```
XML DOC
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
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/entrada"
       android:layout width="0dp"
       android:layout_height="47dp"
       android:layout marginStart="34dp"
       android:layout marginLeft="34dp"
       android:layout marginTop="58dp"
       android:layout marginEnd="34dp"
       android:layout marginRight="34dp"
       android:ems="10"
       android:inputType="textPersonName"
       android:text="Input"
       app:layout constraintEnd toEndOf="parent"
       app:layout constraintStart toStartOf="parent"
       app:layout constraintTop toTopOf="parent" />
   <Button
       android:id="@+id/encriptar"
       android: layout width="wrap content"
       android:layout height="wrap content"
       android:layout marginStart="28dp"
       android:layout marginLeft="28dp"
       android:layout marginBottom="60dp"
       android: text="Encript"
       app:layout constraintBottom toBottomOf="parent"
       app:layout constraintStart toStartOf="parent"
       app:layout constraintTop toBottomOf="@+id/output" />
   <Button
       android:id="@+id/clc"
       android:layout_width="wrap_content"
       android: layout height="wrap content"
       android:layout marginEnd="16dp"
       android:layout marginRight="16dp"
       android: text="Clear"
       app:layout_constraintBaseline_toBaselineOf="@+id/encriptar"
       app:layout constraintEnd toEndOf="parent" />
   <Button
       android:id="@+id/decrt"
       android:layout width="wrap content"
       android:layout height="wrap content"
       android:layout marginStart="132dp"
```

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android:layout marginLeft="132dp"
    android:layout marginBottom="60dp"
    android:text="Decrypt"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout constraintStart toStartOf="@+id/encriptar" />
<EditText
   android:id="@+id/key"
    android:layout width="0dp"
    android:layout height="wrap content"
    android:layout marginStart="29dp"
    android:layout marginLeft="29dp"
    android:layout marginEnd="21dp"
    android:layout marginRight="21dp"
    android:layout marginBottom="210dp"
    android:ems="10"
    android:inputType="textEmailSubject|textPersonName"
    android:text="1"
    app:layout constraintBottom toBottomOf="parent"
    app:layout constraintEnd toStartOf="@+id/keylbl"
    app:layout constraintHorizontal chainStyle="spread inside"
    app:layout constraintStart toStartOf="parent" />
<TextView
    android:id="@+id/keylbl"
    android:layout width="40dp"
    android:layout height="31dp"
    android:layout_marginEnd="245dp"
    android:layout marginRight="245dp"
    android:layout marginBottom="216dp"
    android:text="key"
    android:textAppearance="@style/TextAppearance.AppCompat"
    android:textSize="18sp"
    app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd toEndOf="parent"
    app:layout constraintStart toEndOf="@+id/key" />
<EditText
    android:id="@+id/output"
    android:layout width="0dp"
    android:layout height="0dp"
    android:layout marginStart="33dp"
    android:layout marginLeft="33dp"
    android:layout marginTop="164dp"
    android:layout marginEnd="33dp"
    android:layout marginRight="33dp"
    android:layout marginBottom="193dp"
    android:ems="10"
    android:inputType="textPersonName"
    android: text="Output"
    app:layout constraintBottom toTopOf="@+id/encriptar"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="1.0"
    app:layout constraintStart toStartOf="parent"
```

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app:layout constraintTop toTopOf="parent" />
```

</android.support.constraint.ConstraintLayout>

```
Activity code
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.*;
import android.view.View;
public class MainActivity extends AppCompatActivity {
   private Button encriptar;
   private Button clear;
   private EditText salida;
   private EditText entrada;
   private Button decrypt;
  private TextView key;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);
       setupUIViews();
       setTitle("Programa");
       encriptar.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               salida.setText(codificacion(entrada.getText().toString()));
       });
       clear.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               salida.setText("Message");
               entrada.setText("Input");
       });
       decrypt.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               salida.setText(decodificacion(entrada.getText().toString()));
       });
   }
   private void setupUIViews(){
       encriptar= (Button) findViewById(R.id.encriptar);
       clear= (Button) findViewById(R.id.clc);
       salida=(EditText) findViewById(R.id.output);
       entrada=(EditText) findViewById(R.id.entrada);
       decrypt=(Button) findViewById(R.id.decrt);
       key=(TextView) findViewById(R.id.key);
   }
```

```
private String codificacion(String word) {
       int value;
       char[] w=word.toCharArray();
       try {
           for (int i = 0; i < w.length; i++) {</pre>
              value = (int) w[i] + Integer.valueOf(key.getText().toString());
               w[i] = (char) value;
           }
       }catch (Exception e) {
          return ("Key must be an integer.");
       return new String(w);
   private String decodificacion(String word) {
       int value;
       char[] w=word.toCharArray();
       try{
       for(int i=0;i<w.length;i++) {</pre>
           value=(int)w[i]-Integer .valueOf(key.getText().toString());
          w[i]=(char)value;
       }
       catch (Exception e) {
          return ("Key must be a number.");
       return new String(w);
}
```