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ROLL NO: 20211CSE0208

SECTION:5CSE-4

SET B

1.NPTEL Portal App:

NPTEL portal needs an app for students' performance evaluation, student should enter their details in the Main Activity to do Registration, The Student's: ID No, Name, CGPA, university name, and NPTEL certificate received course name, Store all the details in the database.

[A] Display all details of the students list

[B] Display the count for a particular course

1.mainActivity.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:background="@drawable/bcg"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="124dp"
        android:layout_height="43dp"
        android:fontFamily="sans-serif-black"
        android:text="SQLITE "
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.458"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.067" />

    <EditText
        android:id="@+id/editTextText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="enter id"
        android:inputType="text"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.182" />

    <EditText
        android:id="@+id/editTextText2"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="enter name"
    android:inputType="text"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.274" />
```

<EditText

```
    android:id="@+id/editTextText3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="enter course"
    android:inputType="text"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.462" />
```

<EditText

```
    android:id="@+id/editTextText4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="enter university"
    android:inputType="text"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.569" />
```

<Button

```
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Insert"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.182"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.695" />
```

<Button

```
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Display"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.804"
    app:layout_constraintStart_toStartOf="parent"
```

```

        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.71" />

<Button
    android:id="@+id/button5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Count"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.455"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.856" />

<EditText
    android:id="@+id/editTextText5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="enter marks"
    android:inputType="text"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.368" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

2.MainActivity.java:

```

package com.example.sqlite;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText ed1,ed2,ed3,ed4,ed5;
    Button bt1,bt4,bt5;
    SQLite_helper myDb; //reference
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        myDb=new SQLite_helper(this);//creation of obj of java cls -
        >constructor invokes,db created automatically
        ed1=findViewById(R.id.editTextText);
        ed2=findViewById(R.id.editTextText2);
        ed3=findViewById(R.id.editTextText3);
    }
}

```

```

ed4=findViewById(R.id.editTextText4);
ed5=findViewById(R.id.editTextText5);
bt1=findViewById(R.id.button);
bt4=findViewById(R.id.button4);
bt5=findViewById(R.id.button5);
bt1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        boolean isInserted= myDb.insertData(ed2.getText().toString(),
            ed5.getText().toString(),
            ed3.getText().toString(),
            ed4.getText().toString());
        if (isInserted==true)
            Toast.makeText(MainActivity.this, "Data Inserted",
Toast.LENGTH_SHORT).show();
        else
            Toast.makeText(MainActivity.this, "Data not Inserted",
Toast.LENGTH_SHORT).show();
    }
});

bt4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Cursor res=myDb.displayData();
        if (res.getCount()==0){
            showMessage("Error","No Data Found... ");
            return;
        }
        StringBuffer buffer=new StringBuffer();
        while (res.moveToNext()){ //res iterate
            buffer.append("Id :"+res.getString(0)+"\n");
            //0 is pointing to 1st col of table
            buffer.append("Name :"+res.getString(1)+"\n");
            buffer.append("cgpa :"+res.getString(2)+"\n");
            buffer.append("Course :"+res.getString(3)+"\n");
            buffer.append("university :"+res.getString(4)+"\n");
        }
        showMessage("Data",buffer.toString());
    }
});

bt5.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Cursor r=myDb.countData();
        if (r.getCount()==0){
            showMessage("error","data not found");
        }
        showMessage("Count",String.valueOf(r.getCount()));
    }
});

}
private void showMessage(String title, String Message){
    AlertDialog.Builder builder=new AlertDialog.Builder(this);
    builder.setCancelable(true);
    builder.setTitle(title);
    builder.setMessage(Message);
    builder.show();
}

```

```
}  
}
```

3.sqliteHelper.java:

```
package com.example.sqlite;  
  
import android.content.ContentValues;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
  
import androidx.annotation.Nullable;  
  
public class SQLite_helper extends SQLiteOpenHelper {  
    //click on bulb implement->2methods->ok  
    //again click on bulb->create constructor->1st 1 by default ->ok  
    public static final String DATABASE_NAME="STUDENT.db";  
    public static final String TABLE_NAME="STUDENT_table";  
    public static final String col_1="ID";  
    public static final String col_2="NAME";  
    public static final String col_3="Cgpa";  
    public static final String col_4="Course";  
    public static final String col_5="University";  
    public SQLite_helper(@Nullable Context context) {  
        super(context,DATABASE_NAME , null, 1); //remove  
name,factory,version inside()  
    }  
    @Override  
    public void onCreate(SQLiteDatabase sqLiteDatabase) {  
        //CREATION OF TABLE  
        sqLiteDatabase.execSQL("create table "+TABLE_NAME+"(ID INTEGER  
PRIMARY KEY AUTOINCREMENT,NAME TEXT,CGPA INT,COURSE TEXT,UNIVERSITY  
TEXT)"); //executeSQL create table (space) +table name  
        //if id is auto-increment no need to pass id, during insertion we  
hv take other 3  
    }  
  
    @Override  
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {  
        //IF ALREADY TABLE EXIST DROP TABLE AND CREATE TABLE (on create)  
        sqLiteDatabase.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);  
        onCreate(sqLiteDatabase);  
    }  
  
    public boolean insertData (String name,String cgpa,String course,String  
university){  
        SQLiteDatabase sqLiteDatabase=this.getWritableDatabase();  
        //for insertion,update,delete, we hv open in writable mode must n  
should  
        ContentValues contentValues =new ContentValues();  
        contentValues.put(col_2,name);  
        contentValues.put(col_3,cgpa);  
        contentValues.put(col_4,course);  
        contentValues.put(col_5,university);  
  
        //to push these values .insert  
        long result=sqLiteDatabase.insert(TABLE_NAME,null,contentValues);  
        //after insertion it will written some +ve no
```

```

        if (result==-1)
            return false;
        else
            return true;
    }

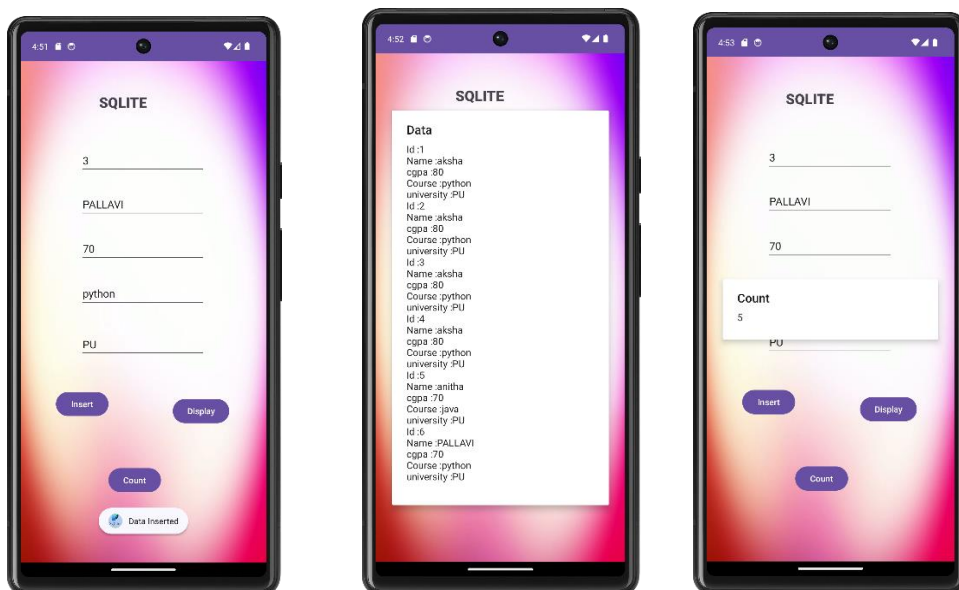
    public Cursor displayData(){
        SQLiteDatabase sqLiteDatabase=this.getWritableDatabase();
        Cursor res=sqLiteDatabase.rawQuery("Select * from
"+TABLE_NAME,null);
        return res;
    }

    public Cursor countData(){
        SQLiteDatabase sqLiteDatabase=this.getWritableDatabase();
        Cursor r=sqLiteDatabase.rawQuery("Select * from "+TABLE_NAME+"
where "+col_4+" like 'python' ",null);
        return r;
    }

}
}

```

4.output:



SET A

2.Admission App:

Presidency University's sports division needs an app for checking students' eligibility for admission to a sports club, students should enter their details Student: ID No, Name, branch, game name, gold or silver medals clicking on the submit button all the details should be stored in the database.

[A] Display all details of the Students admitted to the club

[B] Display total No. Of the Students who had more than two gold medals

1.mainActiviy.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:background="@drawable/bcg"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="124dp"
        android:layout_height="43dp"
        android:fontFamily="sans-serif-black"
        android:text="sports app"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.458"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.067" />

    <EditText
        android:id="@+id/ed1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="enter id"
        android:inputType="text"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.182" />

    <EditText
        android:id="@+id/ed2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="enter name"
        android:inputType="text"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.274" />

    <EditText
        android:id="@+id/ed4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="enter game name"
        android:inputType="text"
```

```
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.462" />
```

<EditText

```
android:id="@+id/ed5"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="enter gold medals"
android:inputType="text"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.569" />
```

<Button

```
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Insert"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.164"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.77" />
```

<Button

```
android:id="@+id/button4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Display"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.75"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.77" />
```

<Button

```
android:id="@+id/button5"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Count"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.92" />
```

<EditText

```
android:id="@+id/ed3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
```



```

        android:ems="10"
        android:hint="enter branch"
        android:inputType="text"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.368" />

```

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

2.mainActivity.java:

```

package com.example.sqlite;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText ed1,ed2,ed3,ed4,ed5;
    Button bt1,bt4,bt5;
    SQLite_helper myDb; //reference
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        myDb=new SQLite_helper(this);//creation of obj of java cls -
        >constructor invokes,db created automatically
        ed1=findViewById(R.id.ed1);
        ed2=findViewById(R.id.ed2);
        ed3=findViewById(R.id.ed3);
        ed4=findViewById(R.id.ed4);
        ed5=findViewById(R.id.ed5);
        bt1=findViewById(R.id.button);
        bt4=findViewById(R.id.button4);
        bt5=findViewById(R.id.button5);
        bt1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                boolean isInserted= myDb.insertData(ed1.getText().toString(),
                    ed2.getText().toString(),
                    ed3.getText().toString(),
                    ed4.getText().toString(),
                    ed5.getText().toString());
                if (isInserted==true)
                    Toast.makeText(MainActivity.this, "Data Inserted",
                        Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "Data not Inserted",
                        Toast.LENGTH_SHORT).show();
            }
        });
    }
}

```

```

    }
    });

    bt4.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Cursor res=myDb.displayData();
            if (res.getCount()==0){
                showMessage("Error","No Data Found... ");
                return;
            }
            StringBuffer buffer=new StringBuffer();
            while (res.moveToNext()){ //res iterate
                buffer.append("Id :"+res.getString(0)+"\n");
                //0 is pointing to 1st col of table
                buffer.append("Name :"+res.getString(1)+"\n");
                buffer.append("Branch :"+res.getString(2)+"\n");
                buffer.append("Game :"+res.getString(3)+"\n");
                buffer.append("GoldMedal :"+res.getString(4)+"\n");
            }
            showMessage("Data",buffer.toString());
        }
    });

    bt5.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Cursor r=myDb.countData();
            if (r.getCount()==0){
                showMessage("error","data not found");
            }
            showMessage("Count",String.valueOf(r.getCount()));
        }
    });

}

private void showMessage(String title, String Message){
    AlertDialog.Builder builder=new AlertDialog.Builder(this);
    builder.setCancelable(true);
    builder.setTitle(title);
    builder.setMessage(Message);
    builder.show();
}
}

```

3.SQLiteHelper.java:

```

package com.example.sqlite;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import androidx.annotation.Nullable;

public class SQLite_helper extends SQLiteOpenHelper {
    //click on bulb implement->2methods->ok

```

```

//again click on bulb->create constructor->1st 1 by default ->ok
public static final String DATABASE_NAME="STUDENT.db";
public static final String TABLE_NAME="STUDENT_table";
public static final String col_1="ID";
public static final String col_2="NAME";
public static final String col_3="BRANCH";
public static final String col_4="GAME";
public static final String col_5="GOLDMEDALS";
public SQLite_helper(@Nullable Context context) {
    super(context,DATABASE_NAME , null, 1); //remove
name,factory,version inside()
}
@Override
public void onCreate(SQLiteDatabase sqLiteDatabase) {
    //CREATION OF TABLE
    sqLiteDatabase.execSQL("create table "+TABLE_NAME+"(ID INT PRIMARY
KEY,NAME TEXT,BRANCH TEXT,GAME TEXT,GOLDMEDALS INT)"); //executesQL create
table (space) +table name
    //if id is auto-increment no need to pass id, during insertion we
hv take other 3
}

@Override
public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int il) {
    //IF ALREADY TABLE EXIST DROP TABLE AND CREATE TABLE (on create)
    sqLiteDatabase.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);
    onCreate(sqLiteDatabase);
}

public boolean insertData (String id,String name,String branch,String
game,String gold_medal){
    SQLiteDatabase sqLiteDatabase=this.getWritableDatabase();
    //for insertion,update,delete, we hv open in writable mode must n
should
    ContentValues contentValues =new ContentValues();
    contentValues.put(col_1,id);
    contentValues.put(col_2,name);
    contentValues.put(col_3,branch);
    contentValues.put(col_4,game);
    contentValues.put(col_5,gold_medal);

    //to push these values .insert
    long result=sqLiteDatabase.insert(TABLE_NAME,null,contentValues);
    //after insertion it will written some +ve no
    if (result==-1)
        return false;
    else
        return true;
}

public Cursor displayData(){
    SQLiteDatabase sqLiteDatabase=this.getWritableDatabase();
    Cursor res=sqLiteDatabase.rawQuery("Select * from
"+TABLE_NAME,null);
    return res;
}

public Cursor countData(){
    SQLiteDatabase sqLiteDatabase=this.getWritableDatabase();
    Cursor r=sqLiteDatabase.rawQuery("Select * from "+TABLE_NAME+
where "+col_5+" >=3",null);

```

```

        return r;

    }

}

```

4.output:

