Componentes Android Studio

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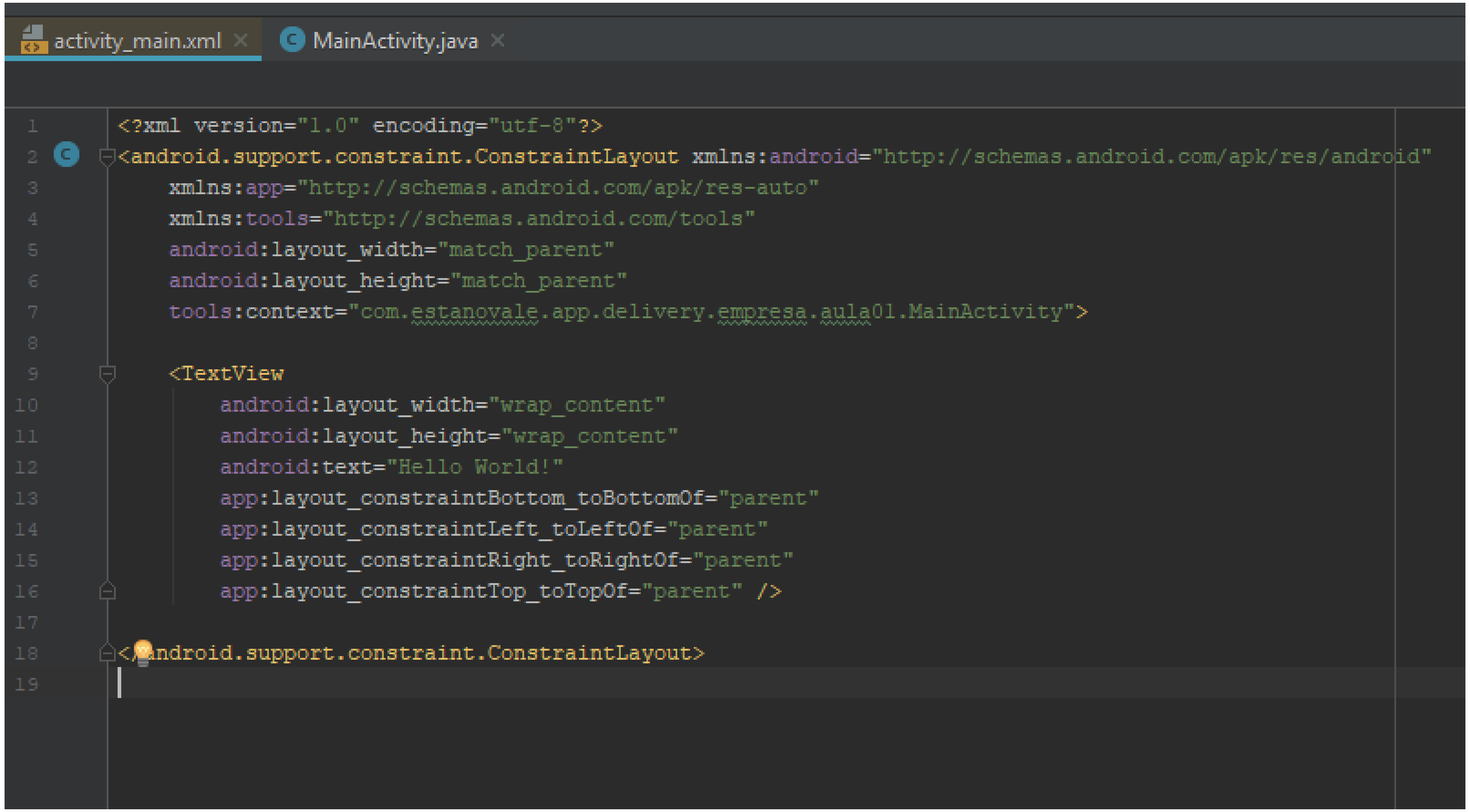
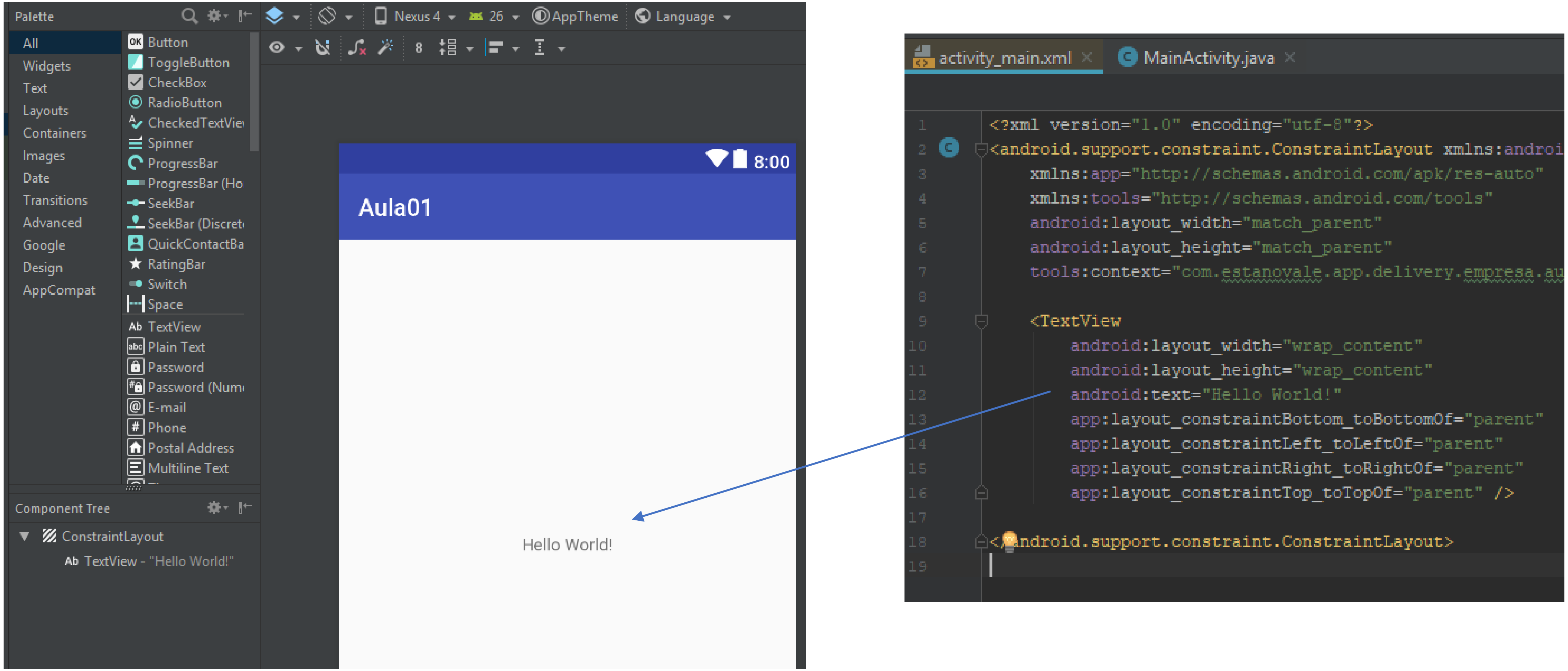
Arquivo xml



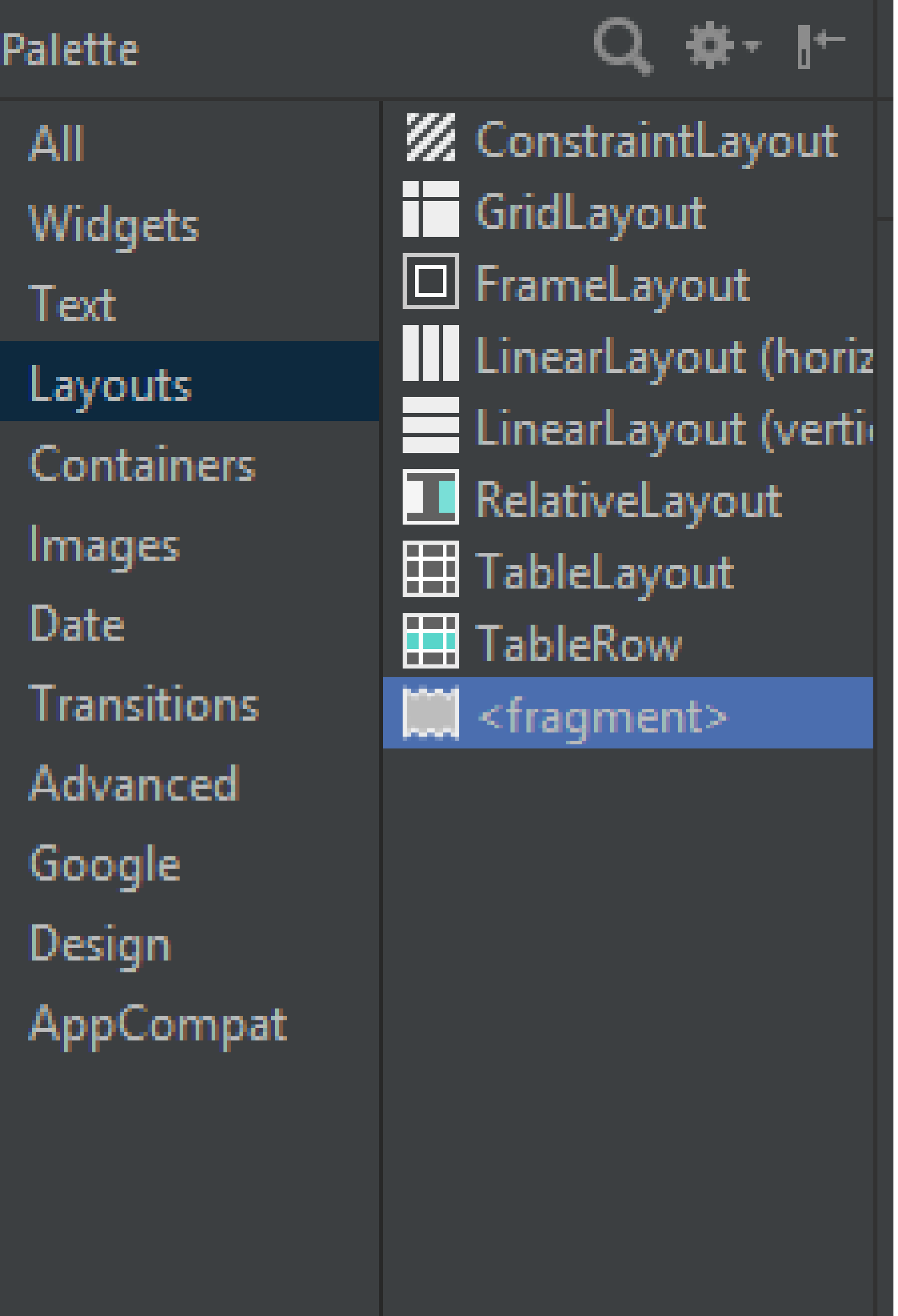
```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.estanovale.app.delivery.empresa.aula01.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" />

</android.support.constraint.ConstraintLayout>

```

- O arquivo xml do activity_main é responsável pelo layout do aplicativo, nele são definidas as posições de todos os componentes visuais.

Editor Gráfico



```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout xmlns:androi
    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="com.estanovale.app.delivery.empresa.au

    <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" />

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

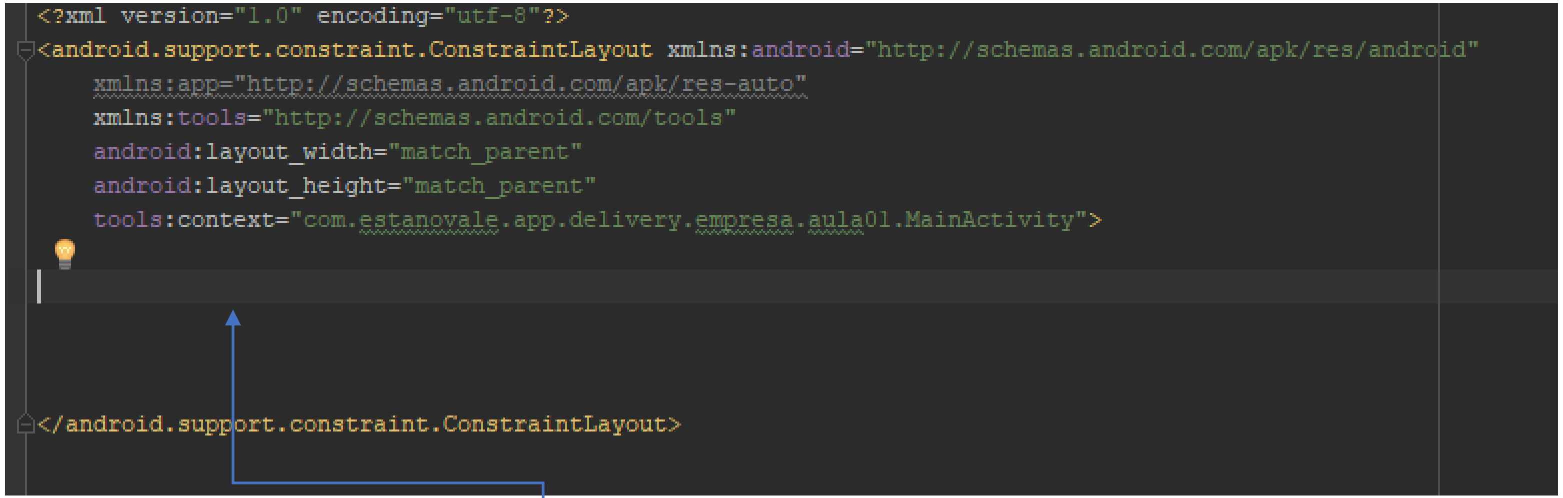


Paleta de componentes visuais

- Os layouts determinam como os componentes visuais serão distribuídos na janela.

- O Layout LinearLayout é o mais simples pois permite que os componentes sejam posicionados um abaixo do outro ou lado a lado.

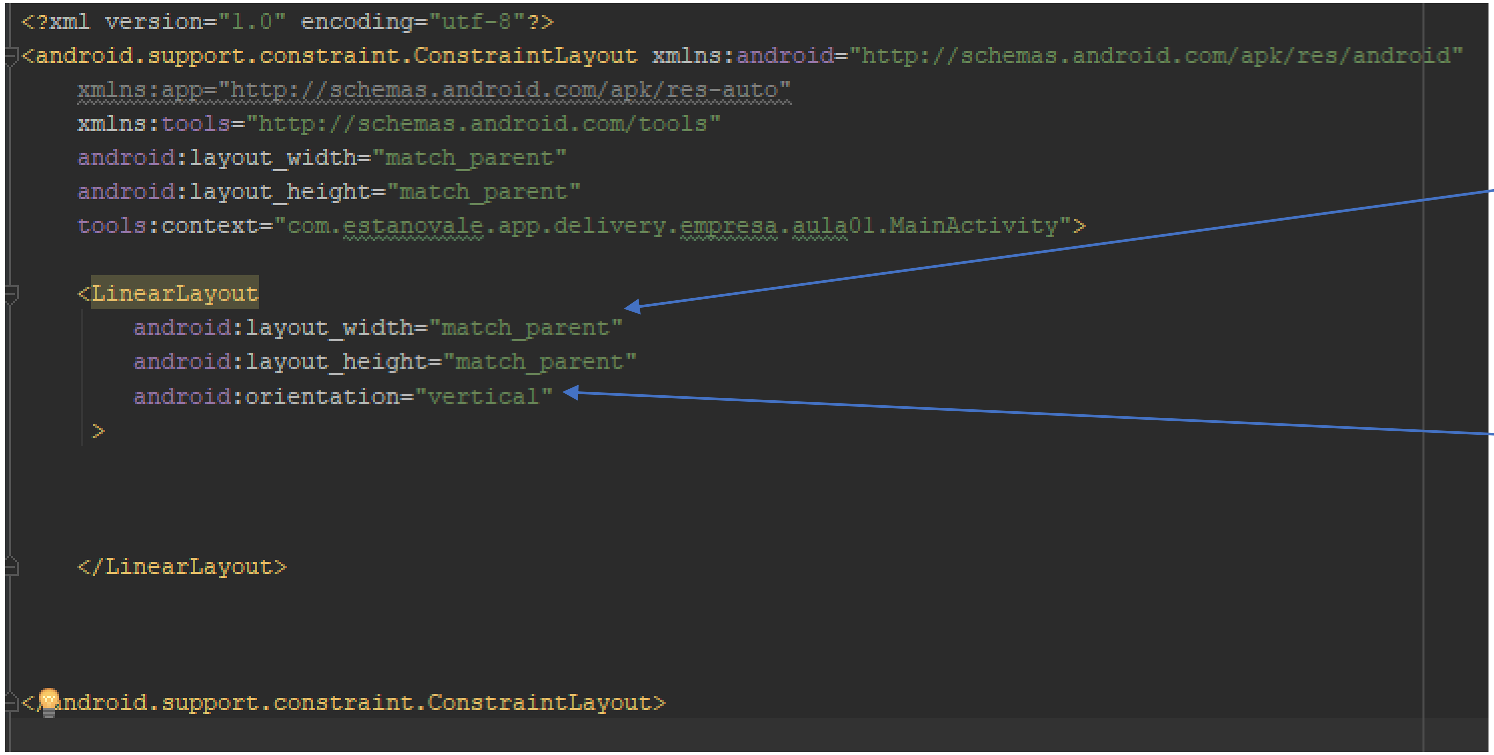
Estrutura básica do xml



```
<?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="com.estanovale.app.delivery.empresa.aula01.MainActivity">



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

Programe aqui seus componentes visuais.

Programe o LinearLayout

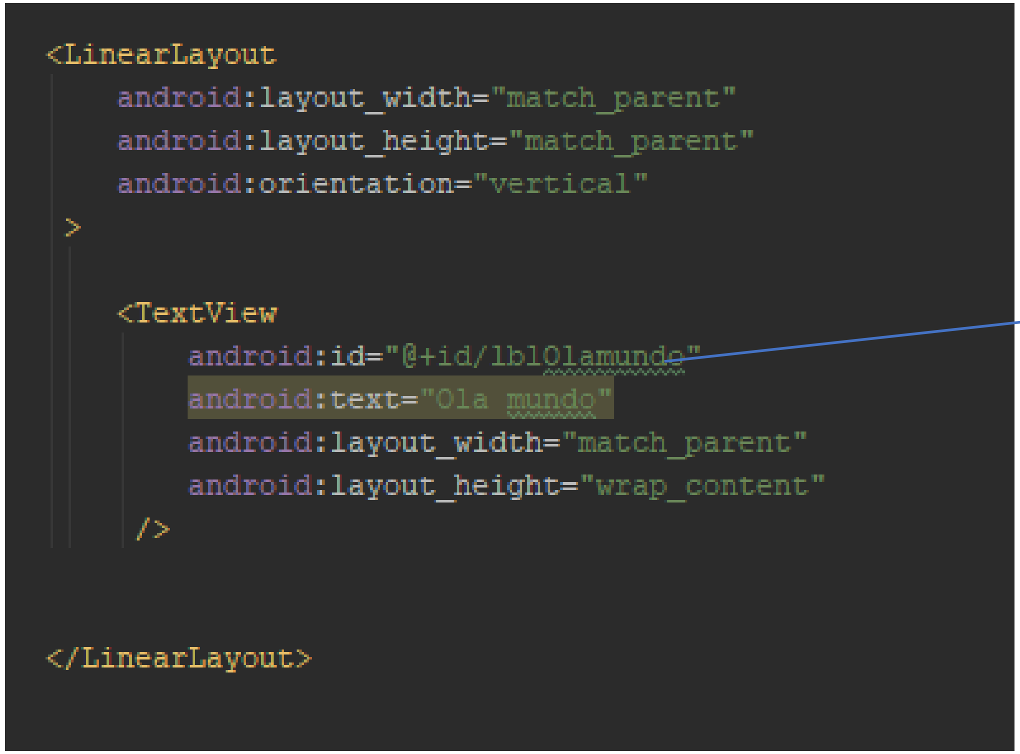


```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.estanovale.app.delivery.empresa.aula01.MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
    >



    </LinearLayout>



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

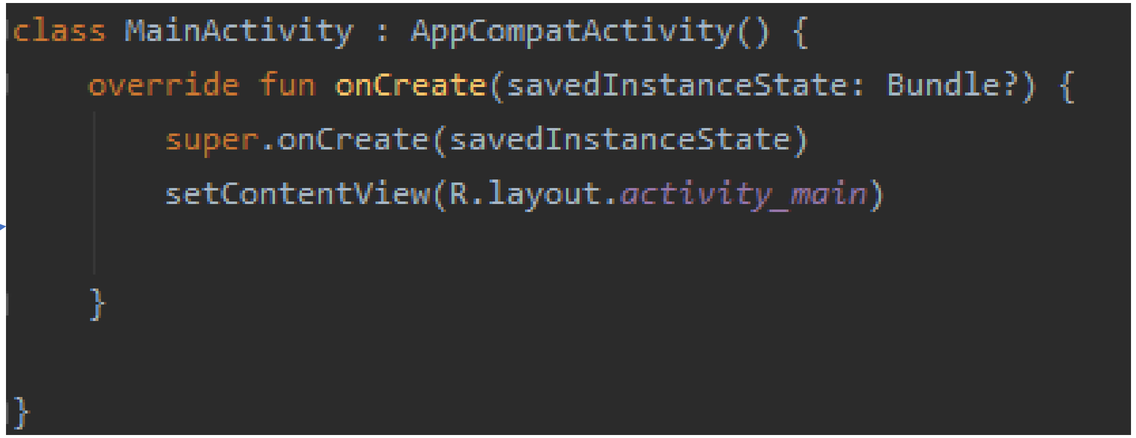
Seu tamanho é definido de acordo
Com o tamanho da tela

Sua organização é na vertical, ou seja,
Os componentes ficarão um abaixo
Do outro.

XMl e .kt



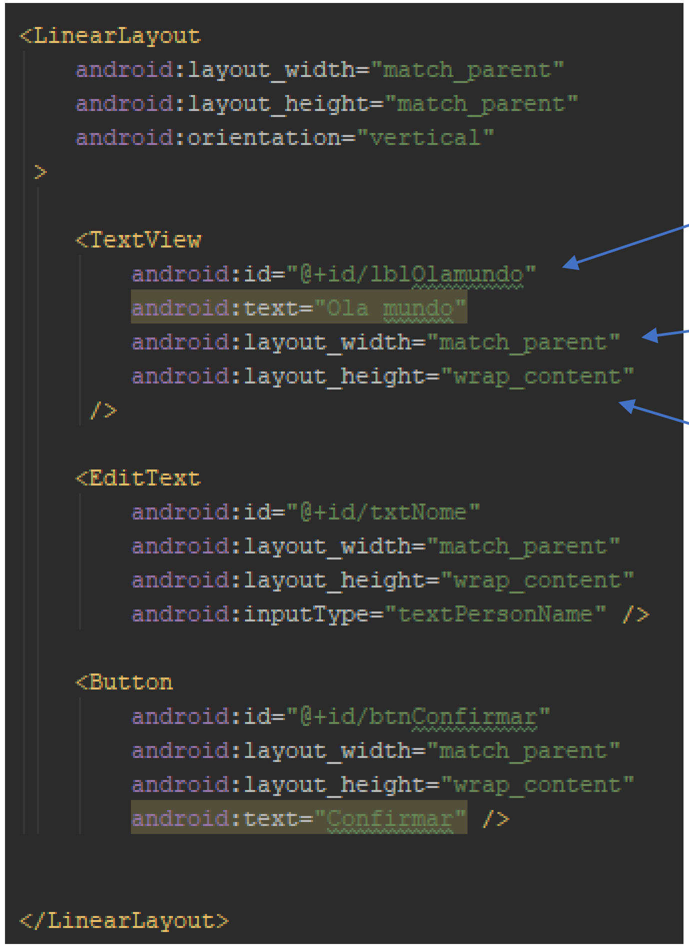
```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
 >

    <TextView
        android:id="@+id/lblOlamundo"
        android:text="Ola mundo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
     />


</LinearLayout>
```



```
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

    }

}
```

Todos os arquivos xml a princípio devem ser associados a um arquivo kt

Label, caixa de texto e botão



```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
 >

    <TextView
        android:id="@+id/lblOlamundo"
        android:text="Ola mundo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
     />

    <EditText
        android:id="@+id/txtNome"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="textPersonName" />

    <Button
        android:id="@+id/btnConfirmar"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Confirmar" />


</LinearLayout>
```

Id do componente

Texto do componente

Largura e altura

Toast

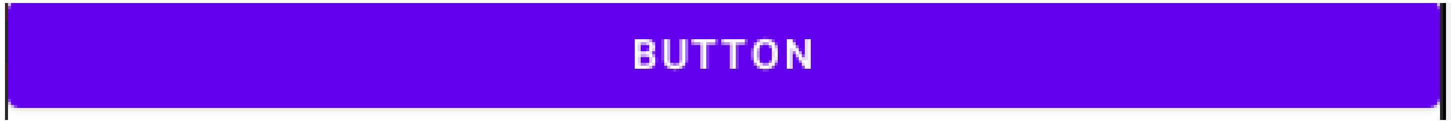
Funciona como uma Caixa de mensagem .

Desaparece depois de alguns instantes.

```
Toast.makeText(this@MainActivity, "Ola Mundo",
Toast.LENGTH_SHORT).show()
```

Button

```
<Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
         android:text="Button" />
```

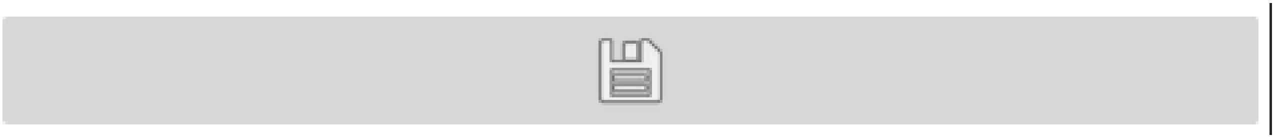


Instância do botão e evento click

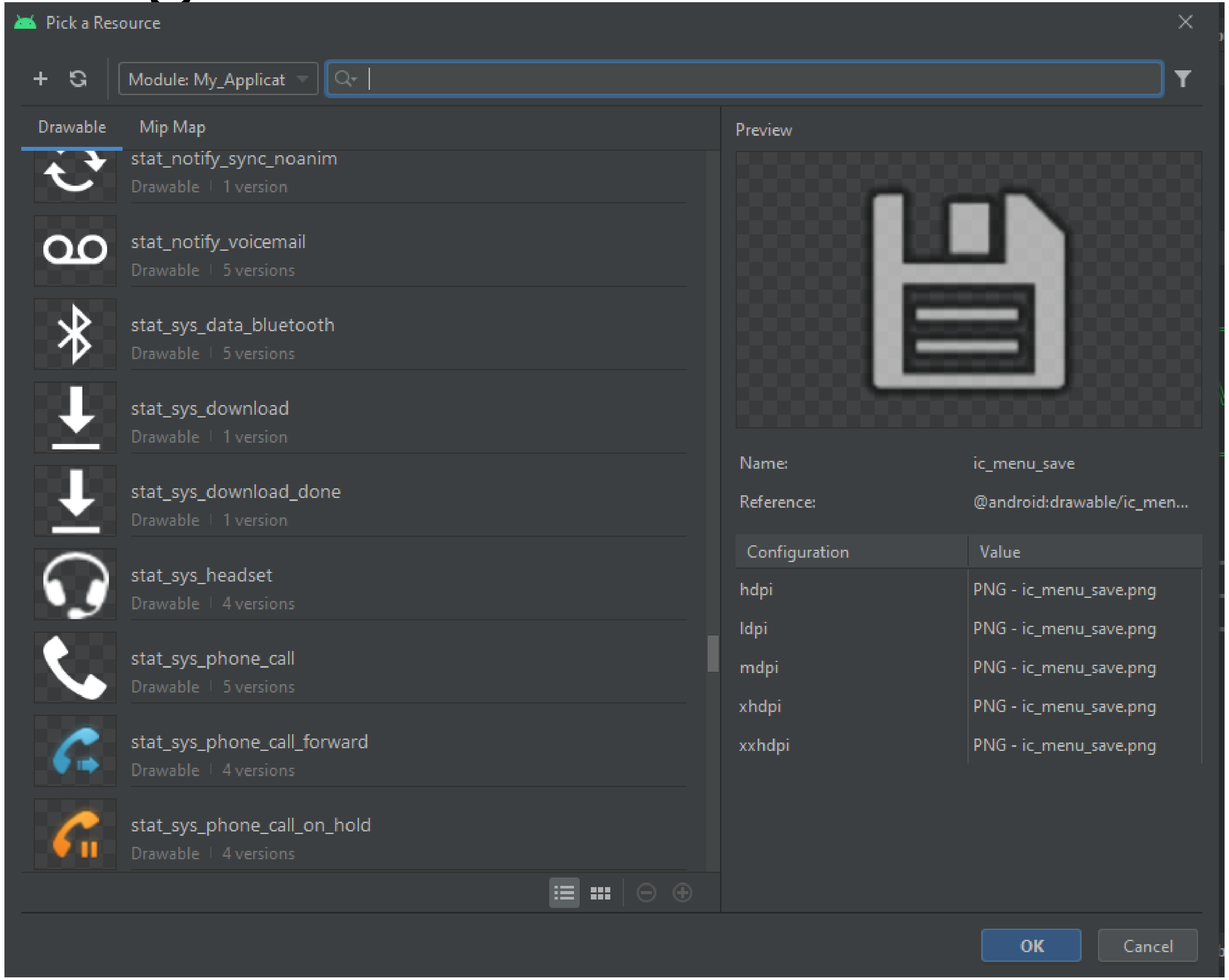
```
 val btn_click_me = findViewById(R.id.button) as Button


btn_click_me.setOnClickListener {
            Toast.makeText(this@MainActivity, "Ola Mundo",
Toast.LENGTH_SHORT).show()
       }
```

ImageButton

```
<ImageButton
        android:id="@+id/imageButton"
         android:layout_width="match_parent"
         android:layout_height="wrap_content"
        app:srcCompat="@android:drawable/ic_menu_save" />
```



Escolha a imagem



stat_notify_sync_noanim
Drawable | 1 version

stat_notify_voicemail
Drawable | 5 versions

stat_sys_data_bluetooth
Drawable | 5 versions

stat_sys_download
Drawable | 1 version

stat_sys_download_done
Drawable | 1 version

stat_sys_headset
Drawable | 4 versions

stat_sys_phone_call
Drawable | 5 versions

stat_sys_phone_call_forward
Drawable | 4 versions

stat_sys_phone_call_on_hold
Drawable | 4 versions

Name: ic_menu_save

Reference: @android:drawable/ic_men...

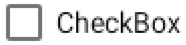
Configuration	Value
hdpi	PNG - ic_menu_save.png
ldpi	PNG - ic_menu_save.png
mdpi	PNG - ic_menu_save.png
xhdpi	PNG - ic_menu_save.png
xxhdpi	PNG - ic_menu_save.png

ImageButton

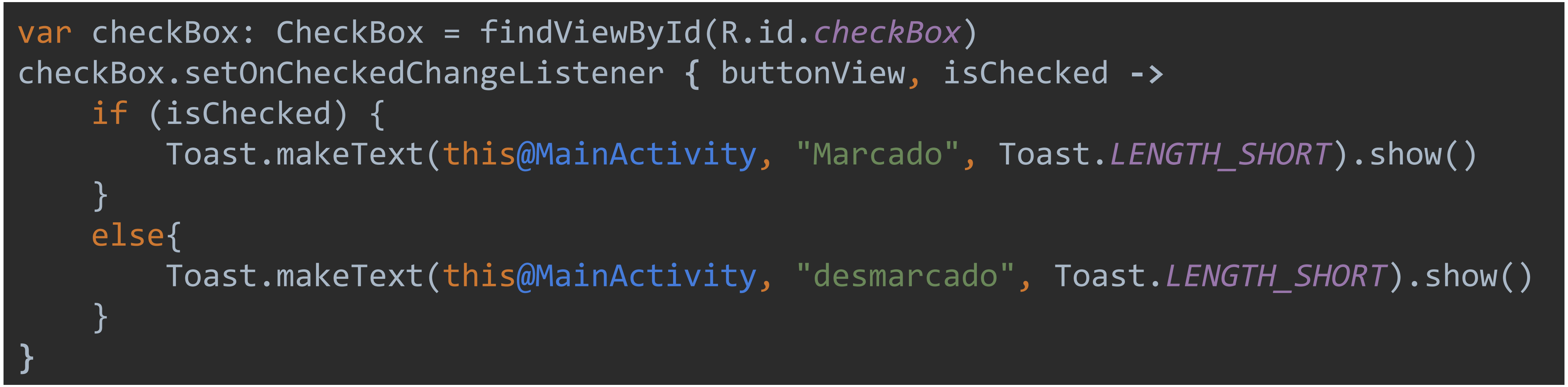
```
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val btn_click_me = findViewById(R.id.imageButton) as ImageButton
        btn_click_me.setOnClickListener {
            Toast.makeText(this@MainActivity, "Ola Mundo", Toast.LENGTH_SHORT).show()
        }

    }
}
```

CheckBox

```
<CheckBox
            android:id="@+id/checkBox"
           android:layout_width="wrap_content"
            android:layout_height="wrap_content"
           android:text="CheckBox" />
```

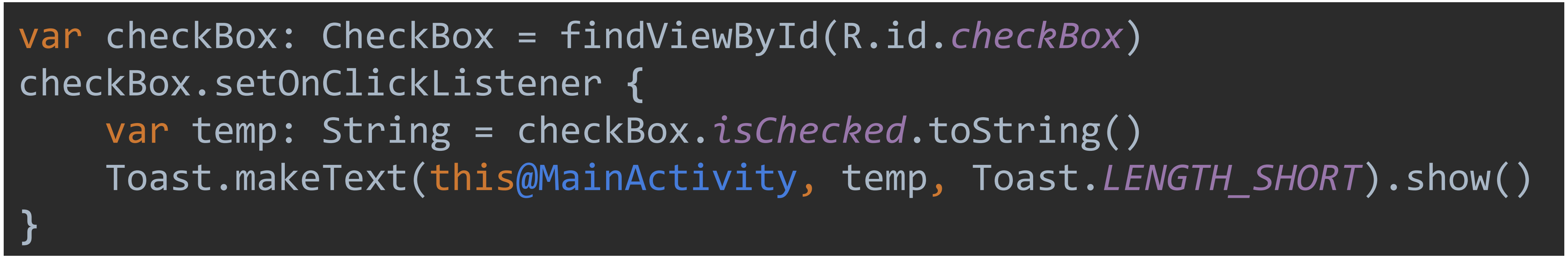


checkBox (CheckedChangeListener)



```
var checkBox: CheckBox = findViewById(R.id.checkBox)
checkBox.setOnCheckedChangeListener { buttonView, isChecked ->
    if (isChecked) {
        Toast.makeText(this@MainActivity, "Marcado", Toast.LENGTH_SHORT).show()
    }
    else{
        Toast.makeText(this@MainActivity, "desmarcado", Toast.LENGTH_SHORT).show()
    }
}
```

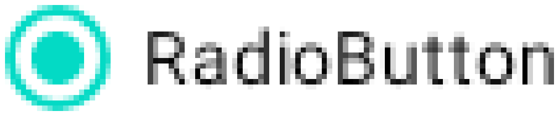
checkBox (OnClickListener)



```
var checkBox: CheckBox = findViewById(R.id.checkBox)
checkBox.setOnClickListener {
    var temp: String = checkBox.isChecked.toString()
    Toast.makeText(this@MainActivity, temp, Toast.LENGTH_SHORT).show()
}
```

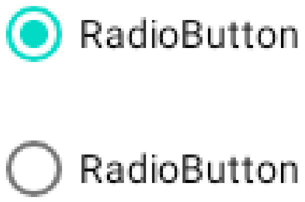
RadioButton

```
<RadioButton
            android:id="@+id/radioButton"
              android:layout_width="wrap_content"
              android:layout_height="wrap_content"
              android:text="RadioButton" />
```



RadioGroup

```
<RadioGroup
      android:layout_width="match_parent"
      android:layout_height="wrap_content">
      <RadioButton
        android:id="@+id/radioButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="RadioButton" />
      <RadioButton
        android:id="@+id/radioButton2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="RadioButton" />
    </RadioGroup>
```

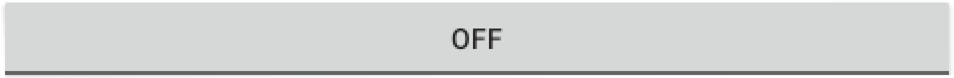


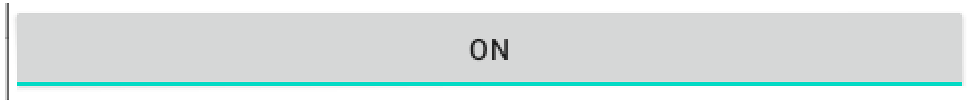
RadioButton - Programando

```kotlin
var radioButton: RadioButton = findViewById(R.id.radioButton)
val btn_click_me = findViewById(R.id.imageButton) as ImageButton
btn_click_me.setOnClickListener {
    var temp: String  =radioButton.isChecked.toString()
    Toast.makeText(this@MainActivity, temp, Toast.LENGTH_SHORT).show()
}
```

ToggleButton

```
<ToggleButton
        android:id="@+id/toggleButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="ToggleButton" />
```



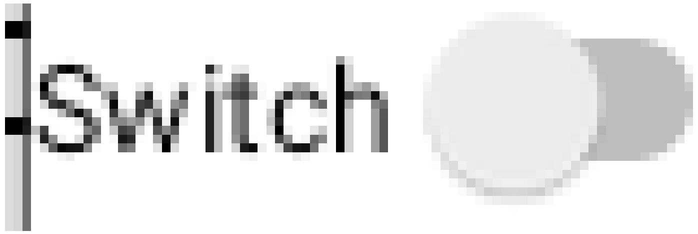


ToggleButton – Recuperando status

```
var toggleButton: ToggleButton = findViewById(R.id.toggleButton)
val btn_click_me = findViewById(R.id.button) as Button

btn_click_me.setOnClickListener {
    var temp: String  =toggleButton.isChecked.toString()
    Toast.makeText(this@MainActivity, temp, Toast.LENGTH_SHORT).show()
}
```

Switch

```
<Switch
        android:id="@+id/switch1"
          android:layout_width="wrap_content"
          android:layout_height="wrap_content"
          android:text="Switch" />
```



Switch

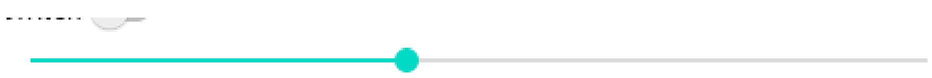
```
var switch: Switch = findViewById(R.id.switch1)
val btn_click_me = findViewById(R.id.button) as Button

btn_click_me.setOnClickListener {
    var temp: String  =switch.isChecked.toString()
    Toast.makeText(this@MainActivity, temp, Toast.LENGTH_SHORT).show()
}
```

Switch: Evento

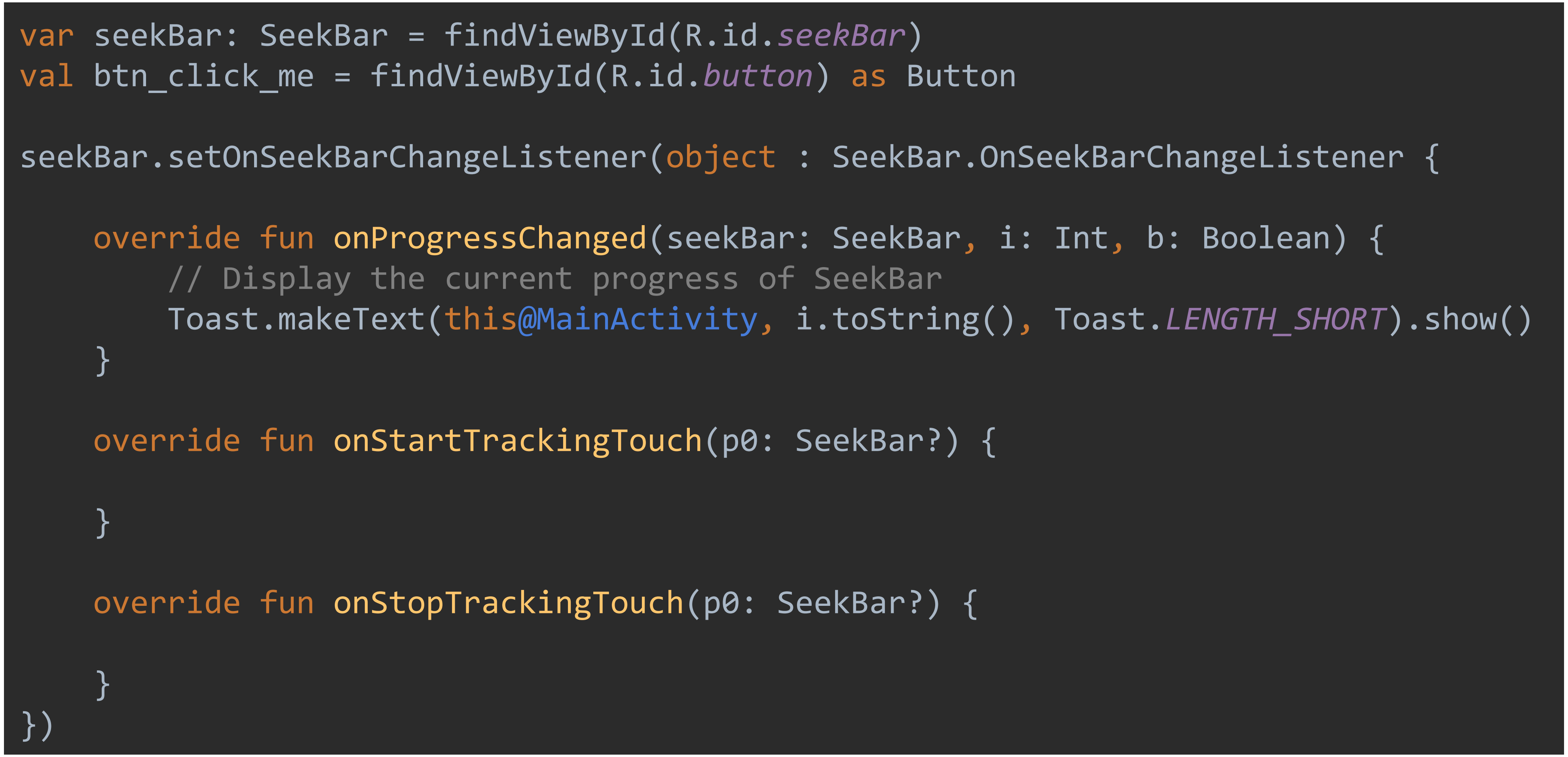
```
var switch: Switch = findViewById(R.id.switch1)
val btn_click_me = findViewById(R.id.button) as Button

switch.setOnClickListener {
    var temp: String  =switch.isChecked.toString()
    Toast.makeText(this@MainActivity, temp, Toast.LENGTH_SHORT).show()
}
```

SeekBar

```
<SeekBar
        android:id="@+id/seekBar"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
```



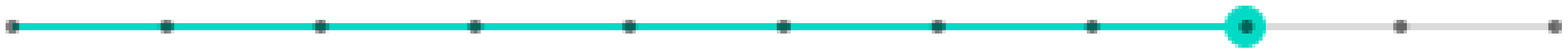
SeekBar : Evento



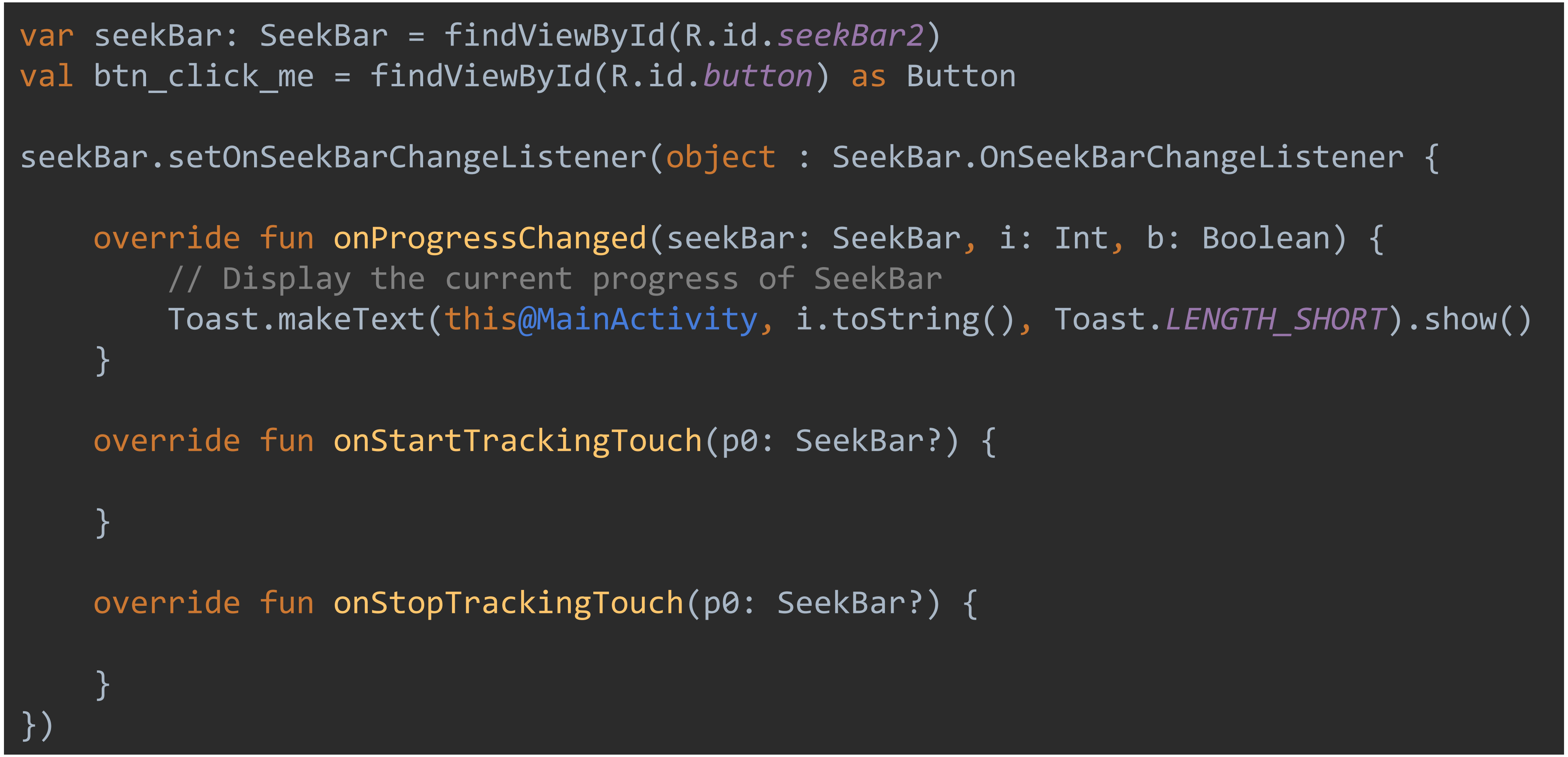
```
var seekBar: SeekBar = findViewById(R.id.seekBar)
val btn_click_me = findViewById(R.id.button) as Button

seekBar.setOnSeekBarChangeListener(object : SeekBar.OnSeekBarChangeListener {

    override fun onProgressChanged(seekBar: SeekBar, i: Int, b: Boolean) {
        // Display the current progress of SeekBar
        Toast.makeText(this@MainActivity, i.toString(), Toast.LENGTH_SHORT).show()
    }

    override fun onStartTrackingTouch(p0: SeekBar?) {

    }

    override fun onStopTrackingTouch(p0: SeekBar?) {

    }
})
```

SeekBar Discrete

```
<SeekBar
        android:id="@+id/seekBar2"
        style="@style/Widget.AppCompat.SeekBar.Discrete"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:max="10"
        android:progress="3" />
```



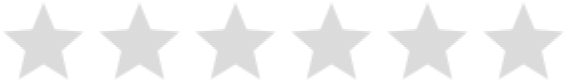
SeekBar: Evento



```
var seekBar: SeekBar = findViewById(R.id.seekBar2)
val btn_click_me = findViewById(R.id.button) as Button

seekBar.setOnSeekBarChangeListener(object : SeekBar.OnSeekBarChangeListener {

    override fun onProgressChanged(seekBar: SeekBar, i: Int, b: Boolean) {
        // Display the current progress of SeekBar
        Toast.makeText(this@MainActivity, i.toString(), Toast.LENGTH_SHORT).show()
    }

    override fun onStartTrackingTouch(p0: SeekBar?) {

    }

    override fun onStopTrackingTouch(p0: SeekBar?) {

    }
})
```

RatingBar

- <RatingBar
-     android:id="@+id/ratingBar"
-     android:layout_width="wrap_content"
-     android:layout_height="wrap_content"
-     android:numStars="6"



RatingBar: Programando

```
val btn_click_me = findViewById(R.id.button) as Button
var ratingBar: RatingBar = findViewById(R.id.ratingBar)
btn_click_me.setOnClickListener {
    Toast.makeText(this@MainActivity, ratingBar.rating.toString(), Toast.LENGTH_SHORT).show()
}
```

RatingBar: Evento

```
var ratingBar: RatingBar = findViewById(R.id.ratingBar)
ratingBar.setOnRatingBarChangeListener { ratingBar, fl, b ->
    Toast.makeText(this@MainActivity, ratingBar.rating.toString(), Toast.LENGTH_SHORT).show()

}
```

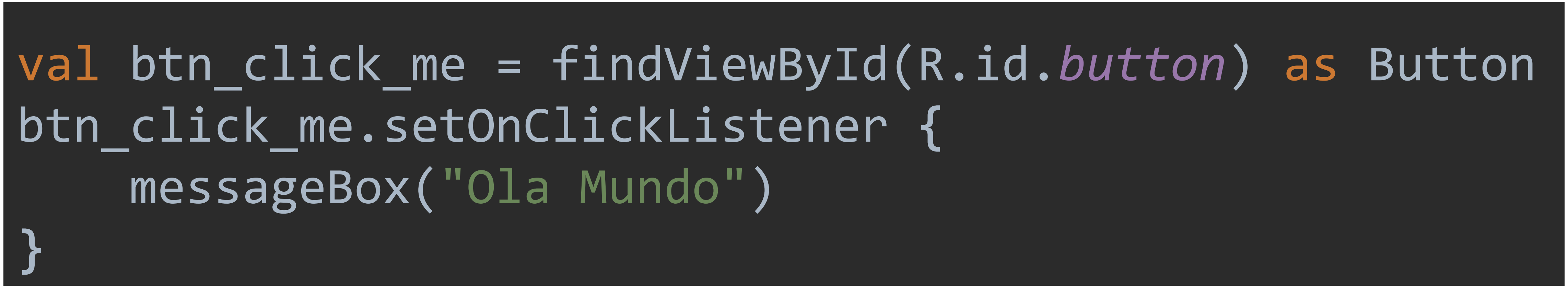
ProgressBar

```
<ProgressBar
        android:id="@+id/progressBar"
         style="?android:attr/progressBarStyleHorizontal"
        android:layout_width="match_parent"
         android:layout_height="wrap_content" />
```

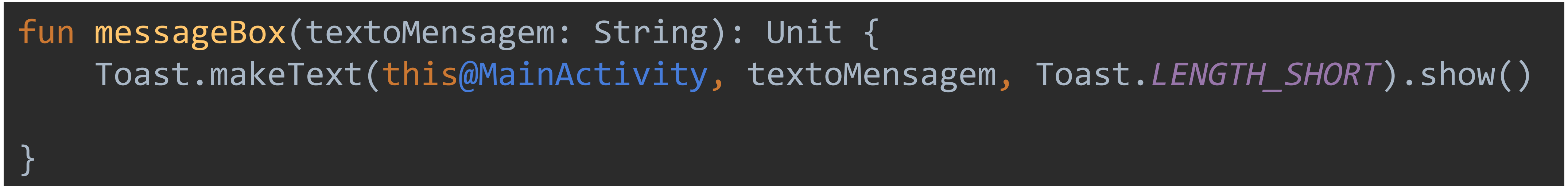
ProgressBar: Progredindo

```kotlin
val btn_click_me = findViewById(R.id.button) as Button
var progressBar: ProgressBar = findViewById(R.id.progressBar)
var progress:Int = 0;
btn_click_me.setOnClickListener {
    progress++
    progressBar.progress=progress;
}
```

Message Box

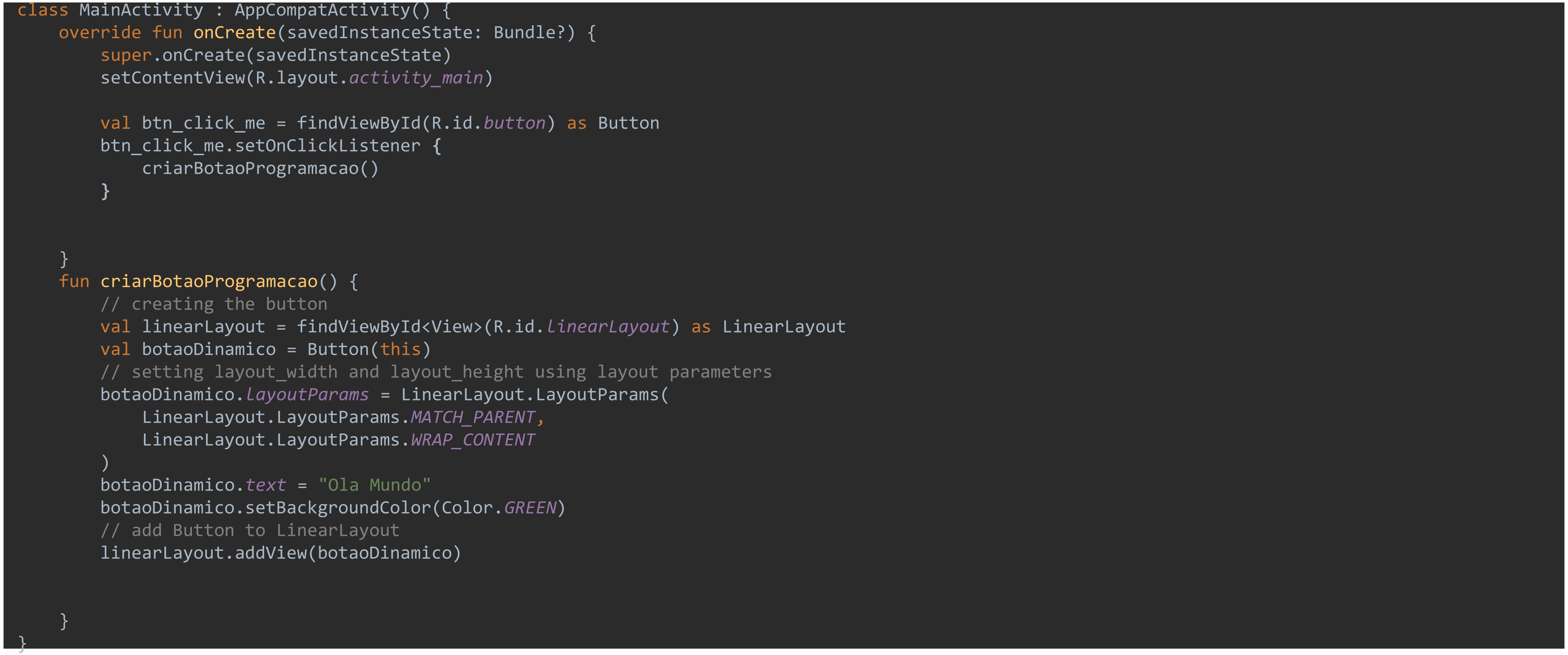


```kotlin
val btn_click_me = findViewById(R.id.button) as Button
btn_click_me.setOnClickListener {
    messageBox("Ola Mundo")
}
```



```kotlin
fun messageBox(textoMensagem: String): Unit {
    Toast.makeText(this@MainActivity, textoMensagem, Toast.LENGTH_SHORT).show()

}
```

Componentes Dinâmicos



```
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val btn_click_me = findViewById(R.id.button) as Button
        btn_click_me.setOnClickListener {
            criarBotaoProgramacao()
        }


    }
    fun criarBotaoProgramacao() {
        // creating the button
        val linearLayout = findViewById<View>(R.id.linearLayout) as LinearLayout
        val botaoDinamico = Button(this)
        // setting layout_width and layout_height using layout parameters
        botaoDinamico.layoutParams = LinearLayout.LayoutParams(
            LinearLayout.LayoutParams.MATCH_PARENT,
            LinearLayout.LayoutParams.WRAP_CONTENT
        )
        botaoDinamico.text = "Ola Mundo"
        botaoDinamico.setBackgroundColor(Color.GREEN)
        // add Button to LinearLayout
        linearLayout.addView(botaoDinamico)


    }
}
```