DATE : ..... PAGE NO. ..... EXP. NO. 01

Aim: To develop an android application using Button, TextView and EditText for designing a Calculator having basic functionality like Addition, Subtraction, Multiplication and Division

Java code:

```
package com.example.calculator;
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 n1, n2;
    TextView t1, t2;
    Button add1, sub1, mul1, div1;
    @Override
    protected void onCreate (Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView (R.layout.activity_main);
        n1 = (EditText) findViewById (R.id.num1);
        n2 = (EditText) findViewById (R.id.num2);
        t1 = (TextView) findViewById (R.id.res);
        add1 = (Button) findViewById (R.id.btn1);
        sub1 = (Button) findViewById (R.id.btn2);
        mul1 = (Button) findViewById (R.id.btn3);
        div1 = (Button) findViewById (R.id.btn4);

        add1.setOnClickListener (new View.OnClickListener() {
            @Override
            public void onClick (View v) {
                String a = n1.getText().toString();
```


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```
                String b= n2.getText().toString();
                int a1 = Integer.parseInt(a);
                int a2 = Integer.parseInt(b);
                int result = a1 + a2;
                t1.setText("Result =" +result);
            }
        });
        sub1.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v){
                String a = n1.getText().tostring();
                String b = n2.getText().tostring();
                int a1 = Integer.parseInt(a);
                int a2 = Integer.parseInt(b);
                int result= a1-a2;
                t1.setText("Result= "+result);
        }});
        mul1.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v){
                String a = n1.getText().tostring();
                String b = n2.getText().tostring();
                int a1 = Integer.parseInt(a);
                int a2 = Integer.parseInt(b);
                int result=a1*a2;
                t1.setText("Result= "+result);
            }
        });
        div1.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v){
                String a = n1.getText().tostring();
                String b = n2.getText().toString();
                int a1 = Integer.parseInt(a);
                int a2 = Integer.parseInt(b);
                int result;
                if(a2!=0){
                    result= a1/a2;
                    t1.setText("Result = "+result);
                }
                else
                    t1.setText("Divide by zero error");
            }
        });
    }
```

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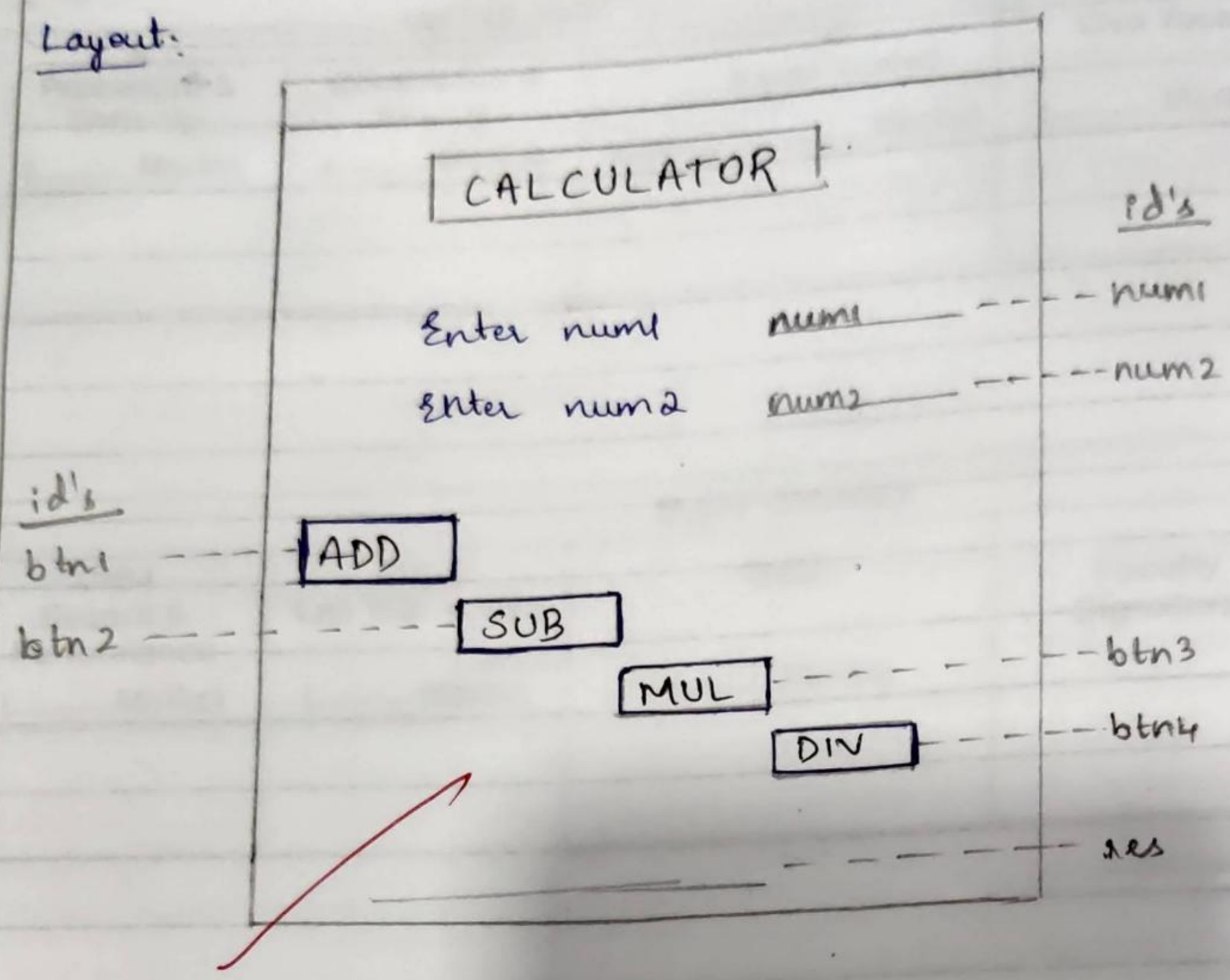
Layout:



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DATE : ..... PAGE NO. ..... EXP. NO. 2

Aim: To develop an Android application that displays information about a small business. Design must include
i) Business name ii) Photo of business iii) Contact information
iv) Description of Business

Xml code:

```
<?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="@drawable/bg"
android:foregroundTint="#E91E36"
tools:context=".MainActivity">
<TextView
android:id="@+id/textView5"
android:layout_width="232dp"
android:layout_height="41dp"
android:background="#F2FF3B"
~~android:fontFamily="cursive"~~
android:text="단소"
android:textAlignment="center"
android:textColor="#E91E36"
android:textSize="34sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintHorizontal_bias="0.268"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.002"/>
```


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```
<TextView
    android:id="@+id/textView"
    android:layout_width="325dp"
    android:layout_height="50dp"
    android:background="#ECADAD"
    android:fontFamily="cursive"
    android:text="Tap your feet to the beat"
    android:textAlignment="viewStart"
    android:textColor="#833AB7"
    android:textDirection="firstStrongRtl"
    android:textSize="34sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.076"/>

<ImageView
    android:id="@+id/imageView"
    android:layout_width="199dp"
    android:layout_height="196dp"
    android:scaleType="centerCrop"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.443"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.207"
    app:srcCompat="@drawable/dance"/>

<EditText
    android:id="@+id/editTextPhone"
    android:layout_width="225dp"
    android:layout_height="73dp"
    android:ems="10"
    android:inputType="phone"
    android:minHeight="48dp"
    android:shadowColor="#F10606"
    android:text="7328453561"
    android:textColor="#F80505"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.973"
```


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```
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.945" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="339dp"
        android:layout_height="33dp"
        android:bufferType="spannable"
        android:fontFamily="@font/aclonica"
        android:text="Lets Meet, Greet and Dance"
        android:textAlignment="viewStart"
        android:textColor="#052BFB"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.222"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView6"
        android:layout_width="215dp"
        android:layout_height="199dp"
        android:breakStrategy="simple"
        android:fontFamily="@font/aclonica"
        android:text="Dance forms:\n Hip-Hop\n Bharatnatyam
            \n Folk dance\n Salsa\n"
        android:textColor="#D54035"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.923"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.813" />

    <TextView
        android:id="@+id/textView7"
        android:layout_width="123dp"
        android:layout_height="44dp"
        android:fontFamily="@font/aladin"
        android:text="CONTACT"
        android:textColor="#C51AE3"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.167"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.936" />

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

v. Good

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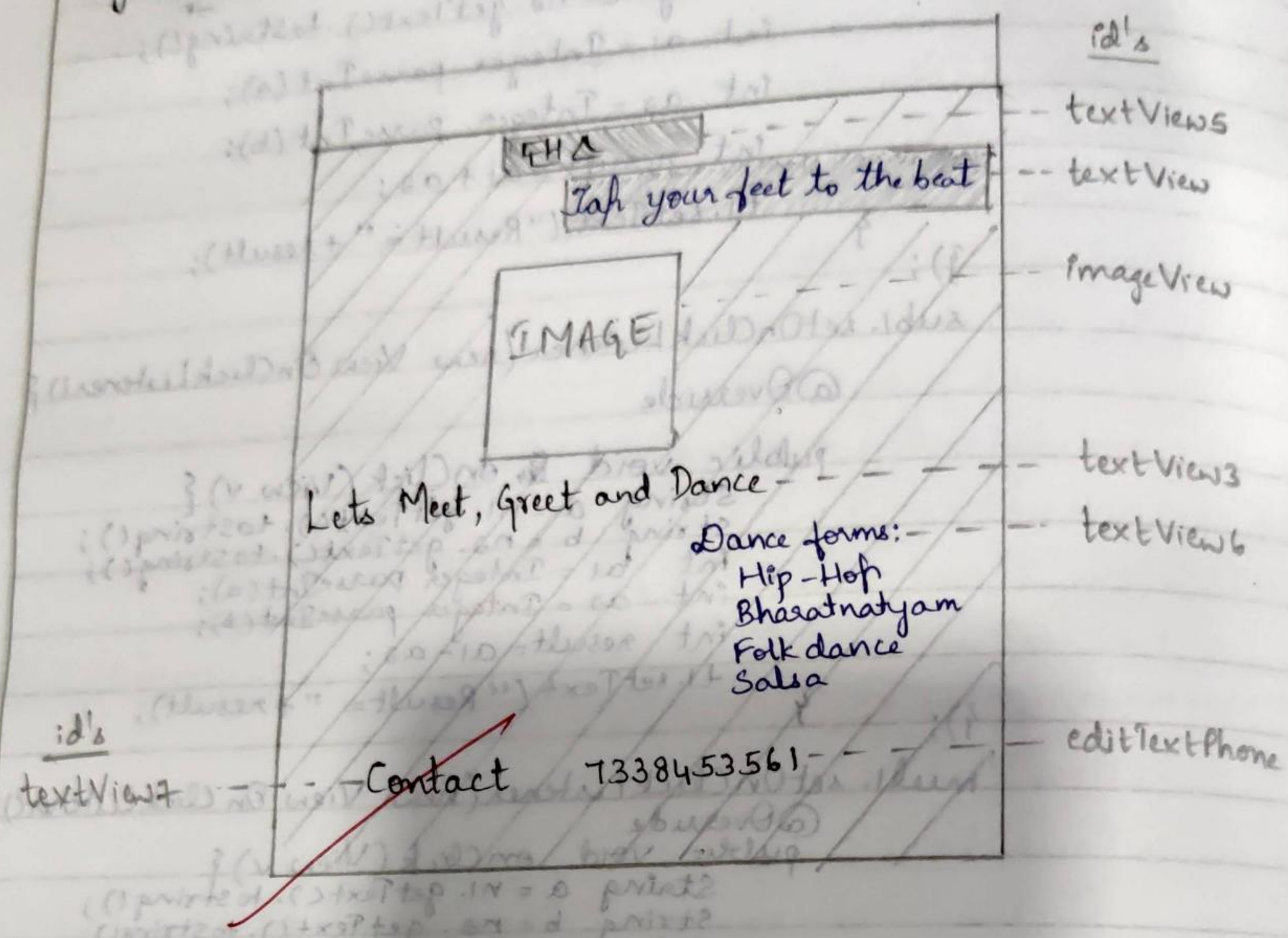
Layout



NHCE, BANGALORE

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DATE : ..... PAGE NO. ..... EXP. NO. 3

Aim: To develop an Android application to design a Visiting card. It should have a company logo at the top right corner, the company name should be displayed in capital letters, aligned to the center. Information like Name of the employee, designation, phone number, Address, Email and the Website address is to be displayed

Xml code:

```
<?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/textView2"
        android:layout_width="409dp"
        android:layout_height="50dp"
        android:background="#E4FA09"
        android:text="Dance"
        android:textAlignment="center"
        android:textAllCaps="true"
        android:textColor="#E80822"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintHorizontal_bias="0.034"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0"/>
```


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```
<TextView
    android:id="@+id/textView"
    android:layout_width="410dp"
    android:layout_height="60dp"
    android:background="#F6F310"
    android:text="Tap your feet to the beat"
    android:textAlignment="viewStart"
    android:textColor="#CE0BEF"
    android:textSize="24sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView2"
    app:layout_constraintVertical_bias="0.0"/>
<TextView
    android:id="@+id/textView3"
    android:layout_width="407dp"
    android:layout_height="92dp"
    android:background="#FBFAFA"
    android:fontFamily="@font/amarnath_bold_italic"
    android:text="Madhura K\n Dance Trainer\n
            Fairyland, Banglore-30"
    android:textColor="#479F4B"
    android:textSize="20sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="@+id/textView2"
    app:layout_constraintVertical_bias="0.42"/>
```

NHCE, BANGALORE.

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```
<TextView
        android:id="@id/textView4"
        android:layout_width="266dp"
        android:layout_height="97dp"
        android:fontFamily="@font/courgette"
        android:text="mmadhura648@gmail.com\n
                7338453561\n www.dance.com"
        android:textAlignment="textEnd"
        android:textColor="#0C2FF1"
        android:textSize="20sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.972"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        app:layout_constraintVertical_bias="0.175" />
<ImageView
        android:id="@+id/imageView"
        android:layout_width="117dp"
        android:layout_height="98dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0"
        app:srcCompat="@drawable/dance" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

V-800d

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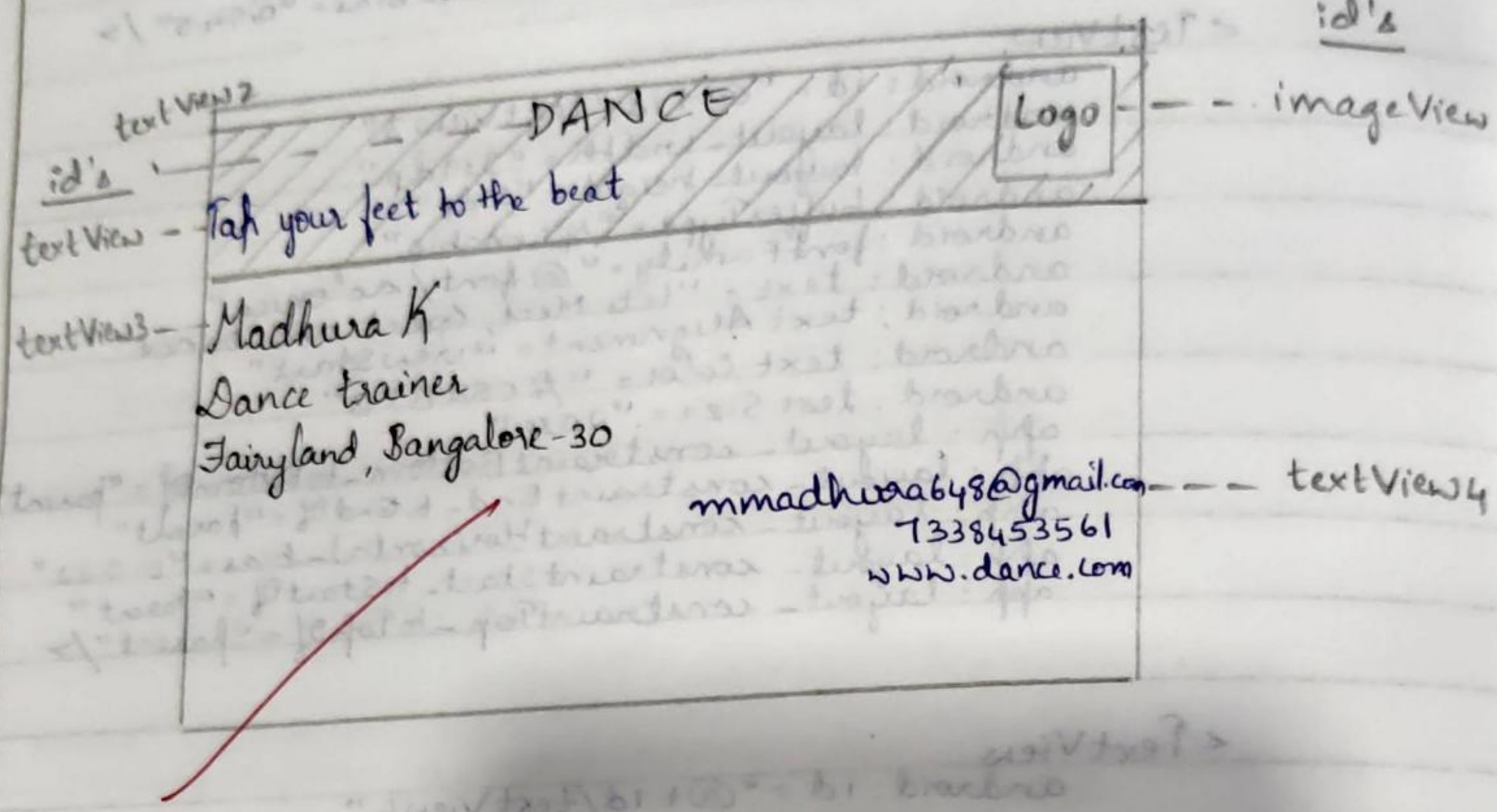
Layout



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DATE : ..... PAGE NO. ..... EXP. NO. 4

Aim: to develop an Android application, 'The Easy Unit Converter' using Radio Buttons

Java code:

```
package com.cs108.exp4;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.provider.MediaStore;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.TextView;
import android.widget.Toast;
import org.w3c.dom.Text;
public class MainActivity extends AppCompatActivity {
    EditText t1;
    TextView a1, a2;
    RadioButton r1, r2, r3, r4;
    Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        t1=(EditText) findViewById(R.id.input1);
        a1=(TextView) findViewById(R.id.res);
        a2=(TextView) findViewById(R.id.ans);
        r1=(RadioButton) findViewById(R.id.r1);
        r2=(RadioButton) findViewById(R.id.r2);
        r3=(RadioButton) findViewById(R.id.r3);
        r4=(RadioButton) findViewById(R.id.r4);
        b1=(Button) findViewById(R.id.button1);
```


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```
b1.setOnClickListener(new View.OnClickListener(){
    @Override
    public void onClick(View v){
        String a=t1.getText().toString();
        float m=Float.parseFloat(a);
        float ans1;
        if(r1.isChecked())
        {
            ans1=m/100;
            a1.setText("Result="+ans1);
            a2.setText(m+"cm="+ans1+"m");
        }
        else if(r2.isChecked())
        {
            ans1=m*100;
            a1.setText("Result="+ans1);
            a2.setText(m+"m="+ans1+"cm");
        }
        else if(r3.isChecked())
        {
            ans1=m*12;
            a1.setText("Result="+ans1);
            a2.setText(m+"feet="+ans1+"inch");
        }
        else if(r4.isChecked())
        {
            ans1=m/12;
            a1.setText("Result="+ans1);
            a2.setText(m+"inch="+ans1+"feet");
        }
        else
        Toast.makeText(MainActivity.this, "Choose any
one radio button", Toast.LENGTH_SHORT).show();
    }
});
}
}
```

V.Good

12/11/21

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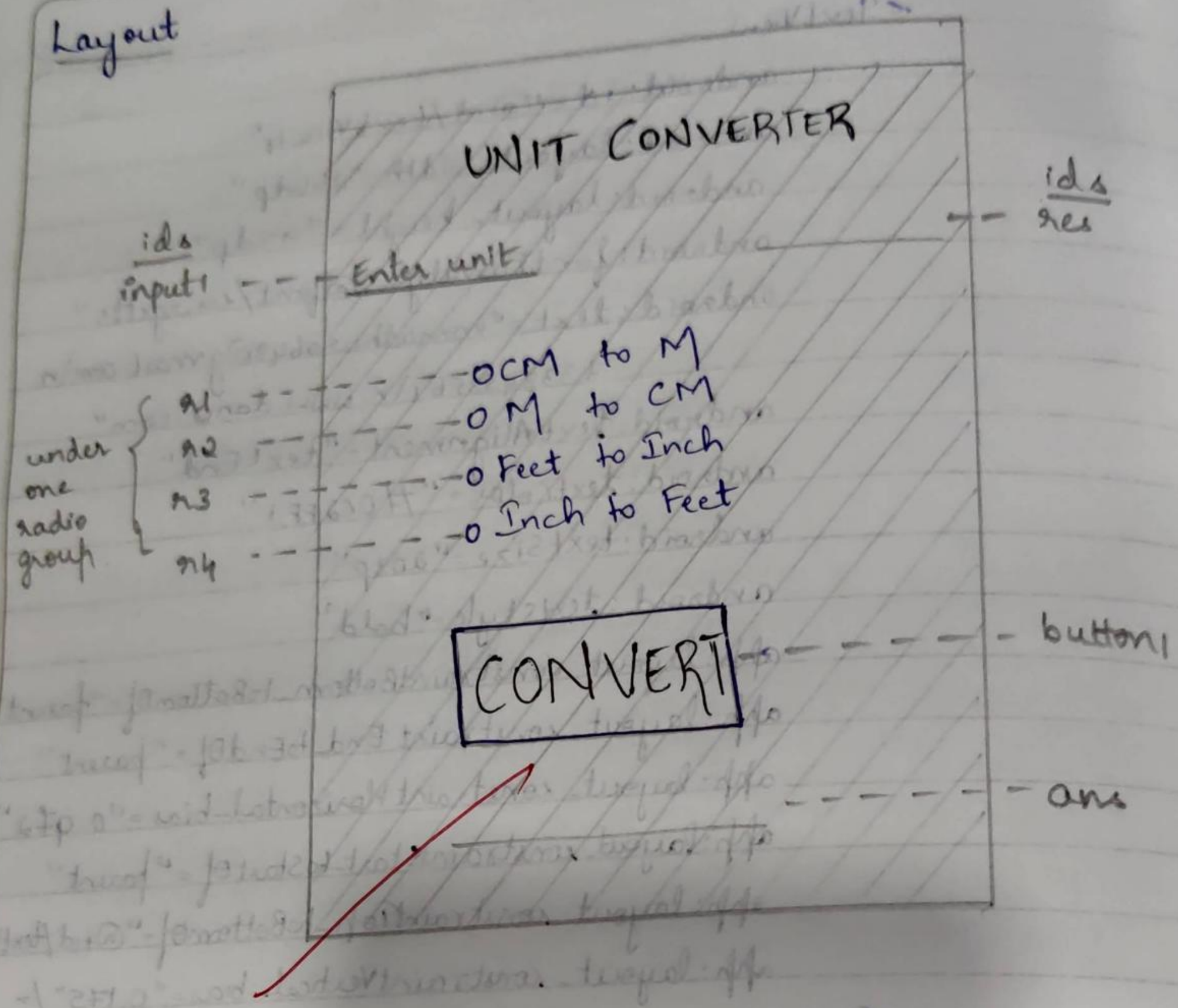
Layout



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DATE : ..... PAGE NO. ..... EXP. NO. 5

Aim: to develop an Android application, "Currency converter" using Spinners.

Java code:

```
package com.cs108.currencyconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    EditText t1;
    TextView v1;
    Button b1;
    Spinner s1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        t1=(EditText) findViewById(R.id.inputt1);
        v1=(TextView) findViewById(R.id.res);
        b1=(Button) findViewById(R.id.button1);
        s1=(Spinner) findViewById(R.id.spinner1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String a=t1.getText().toString();
                float rup=Float.parseFloat(a);
                int x=s1.getSelectedItemPosition();
```


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In xml file add 'android:entries = "@array/choice"
array name in string.xml

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```
double num1=0;
if(x==1)
{
        num1=rup/74.77;
        v1.setText("Result=" +num1);
}
else if (x==2)
{
        num1=rup * 74.77;
        v1.setText("Result= "+num1);
}
else if (x==3)
{
        num1=rup/0.66;
        v1.setText("Result= " +num1);
}
else if (x==4)
{
        num1=rup *0.66;
        v1.setText("Result= " +num1);
}
else if (x==5)
{
        num1= rup/0.064;
        v1.setText("Result= " +num1);
}
else if (x==6)
{
        num1= rup *0.064;
        v1.setText("Result= "+num1);
}
else
  Toast.makeText(MainActivity.this, "Select from
      Spinner", Toast.LENGTH_SHORT).show();
}
});
}
}
```

Strings.xml

v. good

12/11/21

```
<resources>
    <string name="app_name">Currency converter</string>
    <string-array name="choice">
        <item>Select</item>
        <item>Rupee to dollar</item>
        <item>Dollar to Rupee</item>
        <item>Rupee to Yen</item> <item>Yen to Rupee</item>
        <item>Rupee to Korean Won</item> <item>Korean Won to Rupee</item>
    </string-array> </resources>
```

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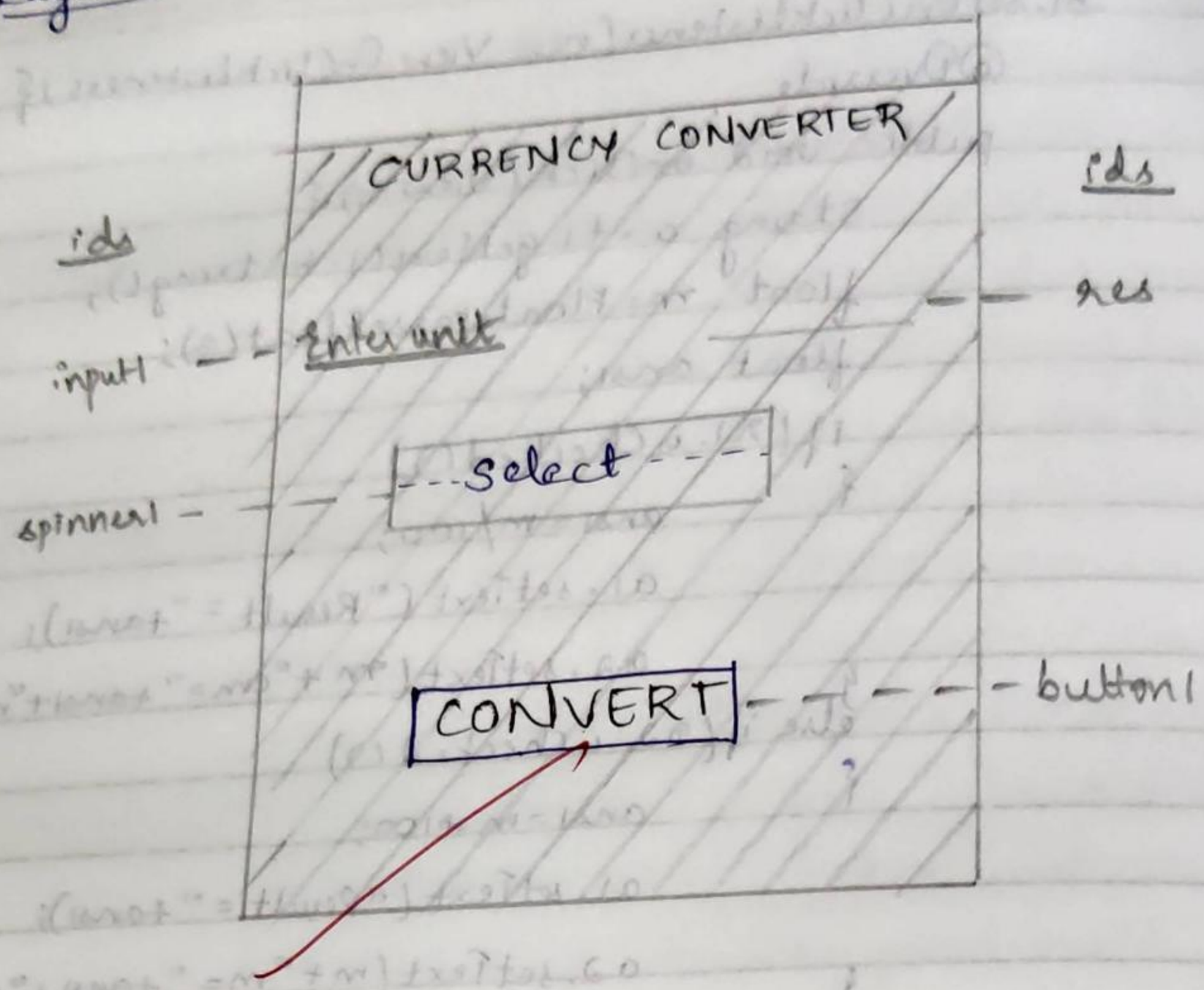
Layout



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