }


                }
            }

        });
        lsingup.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(MainActivity.this, RegForm.class);
                startActivity(i);
            }
        });
    }
}
```

(2) Activity_admin.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".ADMIN">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="25dp"
        tools:layout_editor_absoluteY="152dp">

        <TextView
            android:id="@+id/textView5"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:fontFamily="sans-serif-condensed"
            android:text="@string/welcome_admin"
            android:textColor="#8C1515"
            android:textSize="30sp" />

        <Button
            android:id="@+id/addtf"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/add_true_false_question" />

        <Button
            android:id="@+id/addmcq"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/add_mcq_question" />

        <Button
            android:id="@+id/delete"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/delete_question" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_admin.java

```java
package com.example.project2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class ADMIN extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_a_d_m_i_n);
        Button btf=(Button)findViewById(R.id.addtf);
        Button bmcq=(Button)findViewById(R.id.addmcq);
        Button delete=(Button)findViewById(R.id.delete);
btf.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent i = new Intent(ADMIN.this, AddTrueFalse.class);
        startActivity(i);
    }
});
        bmcq.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(ADMIN.this, ADDMCQ.class);
                startActivity(i);
            }
        });
        delete.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(ADMIN.this, DeleteQuestion.class);
                startActivity(i);
            }
        });
    }
}
```

(3) Activity_add true & false.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".AddTrueFalse">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="83dp"
        tools:layout_editor_absoluteY="101dp">
        <TextView
            android:id="@+id/textView3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/question"
            android:textColor="#D84C4C"
            android:textSize="30sp"
            tools:layout_editor_absoluteX="18dp"
            tools:layout_editor_absoluteY="23dp" />


        <EditText
            android:id="@+id/question"
            android:layout_width="406dp"
            android:layout_height="94dp"
            android:ems="10"
            android:gravity="start|top"
            android:inputType="textMultiLine"
            tools:layout_editor_absoluteY="78dp"
            android:importantForAutofill="no"
            tools:ignore="LabelFor" />
        <TextView
            android:id="@+id/textView6"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/answer"
            android:textColor="#D52828"
            tools:layout_editor_absoluteX="14dp"
            tools:layout_editor_absoluteY="269dp" />
        <RadioGroup
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            tools:layout_editor_absoluteX="32dp"
            tools:layout_editor_absoluteY="351dp" >

        <RadioButton
```

```xml
            android:id="@+id/rtrue"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/true1"
            tools:layout_editor_absoluteX="14dp"
            tools:layout_editor_absoluteY="338dp" />

        <RadioButton
            android:id="@+id/rfalse"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            android:text="@string/false1"
            app:layout_constraintStart_toStartOf="parent"
            tools:layout_editor_absoluteY="404dp" />
    </RadioGroup>
    <TextView
        android:id="@+id/textView7"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/level"
        android:textColor="#D52828"
        tools:layout_editor_absoluteX="34dp"
        tools:layout_editor_absoluteY="497dp"
        tools:ignore="HardcodedText" />
    <RadioGroup
        android:layout_width="match_parent"
        android:layout_height="wrap_content" >
    <RadioButton
        android:id="@+id/rprimary"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/primary"
        tools:layout_editor_absoluteX="21dp"
        tools:layout_editor_absoluteY="540dp" />

    <RadioButton
        android:id="@+id/rprep"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/prep"
        tools:layout_editor_absoluteX="21dp"
        tools:layout_editor_absoluteY="605dp" />
    </RadioGroup>
    <Button
        android:id="@+id/addq"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginBottom="16dp"
        android:text="@string/add"
        app:layout_constraintBottom_toBottomOf="parent"
        tools:layout_editor_absoluteX="101dp" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

(4) Activity_add true & false.java

```java
package com.example.project2;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.Toast;

import java.io.File;

public class AddTrueFalse extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_add_true_false);
        EditText question=(EditText)findViewById(R.id.question);
        RadioButton rtrue=(RadioButton)findViewById(R.id.rtrue);
        RadioButton rfalse=(RadioButton)findViewById(R.id.rfalse);
        RadioButton rprim=(RadioButton)findViewById(R.id.rprimary);
        RadioButton rprep=(RadioButton)findViewById(R.id.rprep);
        Button b=(Button)findViewById(R.id.addq);
        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String q=question.getText().toString();
                String answer,Level;
                if(rtrue.isChecked())
                    answer="true";
                else
                    answer="false";
                if(rprim.isChecked())
                    Level="prim";
                else
                    Level="prep";
                File storagePath = getApplication().getFilesDir();
                String myDbPath = storagePath + "/" + "dataBase";


                SQLiteDatabase    db = SQLiteDatabase.openDatabase(myDbPath, null,
                        SQLiteDatabase.CREATE_IF_NECESSARY);
                try {
                  db.execSQL("insert into trueFalse(question,answer,level)
values('"+q+"','"+answer+"','"+Level+"');");
```

```java
        } catch (SQLiteException e) {

            }

Toast.makeText(getApplicationContext(),"Added",Toast.LENGTH_LONG).show();

            db.close();

        }
    });
}
```

(5) Activity_delete question.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".DeleteQuestion">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="126dp"
        tools:layout_editor_absoluteY="83dp">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="105dp"
            android:orientation="horizontal">

            <TextView
                android:id="@+id/textView9"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="@string/select_type"
                android:textColor="#DC2323"
                android:textSize="30sp" />

            <RadioGroup
                android:layout_width="140dp"
                android:layout_height="match_parent">

                <RadioButton
                    android:id="@+id/radioButton"
                    android:layout_width="123dp"
                    android:layout_height="wrap_content"
                    android:text="@string/treu_false" />

                <RadioButton
                    android:id="@+id/radioButton2"
                    android:layout_width="123dp"
                    android:layout_height="wrap_content"
                    android:text="@string/mcq" />

            </RadioGroup>

            <Button
```

```xml
                android:id="@+id/buttonshow"
                android:layout_width="101dp"
                android:layout_height="wrap_content"
                android:text="@string/show" />
        </LinearLayout>

        <TextView
            android:id="@+id/textView8"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/select_question_to_delete_it"
            android:textColor="#DC2323"
            android:textSize="30sp" />
        <ListView
            android:id="@+id/listquestion"
            android:layout_width="wrap_content"
            android:layout_height="537dp">

        </ListView>

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_delete question.java

```java
package com.example.project2;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.RadioButton;
import android.widget.Toast;

import java.io.File;

public class DeleteQuestion extends AppCompatActivity {
    ArrayAdapter<String> qAdapter;
    ListView que;
    SQLiteDatabase db;

    void fillListView(String type)
    {
        File storagePath = getApplication().getFilesDir();
        String myDbPath = storagePath + "/" + "dataBase";
        db = SQLiteDatabase.openDatabase(myDbPath, null,
                SQLiteDatabase.CREATE_IF_NECESSARY);
        if(type.equals("tf"))
        {   Cursor cursor2=db.rawQuery("select question from truefalse",null);
            if (cursor2 != null) {
                cursor2.moveToFirst();
            }
            while(!cursor2.isAfterLast())
            {
                String q=cursor2.getString(0);

                qAdapter.add(q);
                cursor2.moveToNext();
            }
            db.close();

        }
        else
        {
            Cursor cursor2=db.rawQuery("select question from MCQ",null);
            if (cursor2 != null) {
                cursor2.moveToFirst();
            }
            while(!cursor2.isAfterLast())
            {
```

```java
                String q=cursor2.getString(0);

                qAdapter.add(q);
                cursor2.moveToNext();
            }
            db.close();


        }
    }
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_delete_question);
        Button bshow=(Button)findViewById(R.id.buttonshow);
        que=(ListView)findViewById(R.id.listquestion);
        RadioButton r=(RadioButton)findViewById(R.id.radioButton);
        qAdapter=new
ArrayAdapter<String>(getApplicationContext(),android.R.layout.simple_list_item_1);
        que.setAdapter(qAdapter);
        bshow.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                qAdapter.clear();
                if(r.isChecked())
                {
                    fillListView("tf");
                }
                else
                    fillListView("mcq");


            }
        });
que.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> parent, View view, int position, long id)
{
        String selectedq= (String) parent.getItemAtPosition(position);
        File storagePath = getApplication().getFilesDir();
        String myDbPath = storagePath + "/" + "dataBase";
        db = SQLiteDatabase.openDatabase(myDbPath, null,
                SQLiteDatabase.CREATE_IF_NECESSARY);
        if(r.isChecked())
        {
            db.execSQL("delete from truefalse where question='"+ selectedq+"';");
            qAdapter.clear();
            fillListView("tf");
        }
        else
        {
            db.execSQL("delete from mcq where question='"+ selectedq+"';");
            qAdapter.clear();
            fillListView("mcq");
```

```
        }
    }
});

    }
```

....

(6) Activity_add MCQ.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".ADDMCQ">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="209dp"
        tools:layout_editor_absoluteY="181dp">



        <TextView
            android:id="@+id/textView10"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/question"
            android:textColor="#D84C4C"
            android:textSize="30sp"
            tools:layout_editor_absoluteX="18dp"
            tools:layout_editor_absoluteY="23dp" />

        <EditText
            android:id="@+id/que"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:ems="10"
            android:gravity="start|top"
            android:inputType="textMultiLine"
            tools:layout_editor_absoluteY="78dp"
            android:importantForAutofill="no"
            tools:ignore="LabelFor" />


        <LinearLayout
            android:layout_width="match_parent"
```

```xml
        android:layout_height="wrap_content"
        android:orientation="horizontal">

    <TextView
        android:id="@+id/textView11"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/answer1"
        android:textColor="#D52828"
        tools:layout_editor_absoluteX="14dp"
        tools:layout_editor_absoluteY="269dp"/>

        <EditText
            android:id="@+id/answer1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:importantForAutofill="no" />

        <CheckBox
            android:id="@+id/chanswer1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/checkbox"
            tools:ignore="HardcodedText" />
    </LinearLayout>
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal">

<TextView
    android:id="@+id/textView12"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/answer2"
    android:textColor="#D52828"
    tools:layout_editor_absoluteX="14dp"
    tools:layout_editor_absoluteY="269dp"/>

    <EditText
        android:id="@+id/answer2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:importantForAutofill="no"
        tools:ignore="LabelFor" />
    <CheckBox
        android:id="@+id/chanswer2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
```

```xml
                    android:text="@string/checkbox" />
</LinearLayout>
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">

            <TextView
                android:id="@+id/textView13"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="@string/answer3"
                android:textColor="#D52828"
                tools:layout_editor_absoluteX="14dp"
                tools:layout_editor_absoluteY="269dp"/>

            <EditText
                android:id="@+id/answer3"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:ems="10"
                android:inputType="textPersonName" />
            <CheckBox
                android:id="@+id/chanswer3"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="@string/checkbox" />
        </LinearLayout>
        <TextView
            android:id="@+id/textView15"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/level"
            android:textColor="#D52828"
            tools:layout_editor_absoluteX="34dp"
            tools:layout_editor_absoluteY="497dp" />



        <RadioGroup
            android:layout_width="match_parent"
            android:layout_height="match_parent" >
            <RadioButton
                android:id="@+id/rprep2"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="@string/prep"
                tools:layout_editor_absoluteX="21dp"
                tools:layout_editor_absoluteY="605dp" />

            <RadioButton
                android:id="@+id/rprimary2"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
```

```xml
                    android:text="@string/primary"
                    tools:layout_editor_absoluteX="21dp"
                    tools:layout_editor_absoluteY="540dp" />

            <Button
                    android:id="@+id/buttonadd"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="@string/add" />

            <TextView
                    android:id="@+id/error_"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:textColor="#EF2D2D" />


        </RadioGroup>
    </LinearLayout>

</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_add MCQ.java

```java
package com.example.project2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.ContentValues;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.TextView;
import android.widget.Toast;

import java.io.File;

public class ADDMCQ extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_a_d_d_m_c_q);
        EditText que=(EditText)findViewById(R.id.que);
        EditText ans1=(EditText)findViewById(R.id.answer1);
        EditText ans2=(EditText)findViewById(R.id.answer2);
        EditText ans3=(EditText)findViewById(R.id.answer3);
        CheckBox chans1=(CheckBox)findViewById(R.id.chanswer1);
        CheckBox chans2=(CheckBox)findViewById(R.id.chanswer2);
        CheckBox chans3=(CheckBox)findViewById(R.id.chanswer3);
        RadioButton rprim=(RadioButton)findViewById(R.id.rprimary2);
        RadioButton rprep=(RadioButton)findViewById(R.id.rprep2);
        Button badd=(Button)findViewById(R.id.buttonadd);
        TextView err=(TextView)findViewById(R.id.error_);
        badd.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String q,a1,a2,a3,correctanswer="",level="";
                int correct=1;
                int selectedcorrectanswer=0;
                q=que.getText().toString();
                a1=ans1.getText().toString();
                a2=ans2.getText().toString();
                a3=ans3.getText().toString();
                if(q.equals("")||a1.equals("")||a2.equals("")||a3.equals(""))
                    correct=0;
                if(chans1.isChecked()) {
                    correctanswer=a1;
                    selectedcorrectanswer++;
                }
```

```java
                if(chans2.isChecked()) {
                    correctanswer=a2;
                    selectedcorrectanswer++;
                }
                if(chans3.isChecked()) {
                    correctanswer=a3;
                    selectedcorrectanswer++;
                }
                if(selectedcorrectanswer!=1)
                    correct=0;
                if(rprim.isChecked())
                    level="prim";
                else if(rprep.isChecked())
                    level="prep";
                else
                    correct=0;
                if (correct==0)
                err.setText("You have to entered all the inputs and select only on
correct answer");
                else
                {
                    File storagePath = getApplication().getFilesDir();
                    String myDbPath = storagePath + "/" + "dataBase";


                    SQLiteDatabase db = SQLiteDatabase.openDatabase(myDbPath, null,
                            SQLiteDatabase.CREATE_IF_NECESSARY);
                    try {
                        ContentValues myArgs= new ContentValues();
                        myArgs.put("question", q);
                        myArgs.put("answer1", a1);
                        myArgs.put("answer2", a2);
                        myArgs.put("answer3", a3);
                        myArgs.put("correctanswer", correctanswer);
                        myArgs.put("level", level);
                        db.insert("mcq", null, myArgs);

Toast.makeText(getApplicationContext(),"Added",Toast.LENGTH_LONG).show();


                    } catch (SQLiteException e) {

Toast.makeText(getApplicationContext(),"EEEE",Toast.LENGTH_LONG).show();

                    }

Toast.makeText(getApplicationContext(),"Added",Toast.LENGTH_LONG).show();

                    db.close();
                }
            }
        });
    }
}
```

(7) Activity_Register_Form.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".RegForm">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="74dp"
        tools:layout_editor_absoluteY="70dp">

        <TextView
            android:id="@+id/textView14"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/enter_your_information"
            android:textColor="#CD0808"
            android:textSize="24sp" />

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
        <TextView
            android:id="@+id/textView16"
            android:layout_width="84dp"
            android:layout_height="31dp"
            android:text="@string/name" />

        <EditText
            android:id="@+id/stuname"
            android:layout_width="84dp"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="" />
        </LinearLayout>
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <TextView
                android:id="@+id/textView17"
                android:layout_width="84dp"
```

```xml
                android:layout_height="31dp"
                android:text="@string/username" />

            <EditText
                android:id="@+id/stuusername"
                android:layout_width="84dp"
                android:layout_height="wrap_content"
                android:ems="10"
                android:inputType="textPersonName"
                android:text="" />
        </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
        <TextView
            android:id="@+id/textView18"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/password" />

        <EditText
            android:id="@+id/studpassword"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPassword" />
    </LinearLayout>
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <TextView
                android:id="@+id/textView19"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="@string/confirmpassword" />

            <EditText
                android:id="@+id/studpassword2"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:ems="10"
                android:inputType="textPassword"
                android:importantForAutofill="no"
                tools:ignore="LabelFor" />
        </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
        <TextView
            android:id="@+id/textView20"
            android:layout_width="wrap_content"
```

```xml
            android:layout_height="wrap_content"
            android:text="@string/age" />

        <EditText
            android:id="@+id/age"
            android:layout_width="84dp"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="number"
            android:importantForAutofill="no"
            tools:ignore="LabelFor" />
    </LinearLayout>
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal"
            tools:ignore="UselessLeaf" />
        <Button
            android:id="@+id/button"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/add" />

        <TextView
            android:id="@+id/err"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:textColor="#A82626"
            android:textSize="30sp" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_Register_Form.java

```java
package com.example.project2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.ContentValues;
import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import java.io.File;

public class RegForm extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_reg_form);
        EditText stname=(EditText)findViewById(R.id.stuname);
        EditText pass=(EditText)findViewById(R.id.studpassword);
        EditText pass2=(EditText)findViewById(R.id.studpassword2);
        EditText age=(EditText)findViewById(R.id.age);
        Button badd=(Button)findViewById(R.id.button);
        TextView terr=(TextView)findViewById(R.id.err);
        EditText tusername=(EditText)findViewById(R.id.stuusername);
        badd.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = stname.getText().toString();
                String password = pass.getText().toString();
                String password2 = pass2.getText().toString();
                int stage = Integer.parseInt(age.getText().toString());

                String uname = tusername.getText().toString();
                if(uname.equals("admin"))
                    terr.setText("You can not use this username");

                else if (name.equals("") || password.equals("") ||
password2.equals("") || !password.equals(password2)||uname.equals(""))
                    terr.setText("Missing/incorrect data");
                else {
                    File storagePath = getApplication().getFilesDir();
                    String myDbPath = storagePath + "/" + "dataBase";
                    SQLiteDatabase db = SQLiteDatabase.openDatabase(myDbPath, null,
                            SQLiteDatabase.CREATE_IF_NECESSARY);
```

```java
            try {
                ContentValues myArgs = new ContentValues();
                myArgs.put("name", name);
                myArgs.put("password", password);
                myArgs.put("age", stage);
                myArgs.put("username", uname);
                myArgs.put("noofExams",1);
                db.insert("student", null, myArgs);
            } catch (SQLiteException e)
            {

            }
            Intent i = new Intent(RegForm.this, MainActivity.class);
            startActivity(i);

            db.close();
        }
    }
    });
    }
}
```

Activity_Student_Form.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
    tools:context=".StudentForm">
    <LinearLayout
        android:id="@+id/linearlayout"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="110dp"
        tools:layout_editor_absoluteY="240dp">

        <TextView
            android:id="@+id/textView4"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/textview"
            android:textColor="#ED2828"
            android:textSize="24sp" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_Student_Form.java

```java
package com.example.project2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.graphics.drawable.Drawable;
import android.media.Image;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.LinearLayout;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;
import android.widget.Toast;

import java.io.File;
import java.util.Random;

public class StudentForm extends AppCompatActivity {
    static  String name;
    static int id;
    static int age;
    static int noOfExams;
    static  MCQClass qlist[];
    static trueFalseClass qlist2[];
    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_student_form);
        TextView t=(TextView)findViewById(R.id.textView4);
        TextView t2 = new TextView(this);
        LinearLayout llMain = findViewById(R.id.linearlayout);
        Button Submit     =new Button(this);
        int selectedQuestions[][]=new int[3][2];

        String level;
        if(age<=12) {
            level = "prim";
        }
        else
            level="prep";
        t.setText("Welcome:"+name+" Your age:"+age);
        int questions=0;
        File storagePath = getApplication().getFilesDir();
        String myDbPath = storagePath + "/" + "dataBase";
```

```java
        SQLiteDatabase  db = SQLiteDatabase.openDatabase(myDbPath, null,
                SQLiteDatabase.CREATE_IF_NECESSARY);
        Cursor cursor2=db.rawQuery("select question ,answer1,answer2,answer3,
correctanswer , id from MCQ where level='"+level+"'",null);
        if (cursor2 != null) {
            cursor2.moveToFirst();
        }

    qlist=new MCQClass[cursor2.getCount()];

        int i=0;
        while(!cursor2.isAfterLast())
        {
            qlist[i]=new
MCQClass(cursor2.getString(0),cursor2.getString(1),cursor2.getString(2),cursor2.getSt
ring(3),cursor2.getString(4),cursor2.getInt(5));
            cursor2.moveToNext();
            i++;
        }
        Cursor  cursor3=db.rawQuery("select question ,answer,id from trueFalse where
level='"+level+"'",null);
        if (cursor3 != null) {
            cursor3.moveToFirst();
        }
    qlist2=new trueFalseClass[cursor3.getCount()];
        int j=0;
        while(!cursor3.isAfterLast())
        {
            qlist2[j]=new
trueFalseClass(cursor3.getString(0),cursor3.getString(1),cursor3.getInt(2));
            cursor3.moveToNext();
            j++;
        }

while(questions<3)
{int b =(int) (Math.random() * 2);
    if(b==0)
    {
        if (j != 0) {

            int qnumber = (int) (Math.random() * j);
                TextView textView = new TextView(this);
                RadioGroup rg = new RadioGroup(this);

                RadioButton r1 = new RadioButton(this);
                RadioButton r2 = new RadioButton(this);
                r1.setText("true");
                r2.setText("false");
                rg.addView(r1);
                rg.addView(r2);

                if (qlist2[qnumber].answer.equals("true")) {
                    r1.setId(qlist2[qnumber].id);
                }
                else {
```

```java
                    r2.setId(qlist2[qnumber].id);
                }
                textView.setText("Q" +( questions+1)+") " +
qlist2[qnumber].question);
                LinearLayout.LayoutParams params = new LinearLayout.LayoutParams(
                        LinearLayout.LayoutParams.WRAP_CONTENT,
                        LinearLayout.LayoutParams.WRAP_CONTENT);
                textView.setLayoutParams(params);
                r1.setLayoutParams(params);
                r2.setLayoutParams(params);

                llMain.addView(textView);
                llMain.addView(rg);
                selectedQuestions[questions][0] = 0;
                selectedQuestions[questions][1] = qnumber;
                questions++;
            }
        }

    else if(b==1)
    {   if(i!=0)
        {
        int qnumber=(int)(Math.random()*i);

            TextView textView = new TextView(this);
            RadioGroup rg = new RadioGroup(this);
            RadioButton r1 = new RadioButton(this);
            RadioButton r2 = new RadioButton(this);
            RadioButton r3 = new RadioButton(this);
            r1.setText(qlist[qnumber].answer1);
            r2.setText(qlist[qnumber].answer2);
            r3.setText(qlist[qnumber].answer3);
            rg.addView(r1);
            rg.addView(r2);
            rg.addView(r3);
            if (qlist[qnumber].correctanswer.equals(qlist[qnumber].answer1)) {
                r1.setId(qlist[qnumber].id);

            }
            else if (qlist[qnumber].correctanswer.equals(qlist[qnumber].answer2))
            {
                r2.setId(qlist[qnumber].id);

            }
            else{
                r3.setId(qlist[qnumber].id);

            }
            textView.setText("Q" +  qlist[qnumber].id + ") " +
qlist[qnumber].question);
            LinearLayout.LayoutParams params = new LinearLayout.LayoutParams(
                    LinearLayout.LayoutParams.WRAP_CONTENT,
                    LinearLayout.LayoutParams.WRAP_CONTENT);
            textView.setLayoutParams(params);
            r1.setLayoutParams(params);
```

```java
                r2.setLayoutParams(params);
                r3.setLayoutParams(params);
                llMain.addView(textView);
                llMain.addView(rg);
                selectedQuestions[questions][0] = 1;
                selectedQuestions[questions][1] = qnumber;
                questions++;
            }
        }

}
        LinearLayout.LayoutParams params = new LinearLayout.LayoutParams(
                LinearLayout.LayoutParams.WRAP_CONTENT,
                LinearLayout.LayoutParams.WRAP_CONTENT);
Submit.setText("Submit");
        Submit.setLayoutParams(params);
        t2.setLayoutParams(params);
        llMain.addView(Submit);
        llMain.addView(t2);
        Submit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int score=0;
                t2.setText("");
                for(int k=0;k<3;k++)
                {   int questionno=selectedQuestions[k][1];
                    if(selectedQuestions[k][0]==1)
                    {
                        int qid=qlist[questionno].id;

                        for(int f=0;f<llMain.getChildCount();f++)
                        {
                            View element =  (View)llMain.getChildAt(f);
                            if(element instanceof RadioGroup) {
                                RadioGroup rg=(RadioGroup)element;
                                int id=rg.getCheckedRadioButtonId();
                                if (id== qid) {
                                    score++;
                                    break;
                                }
                            }
                        }

                    }
                    else if(selectedQuestions[k][0]==0)
                    {
                        int qid=qlist2[questionno].id;
                        for(int f=0;f<llMain.getChildCount();f++)
                        {
                            View element =  (View)llMain.getChildAt(f);
                            if(element instanceof RadioGroup) {
                                RadioGroup rg=(RadioGroup)element;
                                int id=rg.getCheckedRadioButtonId();
                                if (id== qid) {
```

```java
                                score++;
                                break;
                        }
                    }
                }

            }
        }
        File storagePath = getApplication().getFilesDir();
        String myDbPath = storagePath + "/" + "dataBase";
        SQLiteDatabase  db = SQLiteDatabase.openDatabase(myDbPath, null,
                SQLiteDatabase.CREATE_IF_NECESSARY);
        switch(noOfExams)
        {
            case 1:
               db.execSQL("update student set score1="+score+" where id="+id);
                break;
            case 2:
               db.execSQL("update student set score2="+score+" where id="+id);
                break;
            case 3:
               db.execSQL("update student set score3="+score+" where id="+id);
                break;
            case 4:
               db.execSQL("update student set score4="+score+" where id="+id);
                break;
        }
        noOfExams++;
        noOfExams=(noOfExams%4)+1;
       db.execSQL("update student set noofExams="+noOfExams+" where id="+id);
        db.close();
        t2.setText("your Score is:"+score);
    }
});


    }
}
```

Strings.xml

```xml
<resources>
    <string name="app_name">Project2</string>
    <string name="welcome_admin">Welcome Admin</string>
    <string name="add_true_false_question">add True/False Question</string>
    <string name="add_mcq_question">Add MCQ Question</string>
    <string name="delete_question">Delete Question</string>
    <string name="question">Question</string>
    <string name="add2">Add</string>
    <string name="primary2">Primary</string>
    <string name="prep6">prep</string>
    <string name="level1">Level</string>
    <string name="checkbox">CheckBox</string>
    <string name="answer3">Answer3</string>
    <string name="checkbox8">CheckBox</string>
    <string name="answer2">Answer2</string>
    <string name="checkbox6">CheckBox</string>
    <string name="answer1">Answer1</string>
    <string name="question1">Question</string>
    <string name="answer">Answer</string>
    <string name="true1">True</string>
    <string name="false1">False</string>
    <string name="level">Level</string>
    <string name="primary">Primary</string>
    <string name="prep">prep</string>
    <string name="addl">Add</string>
    <string name="textview">TextView</string>
    <string name="enter_your_information">Enter Your Information</string>
    <string name="name">Name</string>
    <string name="username">UserName</string>
    <string name="password9">Password</string>
    <string name="confirmpassword">ConfirmPassword</string>
    <string name="age">Age</string>
    <string name="add">Add</string>
    <string name="user_name1">User name</string>
    <string name="invalid_username_password">Invalid Username /Password</string>
    <string name="sign_up">Sign up</string>
    <string name="login">Login</string>
    <string name="password">Password</string>
    <string name="select_question_to_delete_it">Select question to delete
it:</string>
    <string name="show">Show</string>
    <string name="mcq">MCQ</string>
    <string name="treu_false">TREU/False</string>
    <string name="select_type">Select Type:</string>
</resources>
```

Colors.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="teal_700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
</resources>
```
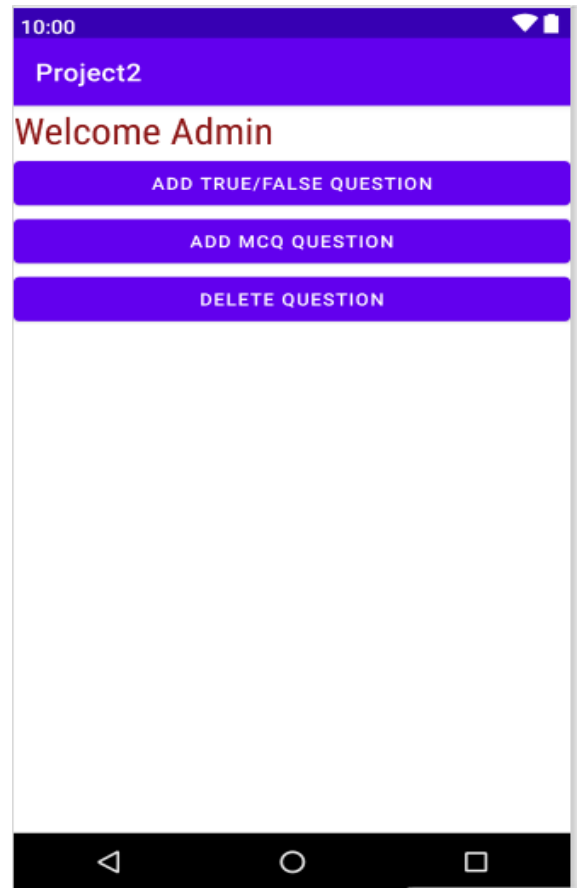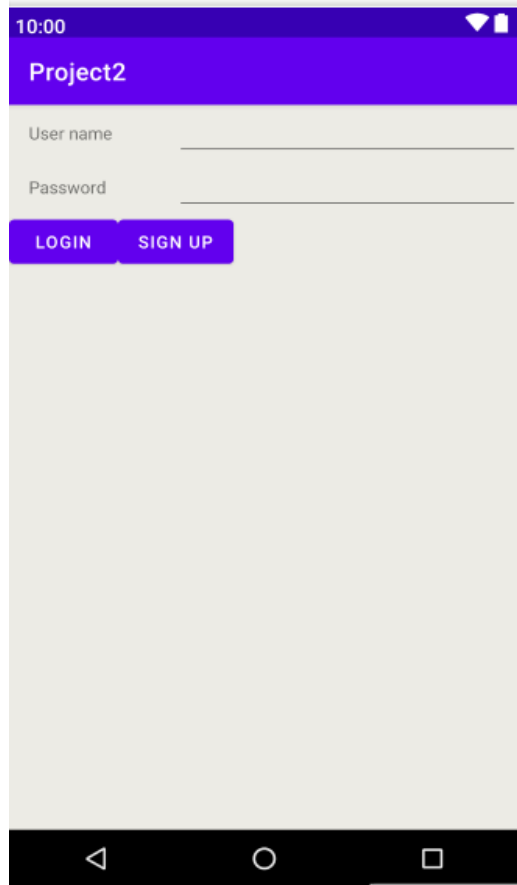
....

AndroidMainfest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.project2">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Project2">
        <activity android:name=".RegForm"></activity>
        <activity android:name=".ADDMCQ" />
        <activity android:name=".DeleteQuestion" />
        <activity android:name=".AddTrueFalse" />
        <activity android:name=".StudentForm" />
        <activity android:name=".ADMIN" />
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Screenshots of project

Screen 1:

10:00

Project2

Question

_____

Answer1 _____ ☐ CheckBox

Answer2 _____ ☐ CheckBox

Answer3 _____ ☐ CheckBox

Level

◯ prep

◯ Primary

ADD

Screen 2:

10:00

Project2

Question

_____

Answer

◯ True

◯ False

Level

◯ Primary

◯ prep

ADD

Screen 3:

10:00

Project2

Select Type: ◯ TREU/False   **SHOW**   ◯ MCQ

Select question to delete it:

Screen 4:

10:00

Project2

TextView