

# VIT-AP UNIVERSITY, ANDHRA PRADESH

## Lab Sheet I : Basic Views of Android Studio

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### Lab1:

1.Exploring all types of Texts supported in Android studio. Screen shot the keyboards that popsup. Observe the difference.

### CODE:

#### Activity\_main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="75dp"
        android:text="CLICK"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextTextPassword" />

    <EditText
        android:id="@+id/editTextTextPassword"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="193dp"
        android:ems="10"
        android:hint="Enter Password"
        android:inputType="textPassword"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

## MainActivty.java

```
package com.example.textmessage;

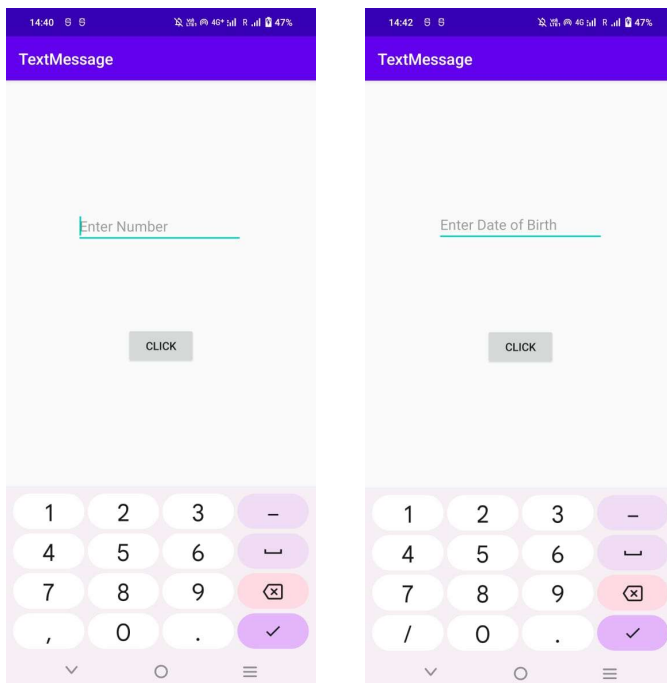
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

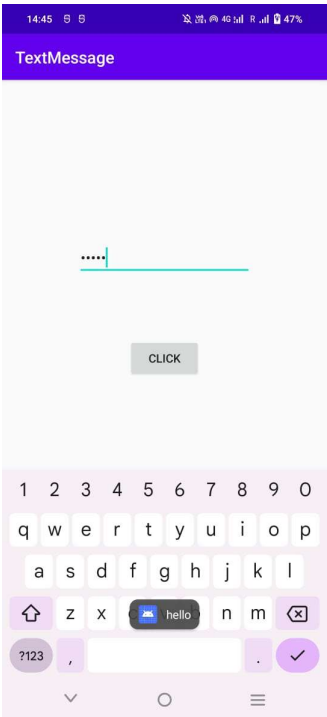
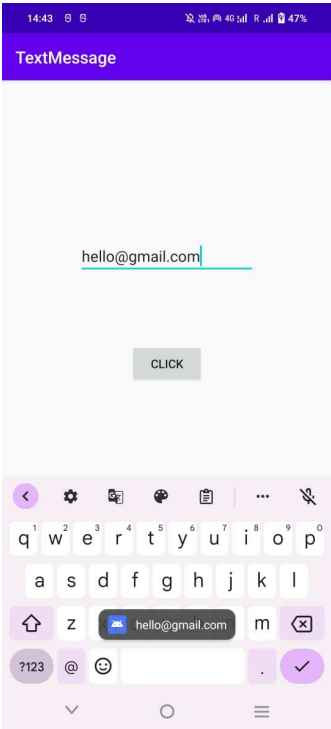
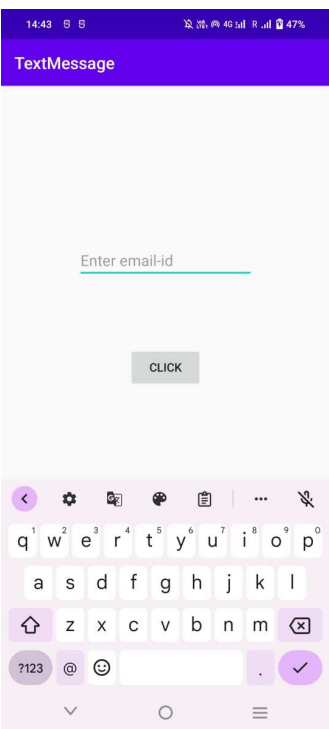
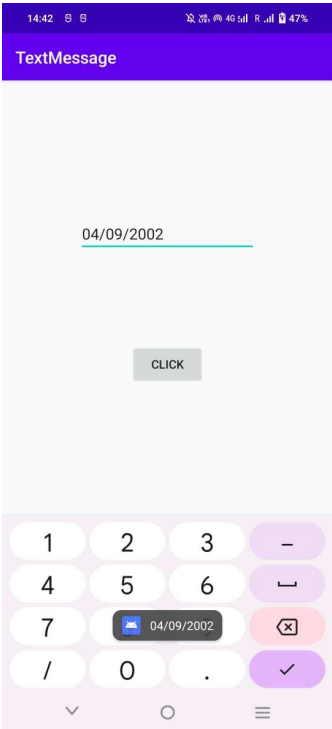
public class MainActivity extends AppCompatActivity {
    EditText e;
    Button b;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e = findViewById(R.id.editTextTextPassword);
        b = findViewById(R.id.button);

        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String s = e.getText().toString();
                Toast.makeText(getApplicationContext(), s ,
Toast.LENGTH_LONG).show();
            }
        });
    }
}
```

## OUTPUT:





## Display a toast Message

### Activity\_main.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">

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="282dp"
        android:ems="10"
        android:hint="Enter Name"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="55dp"
        android:layout_marginTop="56dp"
        android:text="CLICK"
        app:layout_constraintStart_toStartOf="@+id/editTextTextPersonName"
        app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName"
    />
</android.support.constraint.ConstraintLayout>
```

### MainActivity.java:

```
package com.example.printname;

import android.support.v7.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 e;
    Button b;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e = findViewById(R.id.editTextTextPersonName);
        b = findViewById(R.id.button);

        b.setOnClickListener(new View.OnClickListener() {
            @Override
```

```

        public void onClick(View view) {
            String s = e.getText().toString();
            Toast.makeText(MainActivity.this, s,
Toast.LENGTH_LONG).show();
        }
    });
}
}

```

output:



Read a Name from EditText and display hello Name.

Code:

**Activity\_main.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">

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="282dp"
        android:ems="10"
        android:hint="Enter Name"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

```

```

        <Button
            android:id="@+id/button"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="55dp"
            android:layout_marginTop="56dp"
            android:text="CLICK"
            app:layout_constraintStart_toStartOf="@+id/editTextTextPersonName"
            app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName"
        />
    </android.support.constraint.ConstraintLayout>

```

## MainActivty.java:

```

package com.example.printname;

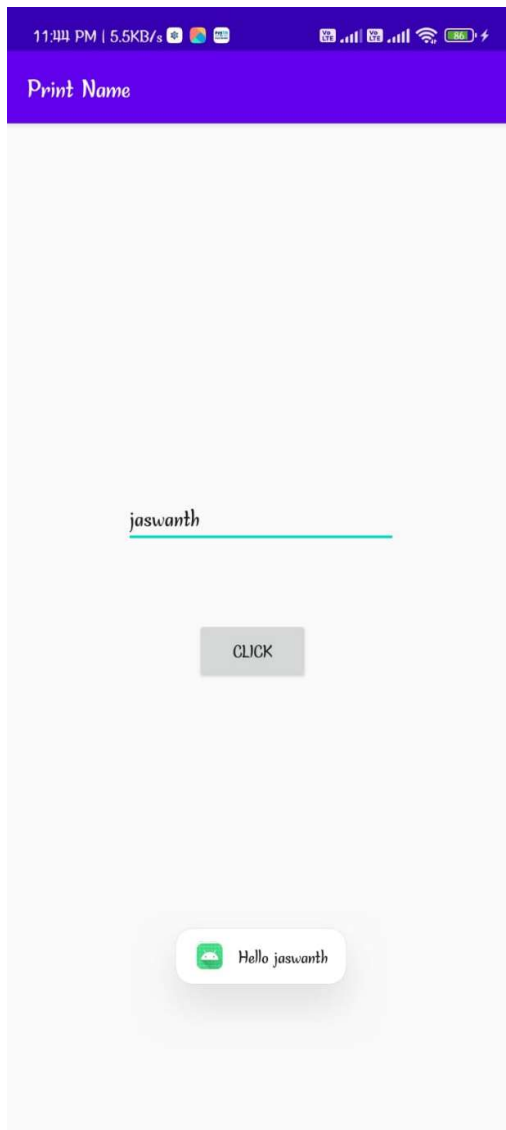
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText e;
    Button b;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e = findViewById(R.id.editTextTextPersonName);
        b = findViewById(R.id.button);

        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String s = e.getText().toString();
                Toast.makeText(MainActivity.this, "Hello " + s,
                    Toast.LENGTH_LONG).show();
            }
        });
    }
}

```

## OUTPUT:



Read username and password and check for validity, and display login successful or failure.

## CODE:

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/e1"
```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="103dp"
        android:ems="10"
        android:hint="Enter Username"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/e2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="55dp"
    android:ems="10"
    android:hint="Enter Password"
    android:inputType="textPassword"
    app:layout_constraintStart_toStartOf="@+id/e1"
    app:layout_constraintTop_toBottomOf="@+id/e1" />

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="61dp"
    android:text="SUBMIT"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/e2" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## MainActivity.java

```

package com.example.useridpassword;

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 {
    Button b1;
    EditText e1, e2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1 = findViewById(R.id.button);
        e1 = findViewById(R.id.e1);
        e2 = findViewById(R.id.e2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String u = e1.getText().toString();
                String p = e2.getText().toString();
                e1.setText(u);
            }
        });
    }
}

```



```

        if(u.equals("Hemanth") && p.equals("hello")){
            Toast.makeText(getApplicationContext(), "Welcome " + u
+ "!!!" , Toast.LENGTH_LONG).show();
        }

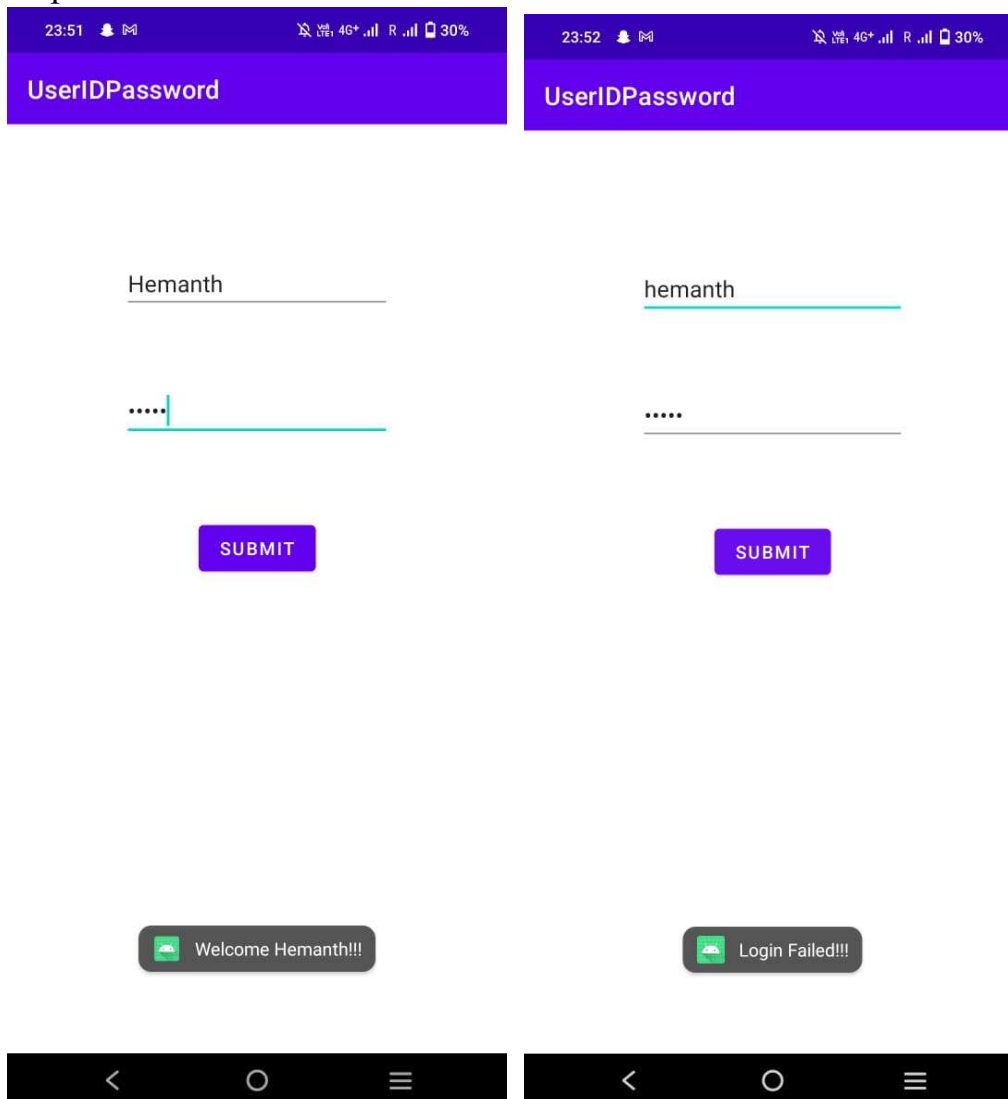
        else{
            Toast.makeText(getApplicationContext(), "Login
Failed!!!" , Toast.LENGTH_LONG).show();
        }

    }

});
}
}

```

output:



Read two numbers and write a program to add, subtract, multiply and divide.

Code:

MainActivity.java:

```
package com.example.calculator;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    Button b1,b2,b3,b4;
    EditText e1, e2;
    TextView t1, t2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1 = findViewById(R.id.button);
        b2 = findViewById(R.id.button2);
        b3 = findViewById(R.id.button3);
        b4 = findViewById(R.id.button4);
        e1 = findViewById(R.id.editTextNumber);
        e2 = findViewById(R.id.editTextNumber2);
        t1 = findViewById(R.id.textView);
        t2 = findViewById(R.id.textView2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                double p = Double.parseDouble(e1.getText().toString());
                double k = Double.parseDouble(e2.getText().toString());
                double res = p+k;
                t1.setText(String.format("%.2f",res));
                Toast.makeText(getApplicationContext(), "Addition of two
numbers is " + res , Toast.LENGTH_SHORT).show();
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                double p = Double.parseDouble(e1.getText().toString());
                double k = Double.parseDouble(e2.getText().toString());
                double res = p-k;
                t1.setText(String.format("%.2f",res));
                Toast.makeText(getApplicationContext(), "Subtraction of two
numbers is " + res , Toast.LENGTH_SHORT).show();
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                double p = Double.parseDouble(e1.getText().toString());
                double k = Double.parseDouble(e2.getText().toString());
```

```

        double res = p*k;
        t1.setText(String.format("%.2f",res));
        Toast.makeText(getApplicationContext(), "Multiplication of
two numbers is " + res , Toast.LENGTH_SHORT).show();
    }
});
b4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        double p = Double.parseDouble(e1.getText().toString());
        double k = Double.parseDouble(e2.getText().toString());
        double res = p/k;
        t1.setText(String.format("%.2f",res));
        Toast.makeText(getApplicationContext(), "Division of two
numbers is " + res , Toast.LENGTH_SHORT).show();
    }
});
}
}
}

```

Activity\_main.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">

    <EditText
        android:id="@+id/editTextNumber"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="126dp"
        android:layout_marginBottom="169dp"
        android:ems="10"
        android:hint="Enter the number"
        android:inputType="number"
        app:layout_constraintBottom_toTopOf="@+id/button4"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/editTextNumber2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="124dp"
        android:ems="10"
        android:hint="Enter the number"
        android:inputType="number"
        app:layout_constraintBottom_toTopOf="@+id/button3"
        app:layout_constraintStart_toStartOf="@+id/editTextNumber"
        app:layout_constraintTop_toBottomOf="@+id/editTextNumber" />

```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="15dp"
    android:layout_marginBottom="237dp"
    android:hint="Result"
    android:textColor="@color/black"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="@+id/button3"
    app:layout_constraintTop_toBottomOf="@+id/button3" />

<Button
    android:id="@+id/button"
    android:layout_width="0dp"
    android:layout_height="51dp"
    android:layout_marginStart="50dp"
    android:layout_marginEnd="30dp"
    android:background="@color/purple_200"
    android:text="+"
    app:layout_constraintBaseline_toBaselineOf="@+id/button2"
    app:layout_constraintEnd_toStartOf="@+id/button2"
    app:layout_constraintStart_toStartOf="parent" />

<Button
    android:id="@+id/button2"
    android:layout_width="0dp"
    android:layout_height="51dp"
    android:layout_marginEnd="51dp"
    android:background="@color/purple_200"
    android:text="-"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/button3"
    app:layout_constraintStart_toEndOf="@+id/button"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/button3"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_marginEnd="44dp"
    android:layout_marginBottom="84dp"
    android:background="@color/purple_200"
    android:text="*"
    app:layout_constraintBottom_toTopOf="@+id/textView"
    app:layout_constraintEnd_toStartOf="@+id/button4"
    app:layout_constraintStart_toEndOf="@+id/button2"
    app:layout_constraintTop_toBottomOf="@+id/editTextNumber2" />

<Button
    android:id="@+id/button4"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_marginEnd="79dp"
    android:layout_marginBottom="340dp"
    android:background="@color/purple_200"
    android:text="/"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/button3"
    app:layout_constraintTop_toBottomOf="@+id/editTextNumber" />
```

```

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="57dp"
    android:layout_marginBottom="50dp"
    android:text="CALCULATOR"
    android:textColor="#0B0B0A"
    app:layout_constraintBottom_toTopOf="@+id/editTextNumber"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>

```

Output:

