MT

Slip 1 :

Create table Customer (id, name, address, phno). Create an Android Application for performing the following operation on the table. (using sqlite database)

i) Insert New Customer Details

. ii) Show All the Customer Details

MainActivity.java

public class MainActivity extends AppCompatActivity {

DatabaseHelper myDb;

EditText editName,editSurname,editMarks ,editTextId;

Button btnAddData;

Button btnviewAll;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

myDb = new DatabaseHelper(this);

editName = (EditText)findViewById(R.id.editText\_name);

editSurname = (EditText)findViewById(R.id.editText\_surname);

editMarks = (EditText)findViewById(R.id.editText\_Marks);

btnAddData = (Button)findViewById(R.id.button\_add);

btnviewAll = (Button)findViewById(R.id.button\_viewAll);

AddData();

viewAll();

}

public void AddData() {

btnAddData.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

boolean isInserted = myDb.insertData(

editName.getText().toString(),

editSurname.getText().toString(),

editMarks.getText().toString() );

if(isInserted == true)

Toast.makeText(MainActivity.this,"Data Inserted",Toast.LENGTH\_LONG).show();

else

Toast.makeText(MainActivity.this,"Data not Inserted",Toast.LENGTH\_LONG).show();

}

}

);

}

public void viewAll() {

btnviewAll.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

Cursor res = myDb.getAllData();

if(res.getCount() == 0) {

// show message

showMessage("Error","Nothing found");

return;

}

StringBuffer buffer = new StringBuffer();

while (res.moveToNext()) {

buffer.append("Id :"+ res.getString(0)+"\n");

buffer.append("Name :"+ res.getString(1)+"\n");

buffer.append("Surname :"+ res.getString(2)+"\n");

buffer.append("Marks :"+ res.getString(3)+"\n\n");

}

// Show all data

showMessage("Data",buffer.toString());

}

}

);

}

public void showMessage(String title,String Message){

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setCancelable(true);

builder.setTitle(title);

builder.setMessage(Message);

builder.show();

}

}

databaseHelper.java

class DatabaseHelper extends SQLiteOpenHelper {

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 = "SURNAME";

public static final String COL\_4 = "MARKS";

public DatabaseHelper(Context context) {

super(context, DATABASE\_NAME, null, 1);

}

@Override

public void onCreate(SQLiteDatabase db) {

db.execSQL("create table " + TABLE\_NAME +" " +

"(ID INTEGER PRIMARY KEY AUTOINCREMENT," +

"NAME TEXT,SURNAME TEXT,MARKS INTEGER)");

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

db.execSQL("DROP TABLE IF EXISTS "+TABLE\_NAME);

onCreate(db);

}

public boolean insertData(String name,String surname,

String marks) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put(COL\_2,name);

contentValues.put(COL\_3,surname);

contentValues.put(COL\_4,marks);

long result = db.insert(TABLE\_NAME,

null ,

contentValues);

if(result == -1)

return false;

else

return true;

}

public Cursor getAllData() {

SQLiteDatabase db = this.getWritableDatabase();

Cursor res = db.rawQuery("select \* from "

+TABLE\_NAME,null);

return res;

}

}

Xml

<?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"

tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Name"

android:id="@+id/textView"

android:layout\_alignParentTop="true"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Surname"

android:id="@+id/textView2"

android:layout\_below="@+id/editText\_name"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Marks"

android:id="@+id/textView3"

android:layout\_below="@+id/editText\_surname"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_name"

android:layout\_alignTop="@+id/textView"

android:layout\_toRightOf="@+id/textView"

android:layout\_toEndOf="@+id/textView" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_surname"

android:layout\_alignTop="@+id/textView2"

android:layout\_toRightOf="@+id/textView2"

android:layout\_toEndOf="@+id/textView2" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_Marks"

android:layout\_below="@+id/editText\_surname"

android:layout\_toRightOf="@+id/textView3"

android:layout\_toEndOf="@+id/textView3" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Add Data"

android:id="@+id/button\_add"

android:layout\_below="@+id/editText\_Marks"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true"

android:layout\_marginTop="76dp" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="View All"

android:id="@+id/button\_viewAll"

android:layout\_above="@+id/button\_update"

android:layout\_centerHorizontal="true" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Update"

android:id="@+id/button\_update"

android:layout\_below="@+id/button\_add"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Delete"

android:id="@+id/button\_delete"

android:layout\_centerVertical="true"

android:layout\_below="@+id/button\_viewAll"

android:layout\_alignLeft="@+id/button\_viewAll"

android:layout\_alignStart="@+id/button\_viewAll" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="id"

android:id="@+id/textView\_id"

android:layout\_below="@+id/editText\_Marks"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_id"

android:layout\_alignTop="@+id/textView\_id"

android:layout\_toRightOf="@+id/textView3"

android:layout\_toEndOf="@+id/textView3" />

</RelativeLayout>

Slip 2:

A) Create an Android Application that will change color of the screen and change the font size of text view using 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"

android:background="#FFEB3B"

tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Hello World!"

android:textSize="50dp"

android:textColor="#F44336"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintLeft\_toLeftOf="parent"

app:layout\_constraintRight\_toRightOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

Slip 3:

**Slip 4 :**

**A) Create a Simple Android Application Which Send ―Hello‖ message from one activity to another with help of Button (Use Intent).**

**MainActivity.java**

public class MainActivity extends AppCompatActivity {

Button b1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

b1 = (Button)findViewById(R.id.btn);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

Intent i = new Intent(getApplicationContext(),Main2Activity.class);

i.putExtra("val","Hello");

startActivity(i);

}

});

}

}

**Main2Activity.java**

**public class Main2Activity extends AppCompatActivity {**

**TextView tv;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main2);**

**tv = (TextView)findViewById(R.id.textView);**

**Bundle extras = getIntent().getExtras();**

**String s = extras.getString("val");**

**tv.setText(s);**

**}**

**}**

**Activitymain.xml**

**Insert Button with text send**

**Activity<?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">**

**<Button**

**android:id="@+id/btn"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Send"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.34"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.218" />**

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

**main2.xml**

**Insert textview**

**<?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=".Main2Activity">**

**<TextView**

**android:id="@+id/textView"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.437"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.23" />**

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

**Slip 5:**

**A) Write an Android Program to Change the Image Displayed on the Screen**

**public class MainActivity extends AppCompatActivity {**

**private ImageSwitcher sw;**

**private Button pr1,nx1;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**sw = findViewById(R.id.imgsw);**

**pr1 = findViewById(R.id.pr);**

**nx1 = findViewById(R.id.nx);**

**sw.setFactory(new ViewSwitcher.ViewFactory() {**

**@Override**

**public View makeView() {**

**ImageView imageView = new ImageView**

**(getApplicationContext());**

**imageView.setScaleType(ImageView.ScaleType.FIT\_CENTER);**

**return imageView;**

**}**

**});**

**pr1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**sw.setImageResource(R.drawable.im1);**

**}**

**});**

**nx1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**sw.setImageResource(R.drawable.im2);**

**}**

**});**

**}**

**}**

**Xml**

**<?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"**

**tools:context=".MainActivity">**

**<ImageSwitcher**

**android:id="@+id/imgsw"**

**android:layout\_centerVertical="true"**

**android:layout\_centerHorizontal="true"**

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent">**

**</ImageSwitcher>**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentBottom="true"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true"**

**android:text="Prev"**

**android:id="@+id/pr"/>**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentBottom="true"**

**android:layout\_alignParentRight="true"**

**android:layout\_alignParentEnd="true"**

**android:text="Next"**

**android:id = "@+id/nx"/>**

**</RelativeLayout>**

**Slip 6 :**

**A) Write an Android code to complete the following Array/List operations 1. Union 2. Intersection**

**public class MainActivity extends AppCompatActivity {**

**TextView l1,l2;**

**RadioGroup rg;**

**RadioButton rbutton1,rbutton2;**

**ArrayList<String> firstlist = new ArrayList<String>();**

**ArrayList<String> secondlist = new ArrayList<String>();**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**l1 = (TextView)findViewById(R.id.list1);**

**l2 = (TextView)findViewById(R.id.list2);**

**rg = (RadioGroup)findViewById(R.id.rg1);**

**firstlist.add("a");**

**firstlist.add("b");**

**firstlist.add("c");**

**firstlist.add("d");**

**secondlist.add("x");**

**secondlist.add("y");**

**secondlist.add("g");**

**secondlist.add("a");**

**l1.setText(firstlist.toString());**

**l2.setText(secondlist.toString());**

**rg.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {**

**@Override**

**public void onCheckedChanged(RadioGroup group, int checkedId) {**

**int selected=rg.getCheckedRadioButtonId();**

**rbutton1=(RadioButton)findViewById(selected);**

**if(rbutton1.getText().toString().equals("intersection")){**

**HashSet<String> inter = new HashSet<String>(firstlist);**

**inter.retainAll(secondlist);**

**Toast.makeText(MainActivity.this, inter.toString(), Toast.LENGTH\_SHORT).show();**

**}**

**else if(rbutton1.getText().toString().equals("union")){**

**HashSet<String> union = new HashSet<String>(firstlist);**

**union.addAll(secondlist);**

**Toast.makeText(MainActivity.this, union.toString(), Toast.LENGTH\_SHORT).show();**

**}**

**}**

**});**

**}**

**}**

**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">**

**<TextView**

**android:id="@+id/list1"**

**android:layout\_width="112dp"**

**android:layout\_height="29dp"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.548"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.105" />**

**<TextView**

**android:id="@+id/list2"**

**android:layout\_width="112dp"**

**android:layout\_height="20dp"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.548"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/list1"**

**app:layout\_constraintVertical\_bias="0.105" />**

**<RadioGroup**

**android:layout\_width="140dp"**

**android:layout\_height="108dp"**

**android:id="@+id/rg1"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.553"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/list2"**

**app:layout\_constraintVertical\_bias="0.128" >**

**<RadioButton**

**android:id="@+id/r1"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:text="intersection" />**

**<RadioButton**

**android:id="@+id/r2"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:text="union" />**

**</RadioGroup>**

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

**B) Java Android Program to demonstrate login form with validation.**

**public class MainActivity extends AppCompatActivity {**

**EditText username,password;**

**Button loginButton;**

**String user = "ss";**

**String pass = "ss";**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**username = (EditText)findViewById(R.id.activity\_main\_usernameEditText);**

**password = (EditText)findViewById(R.id.activity\_main\_passwordEditText);**

**loginButton = (Button)findViewById(R.id.activity\_main\_loginButton);**

**loginButton.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**if(user.equals(username.getText().toString())&& pass.equals(password.getText().toString()))**

**{**

**Toast.makeText(MainActivity.this, "Login Successful", Toast.LENGTH\_SHORT).show();**

**}**

**else**

**{**

**Toast.makeText(MainActivity.this, "Invaild Username & Passward", Toast.LENGTH\_SHORT).show();**

**}**

**}**

**});**

**}**

**}**

**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="wrap\_content"**

**android:orientation="vertical"**

**android:padding="24dp">**

**<TextView**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:text="@string/login\_form\_title"**

**android:textSize="36sp"**

**android:textAlignment="center"**

**android:layout\_gravity="center\_horizontal" />**

**<TextView**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:textSize="22sp"**

**android:text="@string/login\_form\_username" />**

**<EditText**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:inputType="text"**

**android:id="@+id/activity\_main\_usernameEditText" />**

**<TextView**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:textSize="22sp"**

**android:text="@string/login\_form\_password" />**

**<EditText**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:inputType="textPassword"**

**android:id="@+id/activity\_main\_passwordEditText" />**

**<Button**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/activity\_main\_loginButton"**

**android:text="@string/login\_form\_login"**

**android:textSize="22sp"/>**

**</LinearLayout>**

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

**Slip 8 :**

**A) Write an Android program to read 5 numbers and print the sum of all**

**public class MainActivity extends AppCompatActivity {**

**Button b1,b2;**

**TextView tv;**

**EditText eno;**

**List<Integer> arrayList = new ArrayList<Integer>();**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**b1 = (Button)findViewById(R.id.btn);**

**b2 = (Button)findViewById(R.id.btn2);**

**eno = (EditText)findViewById(R.id.no);**

**tv = (TextView)findViewById(R.id.textView);**

**b1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**int n = Integer.parseInt(eno.getText().toString());**

**arrayList.add(n);**

**eno.setText("");**

**}**

**});**

**b2.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**double sum = 0;**

**for(int i=0;i<arrayList.size();i++){**

**sum += (double)arrayList.get(i);**

**}**

**tv.setText(" "+sum);**

**}**

**});**

**}**

**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">**

**<EditText**

**android:id="@+id/no"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:ems="10"**

**android:inputType="textPersonName"**

**android:text="Name"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.091" />**

**<Button**

**android:id="@+id/btn"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Add"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.498"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/no"**

**app:layout\_constraintVertical\_bias="0.067" />**

**<TextView**

**android:id="@+id/textView"**

**android:layout\_width="103dp"**

**android:layout\_height="38dp"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/btn"**

**app:layout\_constraintVertical\_bias="0.111" />**

**<Button**

**android:id="@+id/btn2"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Calculate"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.498"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/textView"**

**app:layout\_constraintVertical\_bias="0.205" />**

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

**B) Create a Notification in Android and display the notification message on second activity**

**mainActivity.java**

**public class MainActivity extends AppCompatActivity {**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**}**

**public void showNotification(View view) {**

**NotificationManager mNotimanager =**

**(NotificationManager)**

**getSystemService(NOTIFICATION\_SERVICE);**

**if(Build.VERSION.SDK\_INT >= Build.VERSION\_CODES.O)**

**{**

**NotificationChannel mChannel = new NotificationChannel**

**("default",**

**"MyNotification App Channel",**

**NotificationManager.IMPORTANCE\_DEFAULT);**

**mChannel.setDescription("This Channel Shows Default Notification");**

**mNotimanager.createNotificationChannel(mChannel);**

**}**

**Intent intent = new Intent(this,**

**Main2Activity.class);**

**PendingIntent pd = PendingIntent.getActivity(this,**

**1,intent,PendingIntent.FLAG\_UPDATE\_CURRENT);**

**NotificationCompat.Builder mNotification =**

**new NotificationCompat.Builder(this,"default");**

**mNotification.setContentTitle("1 New Message");**

**mNotification.setContentText("Hi, How are you?");**

**mNotification.setSmallIcon(R.mipmap.ic\_launcher);**

**mNotification.setAutoCancel(true);**

**mNotification.setContentIntent(pd);**

**mNotimanager.notify(1,mNotification.build());**

**}**

**}**

**main2Activity.java**

**package com.example.notification;**

**import androidx.appcompat.app.AppCompatActivity;**

**import android.os.Bundle;**

**public class Main2Activity extends AppCompatActivity {**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main2);**

**}**

**}**

**Activity\_main.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">**

**<Button**

**android:id="@+id/button"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginBottom="8dp"**

**android:layout\_marginEnd="8dp"**

**android:layout\_marginStart="8dp"**

**android:layout\_marginTop="8dp"**

**android:text="Show Notification"**

**android:onClick="showNotification"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.116" />**

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

**Activity\_main2.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=".Main2Activity">**

**<TextView**

**android:id="@+id/textView"**

**android:layout\_width="112dp"**

**android:layout\_height="42dp"**

**android:layout\_marginBottom="8dp"**

**android:layout\_marginEnd="8dp"**

**android:layout\_marginStart="8dp"**

**android:layout\_marginTop="8dp"**

**android:text="WelCome to Second Activity"**

**android:textColor="@color/colorPrimaryDark"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.085" />**

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

**Slip 9 :**

**B) Write an Android Application to demonstrate Alert Dialog Box**

**public class MainActivity extends AppCompatActivity {**

**Button closeButton;**

**AlertDialog.Builder builder;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**closeButton = (Button) findViewById(R.id.button);**

**builder = new AlertDialog.Builder(this);**

**closeButton.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**//Setting message manually and performing action on button click**

**builder.setMessage("Do you want to close this application ?")**

**.setCancelable(false)**

**.setPositiveButton("Yes",**

**new DialogInterface.OnClickListener() {**

**public void onClick(DialogInterface dialog, int id) {**

**finish();**

**Toast.makeText(getApplicationContext(),"you choose yes action for alertbox",**

**Toast.LENGTH\_SHORT).show();**

**}**

**})**

**.setNegativeButton("No", new DialogInterface.OnClickListener() {**

**public void onClick(DialogInterface dialog, int id) {**

**// Action for 'NO' Button**

**dialog.cancel();**

**Toast.makeText(getApplicationContext(),"you choose no action for alertbox",**

**Toast.LENGTH\_SHORT).show();**

**}**

**});**

**//Creating dialog box**

**AlertDialog alert = builder.create();**

**//Setting the title manually**

**alert.setTitle("AlertDialog");**

**alert.show();**

**}**

**});**

**}**

**}**

**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">**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/button"**

**android:text="Close app"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintLeft\_toLeftOf="parent"**

**app:layout\_constraintRight\_toRightOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent" />**

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

**Slip 10 :**

**A) Create an Android Application to display satellite view of current location using Google Map**

**public class MapsActivity extends FragmentActivity implements OnMapReadyCallback {**

**private GoogleMap mMap;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_maps);**

**// Obtain the SupportMapFragment and get notified when the map is ready to be used.**

**SupportMapFragment mapFragment = (SupportMapFragment) getSupportFragmentManager()**

**.findFragmentById(R.id.map);**

**mapFragment.getMapAsync(this);**

**}**

**/\*\***

**\* Manipulates the map once available.**

**\* This callback is triggered when the map is ready to be used.**

**\* This is where we can add markers or lines, add listeners or move the camera. In this case,**

**\* we just add a marker near Sydney, Australia.**

**\* If Google Play services is not installed on the device, the user will be prompted to install**

**\* it inside the SupportMapFragment. This method will only be triggered once the user has**

**\* installed Google Play services and returned to the app.**

**\*/**

**@Override**

**public void onMapReady(GoogleMap googleMap) {**

**mMap = googleMap;**

**// Add a marker in Sydney and move the camera**

**LatLng sydney = new LatLng(-34, 151);**

**mMap.addMarker(new MarkerOptions().position(sydney).title("Marker in Sydney"));**

**mMap.moveCamera(CameraUpdateFactory.newLatLng(sydney));**

**}**

**}**

**Xml**

**<?xml version="1.0" encoding="utf-8"?>**

**<fragment xmlns:android="http://schemas.android.com/apk/res/android"**

**xmlns:map="http://schemas.android.com/apk/res-auto"**

**xmlns:tools="http://schemas.android.com/tools"**

**android:id="@+id/map"**

**android:name="com.google.android.gms.maps.SupportMapFragment"**

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent"**

**tools:context=".MapsActivity" />**

**B) Construct an Android Application to display the images using ImageSwitcher**

**public class MainActivity extends AppCompatActivity {**

**Button pr1,nx1;**

**ImageSwitcher sw;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**sw = (ImageSwitcher)findViewById(R.id.imgsw);**

**pr1 = (Button)findViewById(R.id.pr);**

**nx1 = (Button)findViewById(R.id.nx);**

**sw.setFactory(new ViewSwitcher.ViewFactory() {**

**@Override**

**public View makeView() {**

**ImageView imageView = new ImageView(getApplicationContext());**

**imageView.setScaleType(ImageView.ScaleType.FIT\_CENTER);**

**return imageView;**

**}**

**});**

**pr1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**sw.setImageResource(R.drawable.im1);**

**}**

**});**

**nx1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**sw.setImageResource(R.drawable.im2);**

**}**

**});**

**}**

**}**

**Xml**

**<?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"**

**tools:context=".MainActivity">**

**<ImageSwitcher**

**android:id="@+id/imgsw"**

**android:layout\_centerVertical="true"**

**android:layout\_centerHorizontal="true"**

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent">**

**</ImageSwitcher>**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentBottom="true"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true"**

**android:text="Prev"**

**android:id="@+id/pr"/>**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentBottom="true"**

**android:layout\_alignParentRight="true"**

**android:layout\_alignParentEnd="true"**

**android:text="Next"**

**android:id = "@+id/nx"/>**

**</RelativeLayout>**

**Slip 11:**

**Slip 12 :  
A) Write an Android program to perform Zoom In, Zoom Out operation and display Satellite view, on Google Mappublic class MapsActivity extends FragmentActivity implements OnMapReadyCallback {**

**private GoogleMap mMap;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_maps);**

**// Obtain the SupportMapFragment and get notified when the map is ready to be used.**

**SupportMapFragment mapFragment = (SupportMapFragment) getSupportFragmentManager()**

**.findFragmentById(R.id.map);**

**mapFragment.getMapAsync(this);**

**}**

**/\*\***

**\* Manipulates the map once available.**

**\* This callback is triggered when the map is ready to be used.**

**\* This is where we can add markers or lines, add listeners or move the camera. In this case,**

**\* we just add a marker near Sydney, Australia.**

**\* If Google Play services is not installed on the device, the user will be prompted to install**

**\* it inside the SupportMapFragment. This method will only be triggered once the user has**

**\* installed Google Play services and returned to the app.**

**\*/**

**@Override**

**public void onMapReady(GoogleMap googleMap) {**

**mMap = googleMap;**

**// Add a marker in Sydney and move the camera**

**LatLng sydney = new LatLng(-34, 151);**

**mMap.addMarker(new MarkerOptions().position(sydney).title("Marker in Sydney"));**

**mMap.moveCamera(CameraUpdateFactory.newLatLng(sydney));**

**}**

**}**

**Xml**

**<?xml version="1.0" encoding="utf-8"?>**

**<fragment xmlns:android="http://schemas.android.com/apk/res/android"**

**xmlns:tools="http://schemas.android.com/tools"**

**xmlns:map="http://schemas.android.com/apk/res-auto"**

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent"**

**android:id="@+id/map"**

**tools:context=".MapsActivity"**

**android:name="com.google.android.gms.maps.SupportMapFragment"/>**

**B) Create an Android application, where the user can enter player name and points in one view and display it in another view.**

**Slip 13:**

**B) Create table Company (id, name, address, phno). Create Android Application for performing the following operation on the table.(using sqlite database) i) Insert New Company Details. ii) Show All the Company Details.**

MainActivity.java

public class MainActivity extends AppCompatActivity {

DatabaseHelper myDb;

EditText editName,editSurname,editMarks ,editTextId;

Button btnAddData;

Button btnviewAll;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

myDb = new DatabaseHelper(this);

editName = (EditText)findViewById(R.id.editText\_name);

editSurname = (EditText)findViewById(R.id.editText\_surname);

editMarks = (EditText)findViewById(R.id.editText\_Marks);

btnAddData = (Button)findViewById(R.id.button\_add);

btnviewAll = (Button)findViewById(R.id.button\_viewAll);

AddData();

viewAll();

}

public void AddData() {

btnAddData.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

boolean isInserted = myDb.insertData(

editName.getText().toString(),

editSurname.getText().toString(),

editMarks.getText().toString() );

if(isInserted == true)

Toast.makeText(MainActivity.this,"Data Inserted",Toast.LENGTH\_LONG).show();

else

Toast.makeText(MainActivity.this,"Data not Inserted",Toast.LENGTH\_LONG).show();

}

}

);

}

public void viewAll() {

btnviewAll.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

Cursor res = myDb.getAllData();

if(res.getCount() == 0) {

// show message

showMessage("Error","Nothing found");

return;

}

StringBuffer buffer = new StringBuffer();

while (res.moveToNext()) {

buffer.append("Id :"+ res.getString(0)+"\n");

buffer.append("Name :"+ res.getString(1)+"\n");

buffer.append("Surname :"+ res.getString(2)+"\n");

buffer.append("Marks :"+ res.getString(3)+"\n\n");

}

// Show all data

showMessage("Data",buffer.toString());

}

}

);

}

public void showMessage(String title,String Message){

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setCancelable(true);

builder.setTitle(title);

builder.setMessage(Message);

builder.show();

}

}

databaseHelper.java

class DatabaseHelper extends SQLiteOpenHelper {

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 = "SURNAME";

public static final String COL\_4 = "MARKS";

public DatabaseHelper(Context context) {

super(context, DATABASE\_NAME, null, 1);

}

@Override

public void onCreate(SQLiteDatabase db) {

db.execSQL("create table " + TABLE\_NAME +" " +

"(ID INTEGER PRIMARY KEY AUTOINCREMENT," +

"NAME TEXT,SURNAME TEXT,MARKS INTEGER)");

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

db.execSQL("DROP TABLE IF EXISTS "+TABLE\_NAME);

onCreate(db);

}

public boolean insertData(String name,String surname,

String marks) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put(COL\_2,name);

contentValues.put(COL\_3,surname);

contentValues.put(COL\_4,marks);

long result = db.insert(TABLE\_NAME,

null ,

contentValues);

if(result == -1)

return false;

else

return true;

}

public Cursor getAllData() {

SQLiteDatabase db = this.getWritableDatabase();

Cursor res = db.rawQuery("select \* from "

+TABLE\_NAME,null);

return res;

}

}

**Xml**

**<?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"**

**tools:context=".MainActivity">**

**<TextView**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:textAppearance="?android:attr/textAppearanceLarge"**

**android:text="Name"**

**android:id="@+id/textView"**

**android:layout\_alignParentTop="true"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true" />**

**<TextView**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:textAppearance="?android:attr/textAppearanceLarge"**

**android:text="Surname"**

**android:id="@+id/textView2"**

**android:layout\_below="@+id/editText\_name"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true" />**

**<TextView**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:textAppearance="?android:attr/textAppearanceLarge"**

**android:text="Marks"**

**android:id="@+id/textView3"**

**android:layout\_below="@+id/editText\_surname"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true" />**

**<EditText**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/editText\_name"**

**android:layout\_alignTop="@+id/textView"**

**android:layout\_toRightOf="@+id/textView"**

**android:layout\_toEndOf="@+id/textView" />**

**<EditText**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/editText\_surname"**

**android:layout\_alignTop="@+id/textView2"**

**android:layout\_toRightOf="@+id/textView2"**

**android:layout\_toEndOf="@+id/textView2" />**

**<EditText**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/editText\_Marks"**

**android:layout\_below="@+id/editText\_surname"**

**android:layout\_toRightOf="@+id/textView3"**

**android:layout\_toEndOf="@+id/textView3" />**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Add Data"**

**android:id="@+id/button\_add"**

**android:layout\_below="@+id/editText\_Marks"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true"**

**android:layout\_marginTop="76dp" />**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="View All"**

**android:id="@+id/button\_viewAll"**

**android:layout\_above="@+id/button\_update"**

**android:layout\_centerHorizontal="true" />**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Update"**

**android:id="@+id/button\_update"**

**android:layout\_below="@+id/button\_add"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true" />**

**<Button**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Delete"**

**android:id="@+id/button\_delete"**

**android:layout\_centerVertical="true"**

**android:layout\_below="@+id/button\_viewAll"**

**android:layout\_alignLeft="@+id/button\_viewAll"**

**android:layout\_alignStart="@+id/button\_viewAll" />**

**<TextView**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:textAppearance="?android:attr/textAppearanceLarge"**

**android:text="id"**

**android:id="@+id/textView\_id"**

**android:layout\_below="@+id/editText\_Marks"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true" />**

**<EditText**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/editText\_id"**

**android:layout\_alignTop="@+id/textView\_id"**

**android:layout\_toRightOf="@+id/textView3"**

**android:layout\_toEndOf="@+id/textView3" />**

**</RelativeLayout>**

**Slip 14 :**

**A) Construct an Android app that toggles a light bulb on and off when the user clicks on toggle button**

**public class MainActivity extends AppCompatActivity {**

**private ToggleButton toggleButton1, toggleButton2;**

**private Button buttonSubmit;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**addListenerOnButtonClick();**

**}**

**private void addListenerOnButtonClick() {**

**toggleButton1 = (ToggleButton) findViewById(R.id.toggleButton);**

**toggleButton2 = (ToggleButton) findViewById(R.id.toggleButton2);**

**buttonSubmit = (Button) findViewById(R.id.button);**

**//Performing action on button click**

**buttonSubmit.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View view) {**

**StringBuilder result = new StringBuilder();**

**result.append("ToggleButton1 : ").append(**

**toggleButton1.getText());**

**result.append("\nToggleButton2 : ").append(toggleButton2.getText());**

**//Displaying the message in toast**

**Toast.makeText(getApplicationContext(), result.toString(), Toast.LENGTH\_LONG).show();**

**}**

**});**

**}**

**}**

**Xml**

**<?xml version="1.0" encoding="utf-8"?>**

**<android.support.constraint.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">**

**<ToggleButton**

**android:id="@+id/toggleButton"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginLeft="8dp"**

**android:layout\_marginTop="80dp"**

**android:text="ToggleButton"**

**android:textOff="Off"**

**android:textOn="On"**

**app:layout\_constraintEnd\_toStartOf="@+id/toggleButton2"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent" />**

**<ToggleButton**

**android:id="@+id/toggleButton2"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginRight="60dp"**

**android:layout\_marginTop="80dp"**

**android:text="ToggleButton"**

**android:textOff="Off"**

**android:textOn="On"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent" />**

**<Button**

**android:id="@+id/button"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginBottom="144dp"**

**android:layout\_marginLeft="148dp"**

**android:text="Submit"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent" />**

**</android.support.constraint.ConstraintLayout>**

**Slip 15:**

**A) Write an Android code to merge given two Array/List**

**public class MainActivity extends AppCompatActivity {**

**TextView tlist1,tlist2,tmlist;**

**Button bmerge;**

**ArrayList<String> firstlist = new ArrayList<String>();**

**ArrayList<String> secondlist = new ArrayList<String>();**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**tlist1 = (TextView)findViewById(R.id.List1);**

**tlist2 = (TextView)findViewById(R.id.List2);**

**bmerge = (Button)findViewById(R.id.submit);**

**tmlist = (TextView)findViewById(R.id.mlist);**

**firstlist.add("a");**

**firstlist.add("b");**

**firstlist.add("c");**

**firstlist.add("d");**

**secondlist.add("x");**

**secondlist.add("y");**

**secondlist.add("g");**

**secondlist.add("a");**

**tlist1.setText(firstlist.toString());**

**tlist2.setText(secondlist.toString());**

**bmerge.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ArrayList<String> union = new ArrayList<>(firstlist);**

**union.addAll(secondlist);**

**tmlist.setText(union.toString());**

**}**

**});**

**}**

**}**

**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">**

**<TextView**

**android:id="@+id/l1"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="List 1"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintEnd\_toStartOf="@+id/List1"**

**app:layout\_constraintHorizontal\_bias="0.44"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.165" />**

**<TextView**

**android:id="@+id/List1"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginEnd="100dp"**

**android:layout\_marginRight="100dp"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.5"**

**app:layout\_constraintStart\_toEndOf="@+id/List2"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.165" />**

**<TextView**

**android:id="@+id/textView9"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginBottom="512dp"**

**android:text="List 2"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toStartOf="@+id/List2"**

**app:layout\_constraintHorizontal\_bias="0.49"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/List2"**

**app:layout\_constraintVertical\_bias="0.099" />**

**<TextView**

**android:id="@+id/List2"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.5"**

**app:layout\_constraintStart\_toEndOf="@+id/textView9"**

**app:layout\_constraintTop\_toBottomOf="@+id/List1"**

**app:layout\_constraintVertical\_bias="0.107" />**

**<TextView**

**android:id="@+id/textView11"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="MergeList"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toStartOf="@+id/mlist"**

**app:layout\_constraintHorizontal\_bias="0.485"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/textView9"**

**app:layout\_constraintVertical\_bias="0.108" />**

**<TextView**

**android:id="@+id/mlist"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.5"**

**app:layout\_constraintStart\_toEndOf="@+id/textView11"**

**app:layout\_constraintTop\_toBottomOf="@+id/List2"**

**app:layout\_constraintVertical\_bias="0.108" />**

**<Button**

**android:id="@+id/submit"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Merge"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.5"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent" />**

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

**B) Write an Android Application to send Email.**

**public class MainActivity extends AppCompatActivity {**

**private EditText mEdittxtTo,mEdittxtsubject,mEdittxtmessage;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**mEdittxtTo = findViewById(R.id.edit\_text\_to);**

**mEdittxtsubject = findViewById(R.id.edit\_text\_subject);**

**mEdittxtmessage = findViewById(R.id.edit\_text\_message);**

**Button buttonsend = findViewById(R.id.button\_send);**

**buttonsend.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**sendMail();**

**}**

**});**

**}**

**private void sendMail()**

**{**

**String recipientList = mEdittxtTo.getText().toString();**

**String[] recipient = recipientList.split(",");**

**String subject = mEdittxtsubject.getText().toString();**

**String message = mEdittxtmessage.getText().toString();**

**Intent intent = new Intent(Intent.ACTION\_SEND);**

**intent.putExtra(Intent.EXTRA\_EMAIL,recipient);**

**intent.putExtra(Intent.EXTRA\_SUBJECT,subject);**

**intent.putExtra(Intent.EXTRA\_TEXT,message);**

**intent.setType("message/rfc822");**

**startActivity(Intent.createChooser(intent,"Choose an email client"));**

**}**

**}**

**Xml**

**<?xml version="1.0" encoding="utf-8"?>**

**<LinearLayout 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:orientation="vertical"**

**android:padding="16dp"**

**tools:context=".MainActivity">**

**<TextView**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:textAppearance="@style/TextAppearance.AppCompat.Large"**

**android:text="To:"**

**/>**

**<EditText**

**android:id="@+id/edit\_text\_to"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:inputType="textEmailAddress" />**

**<TextView**

**android:layout\_width="match\_parent"**

**android:layout\_height="26dp"**

**android:text="Subject:"**

**android:textAppearance="@style/TextAppearance.AppCompat.Large"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**tools:layout\_editor\_absoluteY="62dp" />**

**<EditText**

**android:id="@+id/edit\_text\_subject"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:inputType="textEmailSubject"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**tools:layout\_editor\_absoluteY="76dp" />**

**<TextView**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:text="Message:"**

**android:textAppearance="@style/TextAppearance.AppCompat.Large"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**tools:layout\_editor\_absoluteY="106dp" />**

**<EditText**

**android:id="@+id/edit\_text\_message"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:gravity="start|top"**

**android:lines="10"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**tools:layout\_editor\_absoluteX="3dp" />**

**<Button**

**android:id="@+id/button\_send"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:text="send"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**tools:layout\_editor\_absoluteY="428dp" />**

**</LinearLayout>**

**Slip 16 :**

**A) Create a Simple Android Application Which Send ―Hello‖ message from one activity to another with help of Button (Use Intent).**

**mainActivity**

**public class MainActivity extends AppCompatActivity {**

**Button b1;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**b1 = (Button)findViewById(R.id.btn);**

**b1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**Intent i = new Intent(getApplicationContext(),Main2Activity.class);**

**i.putExtra("val","Hello");**

**startActivity(i);**

**}**

**});**

**}**

**}**

**main2Activity**

**public class Main2Activity extends AppCompatActivity {**

**TextView tv;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main2);**

**tv = (TextView)findViewById(R.id.textView);**

**Bundle extras = getIntent().getExtras();**

**String s = extras.getString("val");**

**tv.setText(s);**

**}**

**}**

**Activity\_main.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">**

**<Button**

**android:id="@+id/btn"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Send"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.34"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.218" />**

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

**Activity\_main2.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=".Main2Activity">**

**<TextView**

**android:id="@+id/textView"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="TextView"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.437"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.23" />**

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

**Slip 18:  
A) Write an Android Program to Demonstrate Date Picker Dialog in Android**

**public class MainActivity extends AppCompatActivity {**

**public DatePicker datePicker;**

**public Calendar calendar;**

**public TextView dateView;**

**public int year, m, day;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**dateView = (TextView) findViewById(R.id.textView3);**

**calendar = Calendar.getInstance();**

**year = calendar.get(Calendar.YEAR);**

**m = calendar.get(Calendar.MONTH);**

**day = calendar.get(Calendar.DAY\_OF\_MONTH);**

**showDate(year, m+1, day);**

**}**

**@SuppressWarnings("deprecation")**

**public void setDate(View view) {**

**showDialog(999);**

**}**

**@Override**

**protected Dialog onCreateDialog(int id) {**

**// TODO Auto-generated method stub**

**if (id == 999) {**

**return new DatePickerDialog(this,**

**myDateListener, year, m, day);**

**}**

**return null;**

**}**

**private DatePickerDialog.OnDateSetListener myDateListener =**

**new DatePickerDialog.OnDateSetListener() {**

**@Override**

**public void onDateSet(DatePicker arg0,**

**int arg1, int arg2,**

**int arg3) {**

**// TODO Auto-generated method stub**

**// arg1 = year**

**// arg2 = month**

**// arg3 = day**

**showDate(arg1, arg2+1, arg3);**

**}**

**};**

**private void showDate(int year, int i, int day) {**

**dateView.setText(new StringBuilder().append(day)**

**.append("/")**

**.append(m).append("/").append(year));**

**}**

**}**

**Xml**

**<?xml version="1.0" encoding="utf-8"?>**

**<android.support.constraint.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">**

**<TextView**

**android:id="@+id/textView"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Press Button to set Date"**

**tools:layout\_editor\_absoluteX="172dp"**

**tools:layout\_editor\_absoluteY="48dp" />**

**<Button**

**android:id="@+id/button"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginBottom="8dp"**

**android:layout\_marginTop="120dp"**

**android:text="Date"**

**android:onClick="setDate"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/textView"**

**app:layout\_constraintVertical\_bias="0.0" />**

**<TextView**

**android:id="@+id/textView2"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginBottom="8dp"**

**android:layout\_marginEnd="8dp"**

**android:layout\_marginStart="8dp"**

**android:layout\_marginTop="8dp"**

**android:text="The Date is"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.341"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/button"**

**app:layout\_constraintVertical\_bias="0.174" />**

**<TextView**

**android:id="@+id/textView3"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginBottom="8dp"**

**android:layout\_marginEnd="8dp"**

**android:layout\_marginStart="8dp"**

**android:layout\_marginTop="8dp"**

**android:text="@string/date\_selected"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toBottomOf="@+id/textView2" />**

**</android.support.constraint.ConstraintLayout>**

**Slip 19 :  
A) Create an Android application that will change color of the screen and change the font size of text view using 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"

android:background="#FFEB3B"

tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Hello World!"

android:textSize="50dp"

android:textColor="#F44336"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintLeft\_toLeftOf="parent"

app:layout\_constraintRight\_toRightOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

**B) Create table Project(id,name,dept,city). Create Application to perform the following operations.(usingsqlite database) i) Add records. ii) Display all the records.**

MainActivity.java

public class MainActivity extends AppCompatActivity {

DatabaseHelper myDb;

EditText editName,editSurname,editMarks ,editTextId;

Button btnAddData;

Button btnviewAll;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

myDb = new DatabaseHelper(this);

editName = (EditText)findViewById(R.id.editText\_name);

editSurname = (EditText)findViewById(R.id.editText\_surname);

editMarks = (EditText)findViewById(R.id.editText\_Marks);

btnAddData = (Button)findViewById(R.id.button\_add);

btnviewAll = (Button)findViewById(R.id.button\_viewAll);

AddData();

viewAll();

}

public void AddData() {

btnAddData.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

boolean isInserted = myDb.insertData(

editName.getText().toString(),

editSurname.getText().toString(),

editMarks.getText().toString() );

if(isInserted == true)

Toast.makeText(MainActivity.this,"Data Inserted",Toast.LENGTH\_LONG).show();

else

Toast.makeText(MainActivity.this,"Data not Inserted",Toast.LENGTH\_LONG).show();

}

}

);

}

public void viewAll() {

btnviewAll.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

Cursor res = myDb.getAllData();

if(res.getCount() == 0) {

// show message

showMessage("Error","Nothing found");

return;

}

StringBuffer buffer = new StringBuffer();

while (res.moveToNext()) {

buffer.append("Id :"+ res.getString(0)+"\n");

buffer.append("Name :"+ res.getString(1)+"\n");

buffer.append("Surname :"+ res.getString(2)+"\n");

buffer.append("Marks :"+ res.getString(3)+"\n\n");

}

// Show all data

showMessage("Data",buffer.toString());

}

}

);

}

public void showMessage(String title,String Message){

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setCancelable(true);

builder.setTitle(title);

builder.setMessage(Message);

builder.show();

}

}

databaseHelper.java

class DatabaseHelper extends SQLiteOpenHelper {

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 = "SURNAME";

public static final String COL\_4 = "MARKS";

public DatabaseHelper(Context context) {

super(context, DATABASE\_NAME, null, 1);

}

@Override

public void onCreate(SQLiteDatabase db) {

db.execSQL("create table " + TABLE\_NAME +" " +

"(ID INTEGER PRIMARY KEY AUTOINCREMENT," +

"NAME TEXT,SURNAME TEXT,MARKS INTEGER)");

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

db.execSQL("DROP TABLE IF EXISTS "+TABLE\_NAME);

onCreate(db);

}

public boolean insertData(String name,String surname,

String marks) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put(COL\_2,name);

contentValues.put(COL\_3,surname);

contentValues.put(COL\_4,marks);

long result = db.insert(TABLE\_NAME,

null ,

contentValues);

if(result == -1)

return false;

else

return true;

}

public Cursor getAllData() {

SQLiteDatabase db = this.getWritableDatabase();

Cursor res = db.rawQuery("select \* from "

+TABLE\_NAME,null);

return res;

}

}

Xml

<?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"

tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Name"

android:id="@+id/textView"

android:layout\_alignParentTop="true"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Surname"

android:id="@+id/textView2"

android:layout\_below="@+id/editText\_name"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Marks"

android:id="@+id/textView3"

android:layout\_below="@+id/editText\_surname"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_name"

android:layout\_alignTop="@+id/textView"

android:layout\_toRightOf="@+id/textView"

android:layout\_toEndOf="@+id/textView" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_surname"

android:layout\_alignTop="@+id/textView2"

android:layout\_toRightOf="@+id/textView2"

android:layout\_toEndOf="@+id/textView2" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_Marks"

android:layout\_below="@+id/editText\_surname"

android:layout\_toRightOf="@+id/textView3"

android:layout\_toEndOf="@+id/textView3" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Add Data"

android:id="@+id/button\_add"

android:layout\_below="@+id/editText\_Marks"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true"

android:layout\_marginTop="76dp" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="View All"

android:id="@+id/button\_viewAll"

android:layout\_above="@+id/button\_update"

android:layout\_centerHorizontal="true" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Update"

android:id="@+id/button\_update"

android:layout\_below="@+id/button\_add"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Delete"

android:id="@+id/button\_delete"

android:layout\_centerVertical="true"

android:layout\_below="@+id/button\_viewAll"

android:layout\_alignLeft="@+id/button\_viewAll"

android:layout\_alignStart="@+id/button\_viewAll" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="id"

android:id="@+id/textView\_id"

android:layout\_below="@+id/editText\_Marks"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_id"

android:layout\_alignTop="@+id/textView\_id"

android:layout\_toRightOf="@+id/textView3"

android:layout\_toEndOf="@+id/textView3" />

</RelativeLayout>

**Slip 20 :  
A) Write an Android application to accept two numbers from the user, and displays them, but reject input if both numbers are greater than 10 and asks for two new numbers.**

**B) Create the simple calculator shown below also perform appropriate operation**

**public class MainActivity extends AppCompatActivity {**

**Button btn\_1,btn\_2,btn\_3,btn\_4,btn\_5,btn\_6,btn\_7,btn\_8,btn\_9,btn\_0,btn\_Add,btn\_Sub,btn\_Mul,btn\_Div,btn\_calc,btn\_dec,btn\_clear;**

**EditText ed1;**

**float Value1, Value2;**

**boolean mAddition, mSubtract, mMultiplication, mDivision ;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**btn\_0 = (Button) findViewById(R.id.btn\_0);**

**btn\_1 = (Button) findViewById(R.id.btn\_1);**

**btn\_2 = (Button) findViewById(R.id.btn\_2);**

**btn\_3 = (Button) findViewById(R.id.btn\_3);**

**btn\_4 = (Button) findViewById(R.id.btn\_4);**

**btn\_5 = (Button) findViewById(R.id.btn\_5);**

**btn\_6 = (Button) findViewById(R.id.btn\_6);**

**btn\_7 = (Button) findViewById(R.id.btn\_7);**

**btn\_8 = (Button) findViewById(R.id.btn\_8);**

**btn\_9 = (Button) findViewById(R.id.btn\_9);**

**btn\_Add = (Button) findViewById(R.id.btn\_Add);**

**btn\_Div = (Button) findViewById(R.id.btn\_Div);**

**btn\_Sub = (Button) findViewById(R.id.btn\_Sub);**

**btn\_Mul = (Button) findViewById(R.id.btn\_Mul);**

**btn\_calc = (Button) findViewById(R.id.btn\_calc);**

**btn\_dec = (Button) findViewById(R.id.btn\_dec);**

**btn\_clear = (Button) findViewById(R.id.btn\_clear);**

**ed1 = (EditText) findViewById(R.id.edText1);**

**btn\_0.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"0");**

**}**

**});**

**btn\_1.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"1");**

**}**

**});**

**btn\_2.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"2");**

**}**

**});**

**btn\_3.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"3");**

**}**

**});**

**btn\_4.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"4");**

**}**

**});**

**btn\_5.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"5");**

**}**

**});**

**btn\_6.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"6");**

**}**

**});**

**btn\_7.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"7");**

**}**

**});**

**btn\_8.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"8");**

**}**

**});**

**btn\_9.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+"9");**

**}**

**});**

**btn\_dec.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText(ed1.getText()+".");**

**}**

**});**

**btn\_Add.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**if (ed1 == null){**

**ed1.setText("");**

**}else {**

**Value1 = Float.parseFloat(ed1.getText() + "");**

**mAddition = true;**

**ed1.setText(null);**

**}**

**}**

**});**

**btn\_Sub.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**Value1 = Float.parseFloat(ed1.getText() + "");**

**mSubtract = true ;**

**ed1.setText(null);**

**}**

**});**

**btn\_Mul.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**Value1 = Float.parseFloat(ed1.getText() + "");**

**mMultiplication = true ;**

**ed1.setText(null);**

**}**

**});**

**btn\_Div.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**Value1 = Float.parseFloat(ed1.getText()+"");**

**mDivision = true ;**

**ed1.setText(null);**

**}**

**});**

**btn\_calc.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**Value2 = Float.parseFloat(ed1.getText() + "");**

**if (mAddition == true){**

**ed1.setText(Value1 + Value2 +"");**

**mAddition=false;**

**}**

**if (mSubtract == true){**

**ed1.setText(Value1 - Value2 +"");**

**mSubtract=false;**

**}**

**if (mMultiplication == true){**

**ed1.setText(Value1 \* Value2 + "");**

**mMultiplication=false;**

**}**

**if (mDivision == true){**

**ed1.setText(Value1 / Value2+"");**

**mDivision=false;**

**}**

**}**

**});**

**btn\_clear.setOnClickListener(new View.OnClickListener() {**

**@Override**

**public void onClick(View v) {**

**ed1.setText("");**

**}**

**});**

**}**

**public void PressOne(View view) {**

**}**

**}**

**Xml<?xml version="1.0" encoding="utf-8"?>**

**<android.support.constraint.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">**

**<RelativeLayout**

**android:layout\_width="368dp"**

**android:layout\_height="495dp"**

**android:layout\_marginBottom="8dp"**

**android:layout\_marginEnd="8dp"**

**android:layout\_marginTop="8dp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent">**

**<Button**

**android:id="@+id/btn\_1"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentStart="true"**

**android:layout\_below="@+id/edText1"**

**android:layout\_marginTop="60dp"**

**android:onClick="PressOne"**

**android:text="1"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_0"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@+id/btn\_8"**

**android:layout\_toEndOf="@+id/btn\_7"**

**android:layout\_toRightOf="@+id/btn\_7"**

**android:text="0"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_9"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@+id/btn\_6"**

**android:layout\_toEndOf="@+id/btn\_5"**

**android:layout\_toRightOf="@+id/btn\_5"**

**android:text="9"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_8"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@+id/btn\_5"**

**android:layout\_toEndOf="@+id/btn\_7"**

**android:layout\_toRightOf="@+id/btn\_7"**

**android:text="8"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_7"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignLeft="@+id/btn\_4"**

**android:layout\_alignStart="@+id/btn\_4"**

**android:layout\_below="@+id/btn\_4"**

**android:text="7"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_6"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignBaseline="@+id/btn\_5"**

**android:layout\_alignBottom="@+id/btn\_5"**

**android:layout\_toEndOf="@+id/btn\_5"**

**android:layout\_toRightOf="@+id/btn\_5"**

**android:text="6"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_5"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@+id/btn\_2"**

**android:layout\_toEndOf="@+id/btn\_4"**

**android:layout\_toRightOf="@+id/btn\_4"**

**android:text="5"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_4"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignLeft="@+id/btn\_1"**

**android:layout\_alignStart="@+id/btn\_1"**

**android:layout\_below="@+id/btn\_1"**

**android:text="4"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_3"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignBaseline="@+id/btn\_2"**

**android:layout\_alignBottom="@+id/btn\_2"**

**android:layout\_toEndOf="@+id/btn\_2"**

**android:layout\_toRightOf="@+id/btn\_2"**

**android:text="3"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_2"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignBaseline="@+id/btn\_1"**

**android:layout\_alignBottom="@+id/btn\_1"**

**android:layout\_toEndOf="@+id/btn\_1"**

**android:layout\_toRightOf="@+id/btn\_1"**

**android:text="2"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_Add"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_above="@+id/btn\_6"**

**android:layout\_alignParentEnd="true"**

**android:layout\_alignParentRight="true"**

**android:backgroundTint="@android:color/darker\_gray"**

**android:text="+"**

**android:textColor="@android:color/background\_light"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_Sub"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignLeft="@+id/btn\_Add"**

**android:layout\_alignStart="@+id/btn\_Add"**

**android:layout\_below="@+id/btn\_Add"**

**android:backgroundTint="@android:color/darker\_gray"**

**android:text="-"**

**android:textColor="@android:color/background\_light"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_Mul"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignLeft="@+id/btn\_Sub"**

**android:layout\_alignStart="@+id/btn\_Sub"**

**android:layout\_below="@+id/btn\_6"**

**android:backgroundTint="@android:color/darker\_gray"**

**android:text="\*"**

**android:textColor="@android:color/background\_light"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_Div"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignLeft="@+id/btn\_Mul"**

**android:layout\_alignStart="@+id/btn\_Mul"**

**android:layout\_below="@+id/btn\_9"**

**android:backgroundTint="@android:color/darker\_gray"**

**android:text="/"**

**android:textColor="@android:color/background\_light"**

**android:textSize="18sp" />**

**<EditText**

**android:id="@+id/edText1"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentEnd="true"**

**android:layout\_alignParentLeft="true"**

**android:layout\_alignParentRight="true"**

**android:layout\_alignParentStart="true"**

**android:layout\_alignParentTop="true"**

**android:layout\_marginTop="22dp"**

**android:ems="10"**

**android:inputType="textPersonName"**

**android:textAlignment="textEnd"**

**android:textSize="24sp" />**

**<Button**

**android:id="@+id/btn\_calc"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@+id/btn\_0"**

**android:layout\_toEndOf="@+id/btn\_0"**

**android:layout\_toRightOf="@+id/btn\_0"**

**android:backgroundTint="@android:color/holo\_green\_light"**

**android:text="="**

**android:textColor="@android:color/background\_light"**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_dec"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@+id/btn\_7"**

**android:layout\_toLeftOf="@+id/btn\_8"**

**android:layout\_toStartOf="@+id/btn\_8"**

**android:text="."**

**android:textSize="18sp" />**

**<Button**

**android:id="@+id/btn\_clear"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_alignParentEnd="true"**

**android:layout\_alignParentRight="true"**

**android:layout\_below="@+id/btn\_Div"**

**android:backgroundTint="@android:color/holo\_blue\_dark"**

**android:text="clear"**

**android:textColor="@android:color/background\_light"**

**android:textSize="18sp" />**

**</RelativeLayout>**

**</android.support.constraint.ConstraintLayout>**