Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas

Dispositivos Móviles

Práctica 19

Grupo: 2TM19

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1 XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />

</LinearLayout>
```

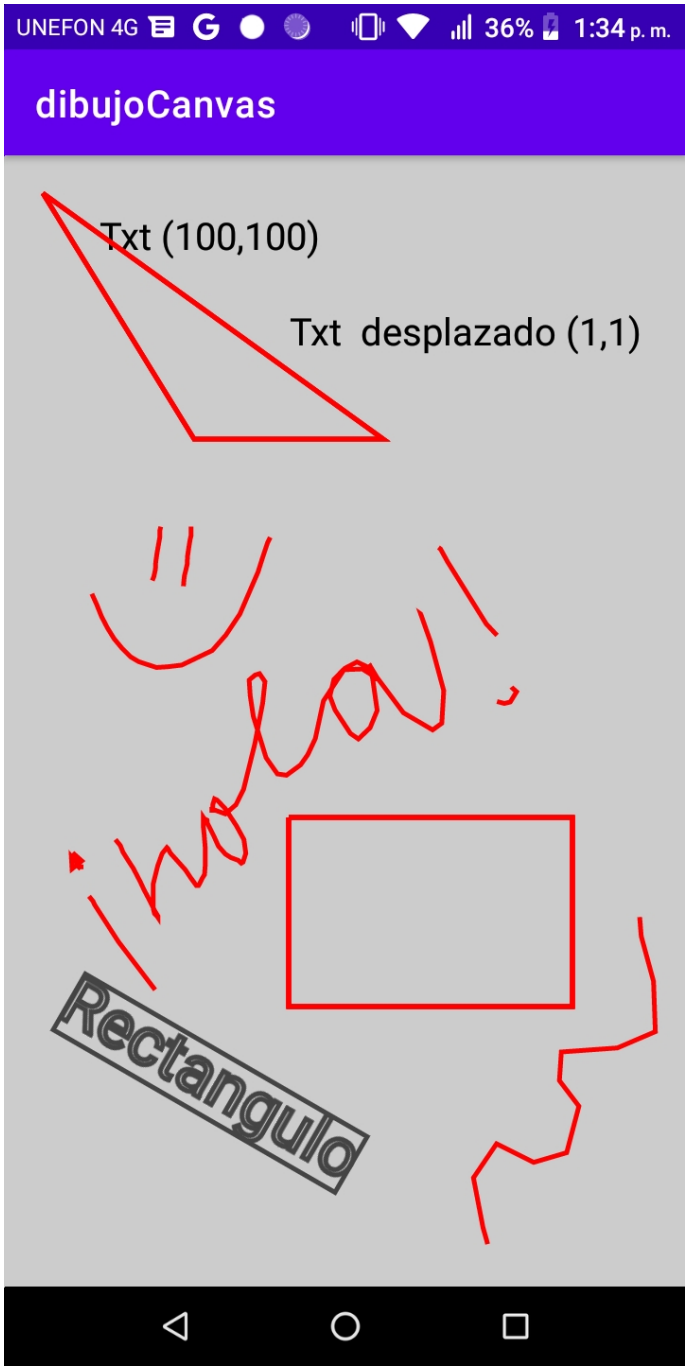
2 JAVA

```java
package com.example.dibujocanvas;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.Path;
import android.graphics.Rect;
import android.os.Bundle;
import android.view.MotionEvent;
import android.view.View;

public class MainActivity extends AppCompatActivity {

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    Dibujos D = new Dibujos(this);
    setContentView(D);
  }

  class Dibujos extends View {

```

```
26      float x = 40, y = 40, x1 = 0, y1 = 0;
27      Path path = new Path();
28      Path path1 = new Path();
29      Path path2 = new Path();
30      String accion = "";
31
32      public  Dibujos(Context context){
33        super(context);
34      }
35
36      protected void onDraw(Canvas canvas){
37        canvas.drawColor(Color.LTGRAY);
38        Paint pintura = new Paint();
39        pintura.setColor(Color.BLACK);
40        pintura.setTextSize(40);
41        pintura.setAntiAlias(true);
42        canvas.save();
43
44        canvas.drawText("Txt (100,100)",100,100,pintura);
45        canvas.translate(300,200);
46        canvas.drawText("Txt  desplazado (1,1)",1,1,pintura);
47        canvas.restore();
48        canvas.save();
49
50
51        Rect bounds = new Rect();
52        String txt = "Rectangulo";
53        pintura.setColor(Color.DKGRAY);
54        pintura.setTextSize(70);
55        pintura.getTextBounds(txt,0,txt.length(),bounds);
56        float cX = bounds.exactCenterX();
57        float cY = bounds.exactCenterY();
58        canvas.translate(40,1000);
59        pintura.setStyle(Paint.Style.STROKE);
60        pintura.setStrokeWidth(5);
61        canvas.rotate(30,cX,cY);
62        canvas.drawRect(bounds,pintura);
63        pintura.setColor(Color.DKGRAY);
64        canvas.drawText(txt, 0,0,pintura);
65        canvas.restore();
66
67        //Trazar l neas sobre una trayectoria
68        pintura.setColor(Color.RED);
69        pintura.setStyle(Paint.Style.STROKE);
70        path.moveTo(x,y);//punto inicial
71        path.lineTo(200, 300);
72        canvas.drawPath(path, pintura);
73        path.lineTo(400, 300);
74        canvas.drawPath(path, pintura);
75        path.lineTo(40, 40);
76        canvas.drawPath(path, pintura);
```

```
77
78          path2.moveTo(300, 700);
79          path2.lineTo(300, 900);
80          canvas.drawPath(path2, pintura);
81          path2.lineTo(600, 900);
82          canvas.drawPath(path2, pintura);
83          path2.lineTo(600, 700);
84          canvas.drawPath(path2, pintura);
85          path2.lineTo(300, 700);
86          canvas.drawPath(path2, pintura);
87
88          if(accion=="down"){
89            path1.moveTo(x1,y1);
90          }
91          if(accion=="move"){
92            path1.lineTo(x1,y1);
93          }
94          canvas.drawPath(path1, pintura);
95        }
96
97        public boolean onTouchEvent (MotionEvent evento){
98          x1 = evento.getX();
99          y1 = evento.getY();
100         if(evento.getAction() == MotionEvent.ACTION_DOWN){
101           accion = "down";
102         }
103         if(evento.getAction() == MotionEvent.ACTION_MOVE){
104           accion = "move";
105         }
106         invalidate();
107         return true;
108       }
109     }
110   }
```

3 Resultados


UNEFON 4G
36%
1:34 p. m.
dibujoCanvas
Txt (100,100)
Txt desplazado (1,1)
¡¡Hola!!
Rectangulo