

NAME:M.Sumana

REG NO: 19BCE7316

LAB: CSE4002 Mobile Application Development LAB

Questions:

1.Display text message using toast

MainActivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toast.makeText(getApplicationContext(),"Hello
World!",Toast.LENGTH_SHORT).show();
    }
}
```

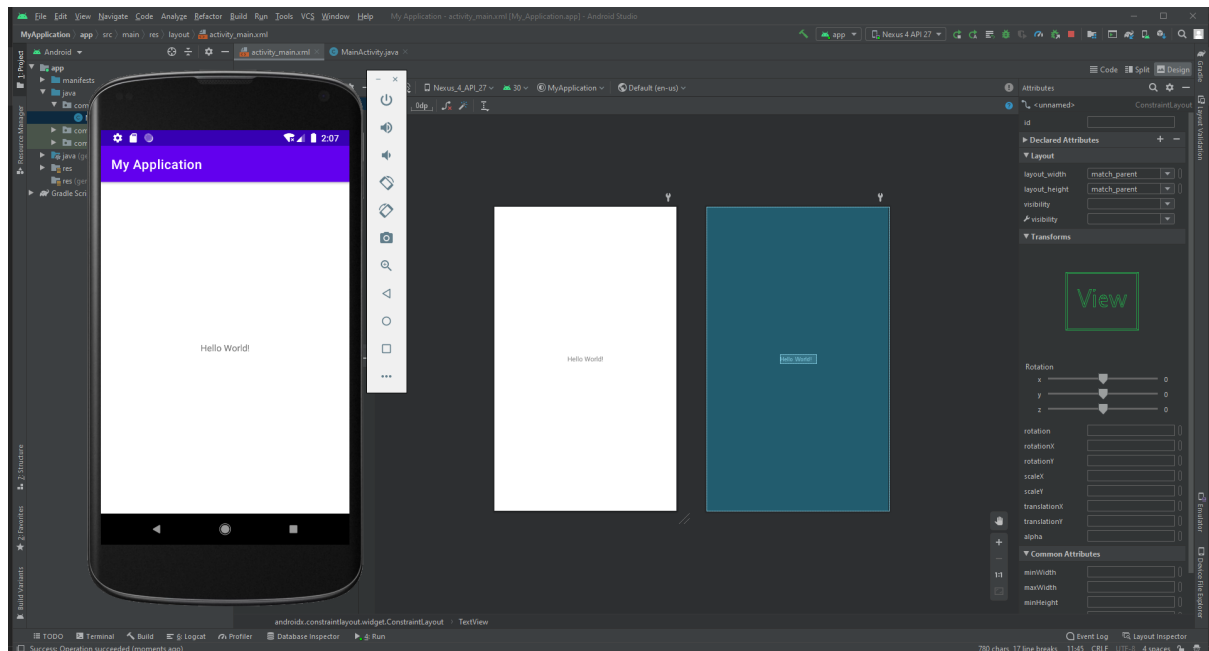
activity_main.xml

```
<?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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

OUTPUT



2. Create different types of text views. Take the screenshot of the output to find the difference.

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.java">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="TextView"
        tools:layout_editor_absoluteX="68dp"
        tools:layout_editor_absoluteY="16dp" />

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="Plain Text"
        tools:layout_editor_absoluteX="68dp"
```

```

tools:layout_editor_absoluteY="35dp" />

<EditText
    android:id="@+id/editTextTextPassword"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPassword"
    android:text="Password"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="80dp" />

<EditText
    android:id="@+id/editTextNumberPassword"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="numberPassword"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="125dp"
    tools:text="456456" />

<EditText
    android:id="@+id/editTextTextEmailAddress"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textEmailAddress"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="170dp"
    tools:text="fakemail@hotmail.com" />

<EditText
    android:id="@+id/editTextPhone"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="phone"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="215dp"
    tools:text="9876543210" />

<EditText
    android:id="@+id/editTextTextPostalAddress"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPostalAddress"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="260dp"
    tools:text="123, fake st, fake city" />

<EditText
    android:id="@+id/editTextTextMultiLine"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:gravity="start|top"

```

```
    android:inputType="textMultiLine"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="305dp"
    tools:text="Mult line text" />
```

<EditText

```
    android:id="@+id/editTextTime"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="time"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="350dp"
    tools:text="12:00" />
```

<EditText

```
    android:id="@+id/editTextDate"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="date"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="395dp"
    tools:text="07/03/2021" />
```

<EditText

```
    android:id="@+id/editTextNumber"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="number"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="440dp"
    tools:text="948465747574" />
```

<EditText

```
    android:id="@+id/editTextNumberSigned"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="numberSigned"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="485dp"
    tools:text="484545" />
```

<EditText

```
    android:id="@+id/editTextNumberDecimal"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="numberDecimal"
    tools:layout_editor_absoluteX="68dp"
    tools:layout_editor_absoluteY="530dp"
    tools:text="45454" />
```

<AutoCompleteTextView

```
    android:id="@+id/autoCompleteTextView"
    android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:text="AutoCompleteTextView"
        tools:layout_editor_absoluteX="68dp"
        tools:layout_editor_absoluteY="575dp" />

<MultiAutoCompleteTextView
    android:id="@+id/multiAutoCompleteTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="MultiAutoCompleteTextView"
    tools:layout_editor_absoluteX="72dp"
    tools:layout_editor_absoluteY="614dp" />

<CheckedTextView
    android:id="@+id/checkedTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="CheckedTextView"
    tools:layout_editor_absoluteX="145dp"
    tools:layout_editor_absoluteY="16dp" />

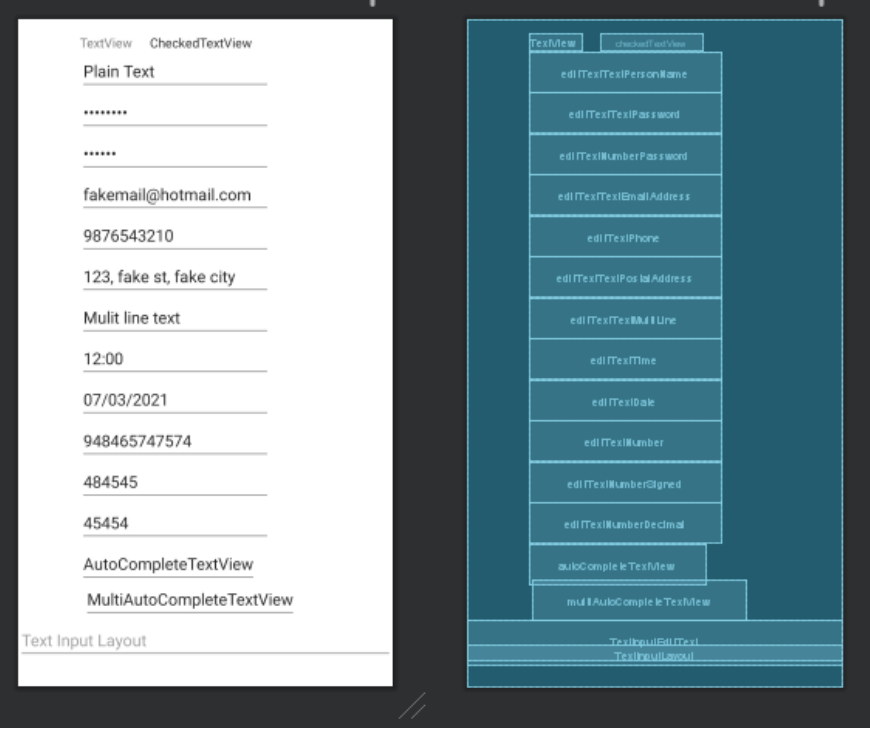
<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    tools:layout_editor_absoluteX="73dp"
    tools:layout_editor_absoluteY="686dp">

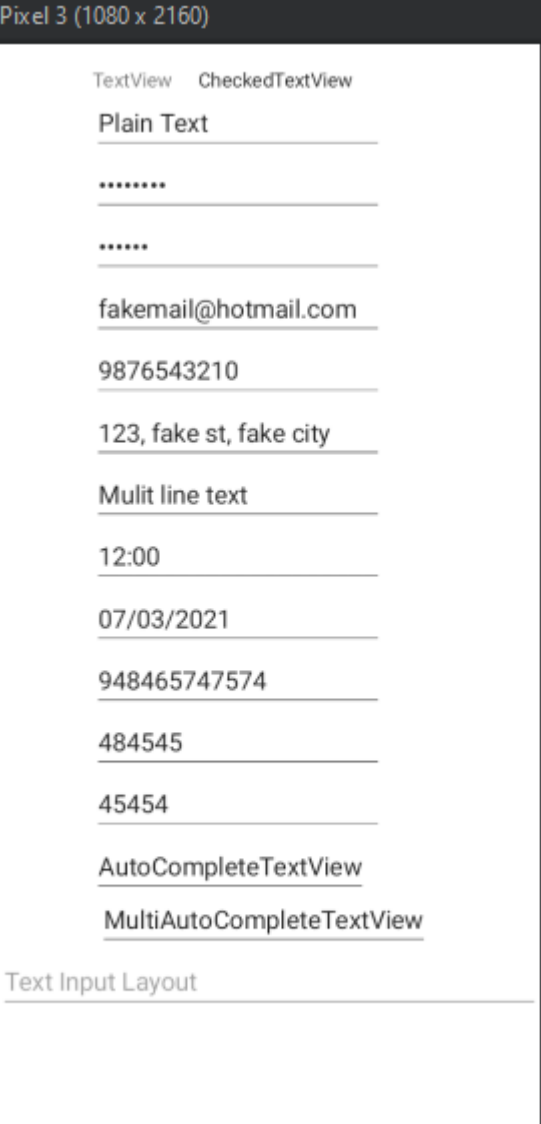
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputEditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Text Input Layout"
    tools:layout_editor_absoluteX="0dp"
    tools:layout_editor_absoluteY="659dp" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

OUTPUT:





3. Read the Name, Regno, Department and college. Display welcome name.

MainActivity.java

```
package com.example.registration;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText name, regno, dept, colg;
```

```

Button submit;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    name = findViewById(R.id.name);
    regno = findViewById(R.id.regno);
    dept = findViewById(R.id.dept);
    colg = findViewById(R.id.colg);
    submit = findViewById(R.id.submit);
    submit.setOnClickListener(new View.OnClickListener(){
        @Override
        public void onClick(View v){
            Toast.makeText(getApplicationContext(), ("Welcome
"+name.getText()),Toast.LENGTH_LONG).show();
        }
    });
}
}

```

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">

    <EditText
        android:id="@+id/name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="84dp"
        android:layout_marginLeft="84dp"
        android:layout_marginTop="196dp"
        android:ems="10"
        android:hint="enter name"
        android:inputType="textPersonName"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/pwd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="84dp"
        android:layout_marginLeft="84dp"
        android:layout_marginTop="32dp"
        android:ems="10"
        android:hint="enter password"
        android:inputType="textPassword"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/name" />

    <Button

```

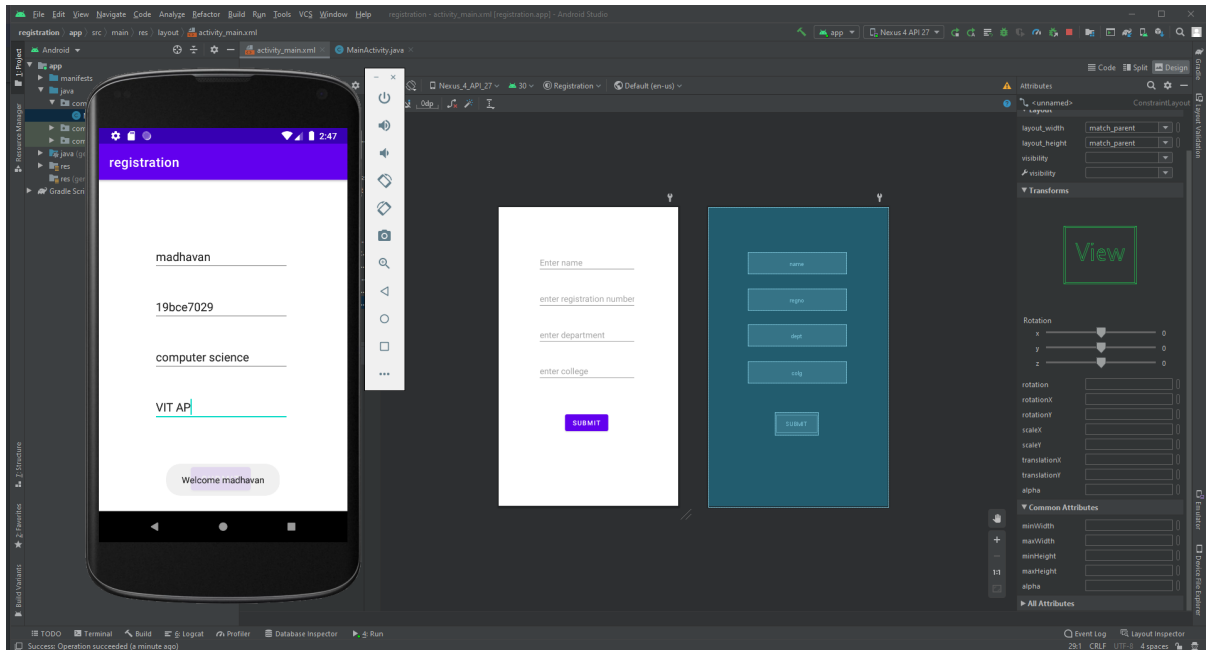


```

        android:id="@+id/submit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="142dp"
        android:layout_marginLeft="142dp"
        android:layout_marginTop="64dp"
        android:text="SUBMIT"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/pwd" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

OUTPUT:



4.Create a login page to read the User id and password. Check for validity and display “Login Successful” or “Login Failed”.

MainActivity.java

```

package com.example.loginapp;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText name, pwd;
    Button submit;
    @Override
    protected void onCreate(Bundle savedInstanceState) {

```

```

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name=findViewById(R.id.name);
        pwd=findViewById(R.id.pwd);
        submit=findViewById(R.id.submit);
        submit.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v){

if(name.getText().toString().equals("Madhavan")&&pwd.getText().toString().equals("8610555133"))
                Toast.makeText(getApplicationContext(), "Login
Successful",Toast.LENGTH_LONG).show();
            else
                Toast.makeText(getApplicationContext(), "Login
Failed",Toast.LENGTH_LONG).show();
            }
        });
    }
}

```

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">

    <EditText
        android:id="@+id/name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="84dp"
        android:layout_marginLeft="84dp"
        android:layout_marginTop="196dp"
        android:ems="10"
        android:hint="enter name"
        android:inputType="textPersonName"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/pwd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="84dp"
        android:layout_marginLeft="84dp"
        android:layout_marginTop="32dp"
        android:ems="10"
        android:hint="enter password"
        android:inputType="textPassword"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/name" />

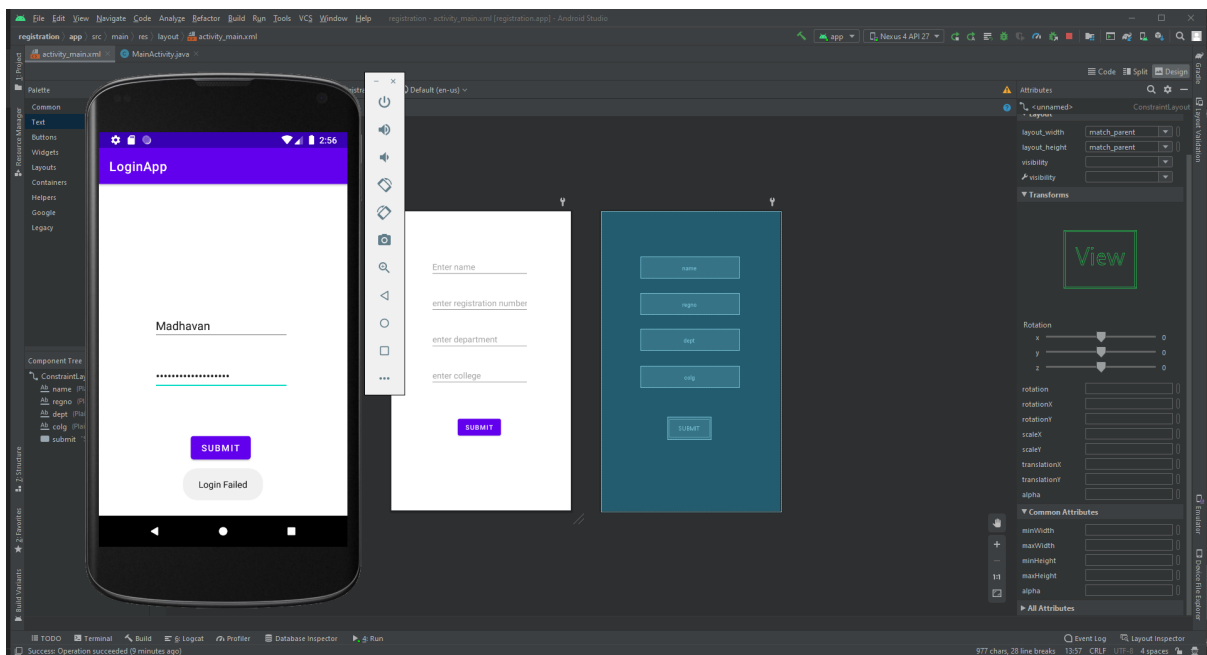
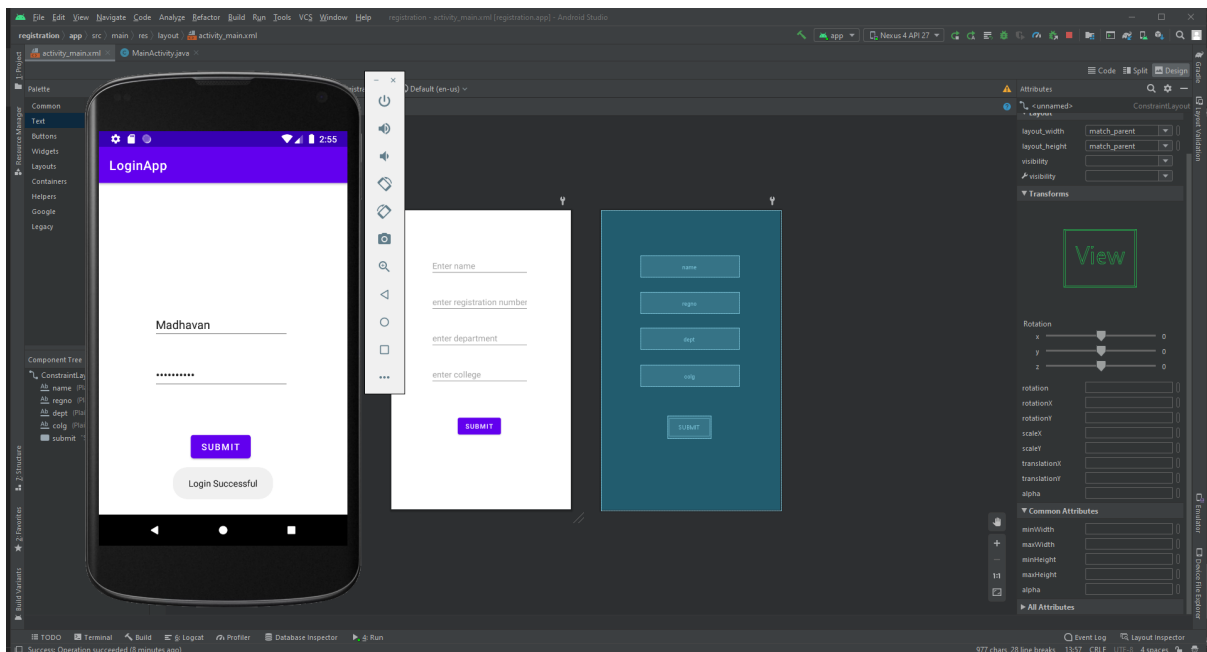
```

```

<Button
    android:id="@+id/submit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="142dp"
    android:layout_marginLeft="142dp"
    android:layout_marginTop="64dp"
    android:text="SUBMIT"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/pwd" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

OUTPUT



5. Read the two numbers using text to perform ADD, SUBTRACT, MULTIPLY and DIVIDE and display the output in a Text.

MainActivity.java

```
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;

public class MainActivity extends AppCompatActivity {

    EditText t1,t2,t3;

    Button b1,b2,b3,b4;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        t1=findViewById(R.id.T1);

        t2=findViewById(R.id.T2);

        t3=findViewById(R.id.T3);

        b1=findViewById(R.id.B1);

        b2=findViewById(R.id.B2);

        b3=findViewById(R.id.B3);

        b4=findViewById(R.id.B4);

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

```

        @Override

        public void onClick(View v) {

            double a = Double.parseDouble(t1.getText().toString());

            double b = Double.parseDouble(t2.getText().toString());

            double c = a + b;

            t3.setText(String.valueOf(c));

        }

    });

    b2.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            double a = Double.parseDouble(t1.getText().toString());

            double b = Double.parseDouble(t2.getText().toString());

            double c = a - b;

            t3.setText(String.valueOf(c));

        }

    });

    b3.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            double a = Double.parseDouble(t1.getText().toString());

            double b = Double.parseDouble(t2.getText().toString());

            double c = a * b;

            t3.setText(String.valueOf(c));

        }

    });

    b4.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

```

```

        double a = Double.parseDouble(t1.getText().toString());

        double b = Double.parseDouble(t2.getText().toString());

        double c = a / b;

        t3.setText(String.valueOf(c));

    }

});

}

}

```

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">

    <EditText

        android:id="@+id/T2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="24dp"

        android:ems="10"

        android:hint="Enter a number"

        android:inputType="number"

        app:layout_constraintStart_toStartOf="@+id/T1"

        app:layout_constraintTop_toBottomOf="@+id/T1" />

```

<EditText

```
    android:id="@+id/T1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="108dp"
    android:layout_marginEnd="86dp"
    android:autofillHints=""
    android:ems="10"
    android:hint="Enter a number"
    android:inputType="number"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

<Button

```
    android:id="@+id/B1"
    android:layout_width="wrap_content"
    android:layout_height="48dp"
    android:layout_marginTop="32dp"
    android:text="+"
    app:layout_constraintStart_toStartOf="@+id/T2"
    app:layout_constraintTop_toBottomOf="@+id/T2" />
```

<Button

```
    android:id="@+id/B2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="32dp"
```

```
    android:text="-"

    app:layout_constraintEnd_toEndOf="@+id/T2"

    app:layout_constraintTop_toBottomOf="@+id/T2" />
```

<Button

```
    android:id="@+id/B3"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="*"

    app:layout_constraintStart_toStartOf="@+id/B1"

    app:layout_constraintTop_toBottomOf="@+id/B1" />
```

<Button

```
    android:id="@+id/B4"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="/"

    app:layout_constraintStart_toStartOf="@+id/B2"

    app:layout_constraintTop_toBottomOf="@+id/B2" />
```

<EditText

```
    android:id="@+id/T3"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginTop="36dp"

    android:ems="10"

    android:hint="Result"

    android:importantForAutofill="no"

    android:inputType="number"
```

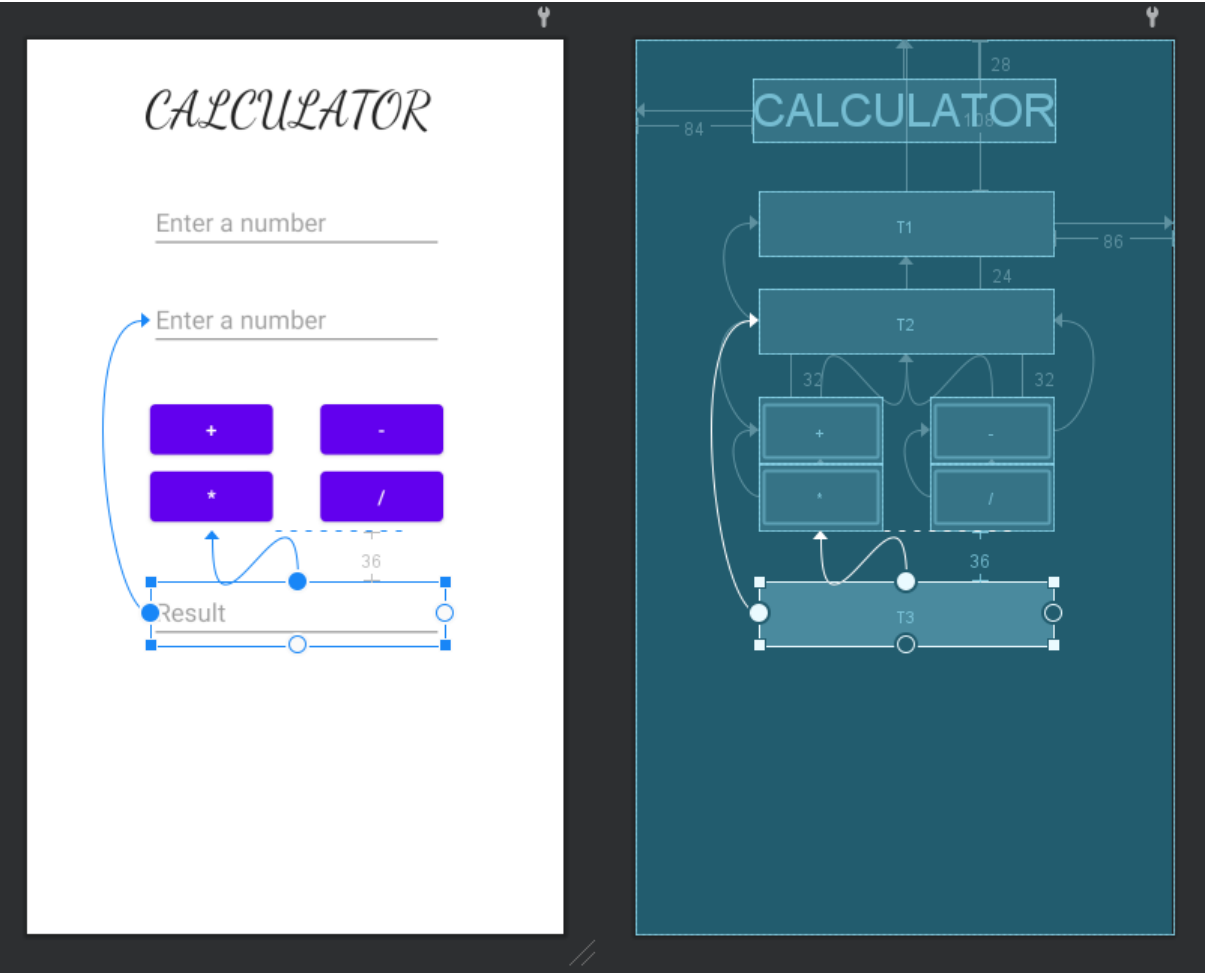


```
app:layout_constraintStart_toStartOf="@+id/T2"  
app:layout_constraintTop_toBottomOf="@+id/B3" />
```

```
<TextView
```

```
    android:id="@+id/textView"  
    android:layout_width="216dp"  
    android:layout_height="45dp"  
    android:layout_marginStart="84dp"  
    android:layout_marginTop="28dp"  
    android:fontFamily="cursive"  
    android:text="CALCULATOR"  
    android:textAppearance="@style/TextAppearance.AppCompat.Large"  
    android:textSize="36sp"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toTopOf="parent" />
```

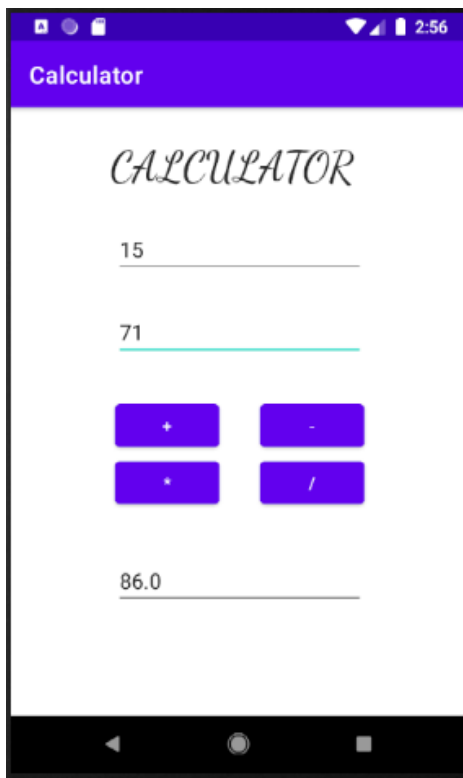
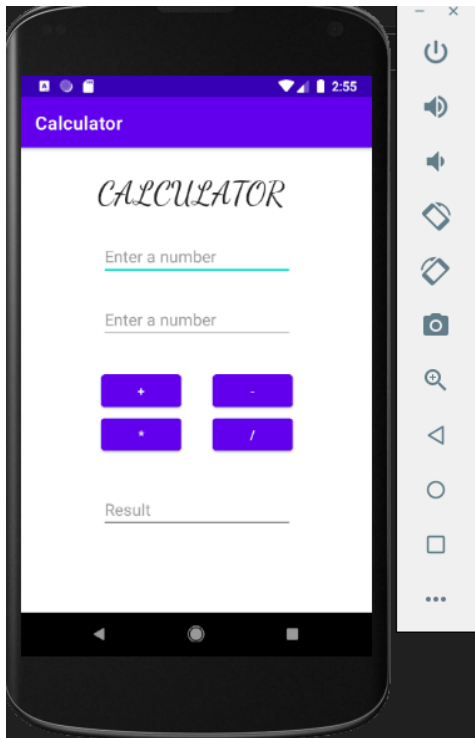
```
</androidx.constraintlayout.widget.ConstraintLayout>
```



OUTPUT:

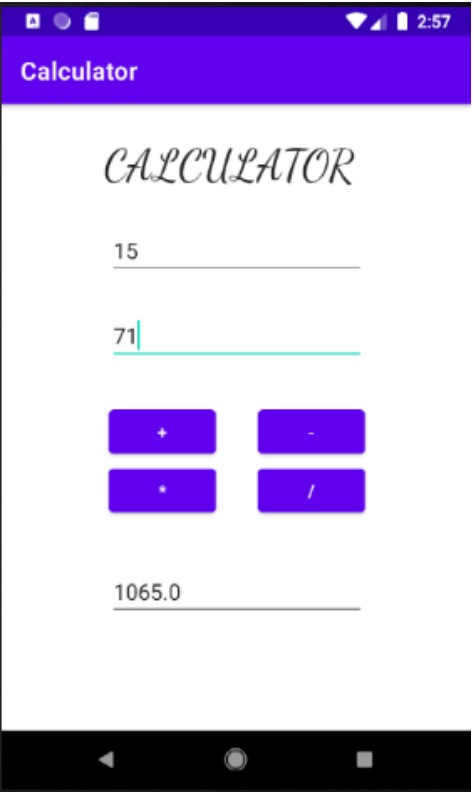
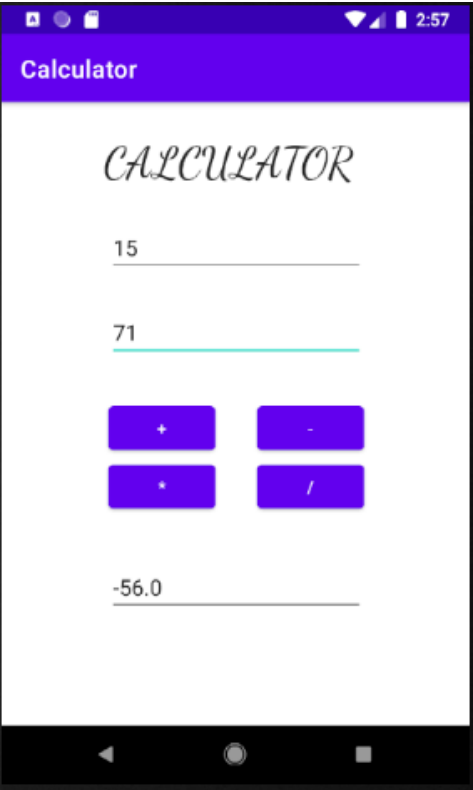
LAYOUT

ADDITION

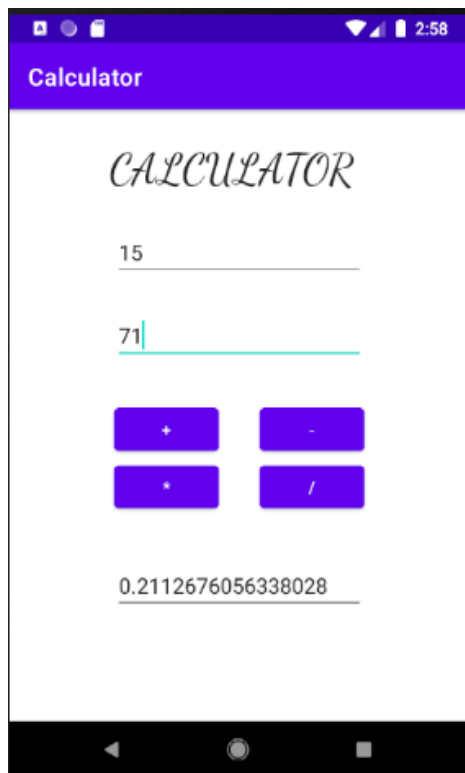


SUBTRACTION

MULTIPLICATION



DIVISION



```

public class MainActivity extends AppCompatActivity {
    ImageView img;
    Button b;
    int flag = 0;

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

        img = (ImageView) findViewById(R.id.imageView1);
        b = (Button) findViewById(R.id.button1);

        b.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub

                if (flag == 0) {
                    img.setImageResource(R.drawable.home1);
                    flag = 1;
                } else if (flag == 1) {
                    img.setImageResource(R.drawable.home2);
                    flag = 2;
                } else if (flag == 2) {
                    img.setImageResource(R.drawable.home3);
                    flag = 0;
                }
            }
        });
    }
}

```

```
@Override
protected void onStart() {
    super.onStart();
    Log.d(LOG_TAG, "onStart");
}

@Override
protected void onPause() {
    super.onPause();
    Log.d(LOG_TAG, "onPause");
}

@Override
protected void onRestart() {
    super.onRestart();
    Log.d(LOG_TAG, "onRestart");
}

@Override
protected void onResume() {
    super.onResume();
    Log.d(LOG_TAG, "onResume");
}

@Override
protected void onStop() {
    super.onStop();
    Log.d(LOG_TAG, "onStop");
}

@Override
protected void onDestroy() {
```