Ex no:5

Develop an Android application using controls like Button, TextView, EditText for designing

a calculator having basic functionality like Addition, Subtraction, Multiplication, and Division.

1) Firstly, Create an Application by Name “calciApplication”

2) Go to xml code of design change the layout to “RelativeLayout”

3) Add TextView component & change the following properties:

• Size: 36sp

• Text: Simple Calci

• Center-Align

4) Add PlainText(EditText) component & change the following properties in XML Code:

• Text: “”

• Hint: “Enter the Number 1”

• id: “@+id/editText1”

5) Add PlainText(EditText) component & change the following properties in XML Code:

• Text: “”

• Hint: “Enter the Number 2 ”

• id: “@+id/editText2”

6) Add TextView component to display result & change the following properties:

• Size: 40dp

• Text: “0”

• Center-Align

• id: “@+id/textView1”

7) Add 4 Buttons & rename the four buttons “Add”, “Sub”,”Mul” and “div”

with following addition:

• Onclick: “doAdd”(Add Button)

• Onclick: “doSub”(Sub Button)

• Onclick: “doMul”(Mul Button)

• Onclick: “doDiv”(Div Button)

XML-CODE

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

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

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:layout\_width="209dp"

android:layout\_height="60dp"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="108dp"

android:layout\_marginRight="108dp"

android:layout\_marginBottom="530dp"

android:text="Simple Calci"

android:textSize="36sp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintLeft\_toLeftOf="parent"

app:layout\_constraintRight\_toRightOf="parent"

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

<EditText

android:id="@+id/editText2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="115dp"

android:layout\_marginRight="115dp"

android:layout\_marginBottom="364dp"

android:ems="10"

android:hint="Enter the Number 2"

android:inputType="textPersonName"

android:text=""

android:textColorHighlight="#FFFFFF" />

<EditText

android:id="@+id/editText1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="110dp"

android:layout\_marginRight="110dp"

android:layout\_marginBottom="439dp"

android:ems="10"

android:hint="Enter the Number 1"

android:inputType="textPersonName"

android:text=""

android:textColorHighlight="#FFFFFF" />

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="260dp"

android:layout\_marginRight="260dp"

android:layout\_marginBottom="175dp"

android:text="ADD"

android:textStyle="bold"

android:onClick="add"

app:backgroundTint="#E8F381" />

<Button

android:id="@+id/button3"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="266dp"

android:layout\_marginRight="266dp"

android:layout\_marginBottom="61dp"

android:text="MUL"

android:onClick="mul"

app:backgroundTint="#A1FAA4" />

<Button

android:id="@+id/button4"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="108dp"

android:layout\_marginRight="108dp"

android:layout\_marginBottom="63dp"

android:text="DIV"

android:onClick="div"

app:backgroundTint="#E6C28C" />

<Button

android:id="@+id/button2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="105dp"

android:layout\_marginRight="105dp"

android:layout\_marginBottom="182dp"

android:text="SUB"

android:onClick="sub"

app:backgroundTint="#ECA9A9" />

<TextView

android:id="@+id/tv1"

android:layout\_width="86dp"

android:layout\_height="61dp"

android:layout\_alignParentEnd="true"

android:layout\_alignParentRight="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="202dp"

android:layout\_marginRight="202dp"

android:layout\_marginBottom="274dp"

android:text="0"

android:textSize="36sp" />

</RelativeLayout>

JAVA-CODE

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

EditText e1,e2;

TextView tv;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

e1 =(EditText)findViewById(R.id.editText1);

e2 = (EditText)findViewById(R.id.editText2);

tv= (TextView)findViewById(R.id.tv1);

}

public void add(View v){

int a1=Integer.parseInt(e1.getText().toString());

int a2= Integer.parseInt(e2.getText().toString());

int result=a1+a2;

tv.setText(""+result);

}

public void sub(View v){

int a1=Integer.parseInt(e1.getText().toString());

int a2= Integer.parseInt(e2.getText().toString());

int result=a1-a2;

tv.setText(""+result);

}

public void mul(View v){

int a1=Integer.parseInt(e1.getText().toString());

int a2= Integer.parseInt(e2.getText().toString());

int result=a1\*a2;

tv.setText(""+result);

}

public void div(View v){

float a1=Integer.parseInt(e1.getText().toString());

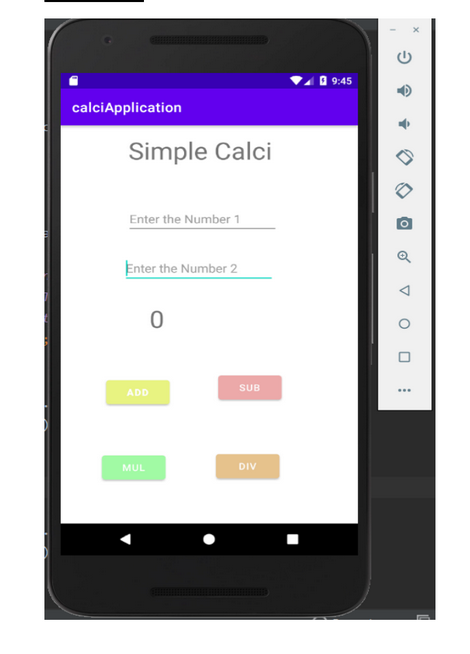
float a2= Integer.parseInt(e2.getText().toString());

float result=a1/a2;

tv.setText(""+result);

}

}



**Ex no:6 DATE PICKER**

**Step 1: Create a New Project in Android Studio**

To create a new project in Android Studio

**Step 2: Working with the activity\_main.xml file**

Navigate to app > res > layout > activity\_main.xml and add the below code to it.

**Step 3: Working with the MainActivity file**

Navigate to app > java > your app’s package name > MainActivity file and add the code below.

XML:

| <?xml version="1.0" encoding="utf-8"?>  <RelativeLayout      xmlns:android="<http://schemas.android.com/apk/res/android>"      xmlns:tools="<http://schemas.android.com/tools>"      android:id="@+id/idRLContainer"      android:layout\_width="match\_parent"      android:layout\_height="match\_parent"      android:orientation="vertical"      tools:context=".MainActivity">        <TextView          android:id="@+id/idTVHeading"          android:layout\_width="match\_parent"          android:layout\_height="wrap\_content"          android:layout\_above="@id/idTVSelectedDate"          android:layout\_centerInParent="true"          android:layout\_margin="20dp"          android:gravity="center"          android:padding="10dp"          android:text="Date Picker Dialog in Android"          android:textAlignment="center"          android:textColor="@color/black"          android:textSize="20sp"          android:textStyle="bold" />          <TextView          android:id="@+id/idTVSelectedDate"          android:layout\_width="match\_parent"          android:layout\_height="wrap\_content"          android:layout\_above="@id/idBtnPickDate"          android:layout\_centerInParent="true"          android:layout\_margin="20dp"          android:gravity="center"          android:padding="10dp"          android:text="Date"          android:textAlignment="center"          android:textColor="@color/black"          android:textSize="20sp"          android:textStyle="bold" />        <Button          android:id="@+id/idBtnPickDate"          android:layout\_width="match\_parent"          android:layout\_height="wrap\_content"          android:layout\_centerInParent="true"          android:layout\_margin="20dp"          android:text="Pick Date"          android:textAllCaps="false" />    </RelativeLayout> |
| --- |

MAIN ACTIVITY:

| package com.gtappdevelopers.kotlingfgproject;    import android.app.DatePickerDialog;  import android.os.Bundle;  import android.view.View;  import android.widget.Button;  import android.widget.DatePicker;  import android.widget.TextView;  import androidx.appcompat.app.AppCompatActivity;  import java.util.Calendar;    public class MainActivity extends AppCompatActivity {        private Button pickDateBtn;      private TextView selectedDateTV;        @Override      protected void onCreate(Bundle savedInstanceState) {          super.onCreate(savedInstanceState);          setContentView(R.layout.activity\_main);            pickDateBtn = findViewById(R.id.idBtnPickDate)          selectedDateTV = findViewById(R.id.idTVSelectedDate)            pickDateBtn.setOnClickListener(new View.OnClickListener() {              @Override              public void onClick(View v) {                      final Calendar c = Calendar.getInstance();                    int year = c.get(Calendar.YEAR);                  int month = c.get(Calendar.MONTH);                  int day = c.get(Calendar.DAY\_OF\_MONTH);                      DatePickerDialog datePickerDialog = new DatePickerDialog(                          MainActivity.this,                          new DatePickerDialog.OnDateSetListener() {                              @Override  public void onDateSet(DatePicker view, int year,       int monthOfYear, int dayOfMonth)  {    selectedDateTV.setText(dayOfMonth + "-" + (monthOfYear + 1) + "-" + year);         }   },                          year, month, day);                    datePickerDialog.show();              }          });      }  } |
| --- |

Now run your application to see the output of it.

**TimePicker in Android**

**Step 1: Create a New Project in Android Studio**

To create a new project in Android Studio

**Step 2: Working with the activity\_main.xml file**

Navigate to app > res > layout > activity\_main.xml and add the below code to it.

**Step 3: Working with the MainActivity file**

Navigate to app > java > your app’s package name > MainActivity file and add the code below.

XML:

| <?xml version="1.0" encoding="utf-8"?>  <RelativeLayout      xmlns:android="<http://schemas.android.com/apk/res/android>"      xmlns:tools="<http://schemas.android.com/tools>"      android:id="@+id/idRLContainer"      android:layout\_width="match\_parent"      android:layout\_height="match\_parent"      android:orientation="vertical"      tools:context=".MainActivity">          <TextView          android:id="@+id/idTVHeading"          android:layout\_width="match\_parent"          android:layout\_height="wrap\_content"          android:layout\_above="@id/idTVSelectedTime"          android:layout\_centerInParent="true"          android:layout\_margin="20dp"          android:gravity="center"          android:padding="10dp"          android:text="Time Picker Dialog in Android"          android:textAlignment="center"          android:textColor="@color/black"          android:textSize="20sp"          android:textStyle="bold" />        <TextView          android:id="@+id/idTVSelectedTime"          android:layout\_width="match\_parent"          android:layout\_height="wrap\_content"          android:layout\_above="@id/idBtnPickTime"          android:layout\_centerInParent="true"          android:layout\_margin="20dp"          android:gravity="center"          android:padding="10dp"          android:text="Time"          android:textAlignment="center"          android:textColor="@color/black"          android:textSize="20sp"          android:textStyle="bold" />        <Button          android:id="@+id/idBtnPickTime"          android:layout\_width="match\_parent"          android:layout\_height="wrap\_content"          android:layout\_centerInParent="true"          android:layout\_margin="20dp"          android:text="Pick Time"          android:textAllCaps="false" />    </RelativeLayout> |
| --- |

MAIN ACTIVITY:

| package com.gtappdevelopers.kotlingfgproject;    import android.app.TimePickerDialog;  import android.os.Bundle;  import android.view.View;  import android.widget.Button;  import android.widget.TextView;  import android.widget.TimePicker;  import androidx.appcompat.app.AppCompatActivity;  import java.util.Calendar;    public class MainActivity extends AppCompatActivity {          private Button pickTimeBtn;      private TextView selectedTimeTV;        @Override      protected void onCreate(Bundle savedInstanceState) {          super.onCreate(savedInstanceState);          setContentView(R.layout.activity\_main);            pickTimeBtn = findViewById(R.id.idBtnPickTime);          selectedTimeTV = findViewById(R.id.idTVSelectedTime);              pickTimeBtn.setOnClickListener(new View.OnClickListener() {              @Override              public void onClick(View v) {                    final Calendar c = Calendar.getInstance();                      int hour = c.get(Calendar.HOUR\_OF\_DAY);                  int minute = c.get(Calendar.MINUTE);                      TimePickerDialog timePickerDialog = new TimePickerDialog(MainActivity.this,                          new TimePickerDialog.OnTimeSetListener() {                              @Override                              public void onTimeSet(TimePicker view, int hourOfDay,                                                    int minute) {                                  selectedTimeTV.setText(hourOfDay + ":" + minute);                              }                          }, hour, minute, false);                    timePickerDialog.show();              }          });      }  } |
| --- |

Now run your application to see the output of it.