**PRACTICAL: 2**

**AIM:**

Create an android application to calculate sum of two numbers and gives result in Toast Message.

**THEORY:**

**TextView:** TextView is a user interface control which is used to set and display the text to the user based on our requirements.In android, we can create a TextView control in two ways either in XML layout file or create it in Activity file programmatically.

Attributes: android:id, android:capitalize, android:cursorVisible, android:editable, android:gravity etc.

**EditText**: In Android, [EditText](https://abhiandroid.com/ui/edittext/" \o "EditText" \t "_self) is a standard entry widget in android apps. It is an overlay over [TextView](https://abhiandroid.com/ui/textview/" \o "TextView" \t "_self) that configures itself to be editable. [EditText](https://abhiandroid.com/ui/edittext/" \o "EditText" \t "_self) is a subclass of [TextView](https://abhiandroid.com/ui/textview/" \o "TextView" \t "_self) with text editing operations. **We often use EditText in our applications in order to provide an input or text field, especially in forms.** The most simple example of [EditText](https://abhiandroid.com/ui/edittext/" \o "EditText" \t "_self) is Login or Sign-in form.

Attributes: android:id, android:capitalize, android:cursorVisible, android:editable, android:gravity etc.

**Button:** In Android, Button represents a push button. A Push buttons can be clicked or pressed by the user to perform an action. There are different types of buttons used in android such as CompoundButton, ToggleButton, RadioButton. Button is a subclass of TextView class and compound button is the subclass of Button class.

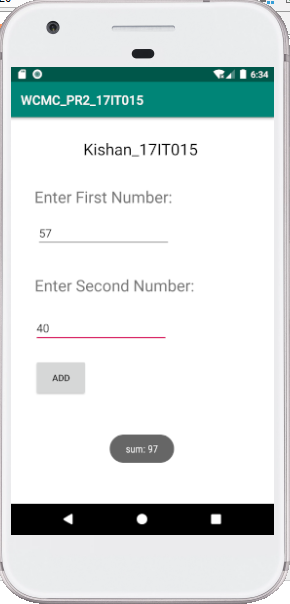
**Toast Message**: A toast provides simple feedback about an operation in a small popup. It only fills the amount of space required for the message and the current activity remains visible and interactive. Toasts automatically disappear after a timeout.

The android.widget.Toast class is the subclass of java.lang.Object class.

**CODE:**

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| **MainActivity.java**  package com.example.wcmc\_pr2\_17it015;  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 et1 ;  EditText et2 ;  View v1;  @Override  protected void onCreate(Bundle savedInstanceState) {  super.onCreate(savedInstanceState);  setContentView(R.layout.*activity\_main*);   v1 = this.getWindow().getDecorView();  v1.setBackgroundResource(R.color.*background*);   b1 = findViewById(R.id.*b1*);  et1 = findViewById(R.id.*et1*);  et2 = findViewById(R.id.*et2*);   b1.setOnClickListener(new View.OnClickListener() {  @Override  public void onClick(View v) {  int n1 = Integer.*parseInt*(et1.getText().toString());  int n2 = Integer.*parseInt*((et2.getText().toString()));  n1 = n1+n2;  Toast.*makeText*(getApplicationContext(),"sum: "+Integer.*toString*(n1),Toast.*LENGTH\_LONG*).show();  }  });  } }  **AndroidManifest.xml**  *<?*xml version="1.0" encoding="utf-8"*?>* <manifest xmlns:android="http://schemas.android.com/apk/res/android"  package="com.example.wcmc\_pr2\_17it015">   <application  android:allowBackup="true"  android:icon="@mipmap/ic\_launcher"  android:label="@string/app\_name"  android:roundIcon="@mipmap/ic\_launcher\_round"  android:supportsRtl="true"  android:theme="@style/AppTheme">  <activity android:name=".MainActivity">  <intent-filter>  <action android:name="android.intent.action.MAIN" />   <category android:name="android.intent.category.LAUNCHER" />  </intent-filter>  </activity>  </application> </manifest>  **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"  android:id="@+id/p1"  tools:context=".MainActivity">   <TextView  android:id="@+id/textView0"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginStart="112dp"  android:layout\_marginLeft="112dp"  android:layout\_marginTop="32dp"  android:layout\_marginEnd="117dp"  android:layout\_marginRight="117dp"  android:text="Kishan\_17IT015"  android:textSize="25sp"  android:textColor="#000000"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toTopOf="parent"  tools:ignore="DuplicateIds,MissingConstraints" />   <TextView  android:id="@+id/textView1"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginStart="37dp"  android:layout\_marginLeft="37dp"  android:layout\_marginTop="41dp"  android:layout\_marginEnd="152dp"  android:layout\_marginRight="152dp"  android:text="Enter First Number: "  android:textSize="25sp"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/textView0"  tools:ignore="MissingConstraints" />   <TextView  android:id="@+id/textView2"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_below="@id/et1"  android:layout\_marginStart="37dp"  android:layout\_marginLeft="37dp"  android:layout\_marginTop="42dp"  android:layout\_marginEnd="117dp"  android:layout\_marginRight="117dp"  android:text="Enter Second Number: "  android:textSize="25sp"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/et1"  tools:ignore="MissingConstraints" />   <EditText  android:id="@+id/et1"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_below="@id/textView1"  android:layout\_marginStart="37dp"  android:layout\_marginLeft="37dp"  android:layout\_marginTop="18dp"  android:layout\_marginEnd="161dp"  android:layout\_marginRight="161dp"  android:ems="10"  android:inputType="text"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintHorizontal\_bias="1.0"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/textView1"  tools:ignore="MissingConstraints" />   <EditText  android:id="@+id/et2"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_below="@id/textView2"  android:layout\_marginStart="37dp"  android:layout\_marginLeft="37dp"  android:layout\_marginTop="28dp"  android:layout\_marginEnd="161dp"  android:layout\_marginRight="161dp"  android:ems="10"  android:inputType="text"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintHorizontal\_bias="0.0"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/textView2"  tools:ignore="MissingConstraints" />   <Button  android:id="@+id/b1"  android:layout\_width="83dp"  android:layout\_height="59dp"  android:layout\_below="@id/et2"  android:layout\_marginStart="37dp"  android:layout\_marginLeft="37dp"  android:layout\_marginTop="25dp"  android:layout\_marginEnd="291dp"  android:layout\_marginRight="291dp"  android:text="add"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/et2"  tools:ignore="MissingConstraints" />  </androidx.constraintlayout.widget.ConstraintLayout>  **Colors.xml**  *<?*xml version="1.0" encoding="utf-8"*?>* <resources>  <color name="colorPrimary">#008577</color>  <color name="colorPrimaryDark">#00574B</color>  <color name="colorAccent">#D81B60</color>  <color name="background">#B9AFF5E3</color> </resources> |

**OUTPUT:**



**LATEST APPLICATIONS:**

G-Mail, Google Drive, Google Classroom, Paytm etc.

**LEARNING OUTCOME:**

In above application we can create a functionality in which user can enter two numbers and then click on ADD button it will display sum of that number in toast message for to develop this app we use TextView, EditText, Button and Toast Message functionalities of the android.