



ViewGroups - Linear Layout

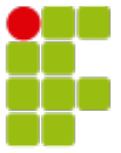


Dispositivos Móveis

Professor Msc Romulo Beninca

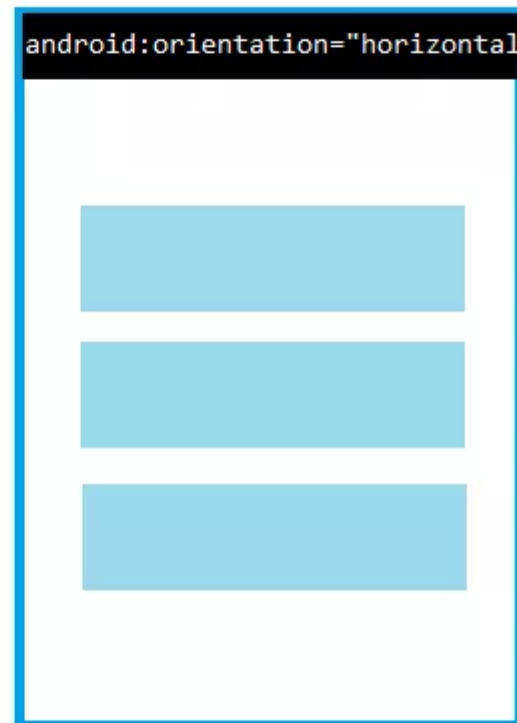
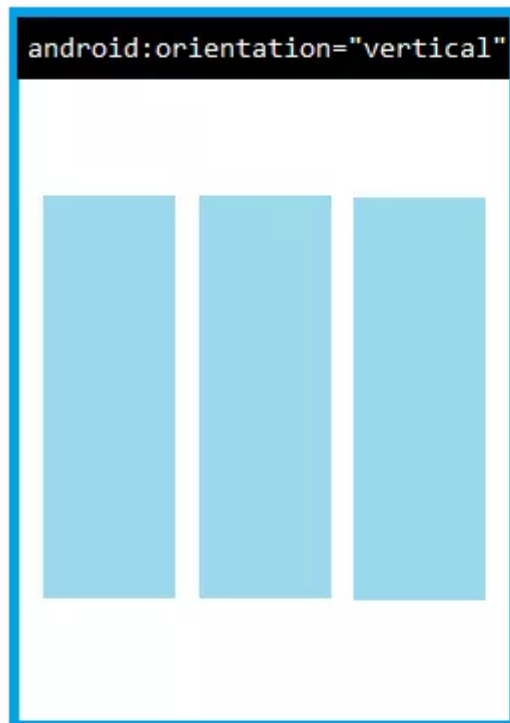
LinearLayout

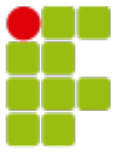
- Orientation
- Propriedade Gravity
- Propriedade Weight



LinearLayout

- É um dos *view groups* mais utilizados pela facilidade de controle dos componentes.





LinearLayout Propriedade Orientation

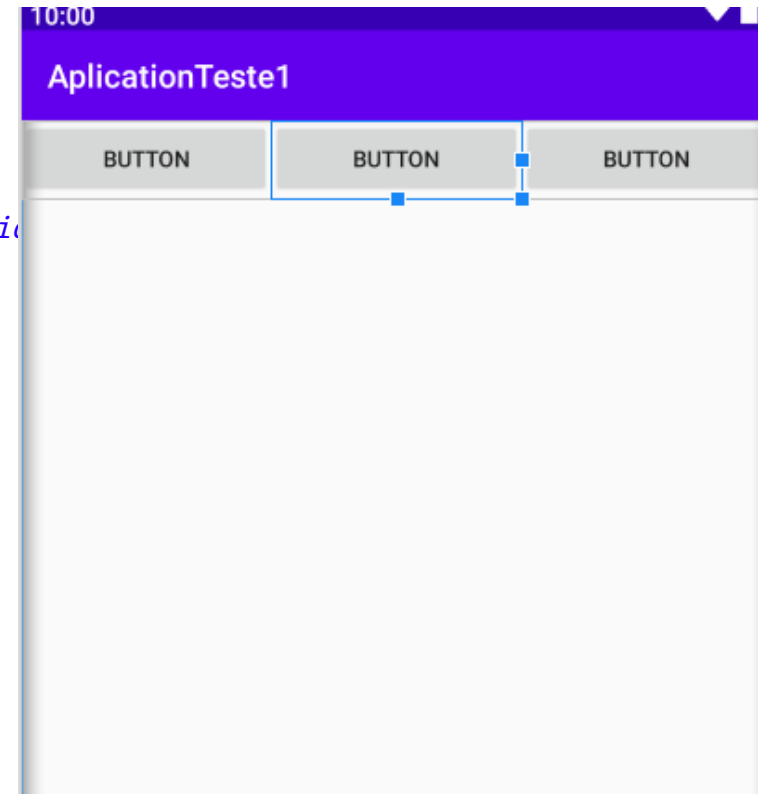
- A propriedade *orientation* permite definir se as *views* serão listadas na vertical ou orinzontal.
- Propriedade *orientation:horizontal*

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="horizontal" >

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Button" />

    <!-- mais dois botões aqui -->

</LinearLayout>
```



LinearLayout

Propriedade Orientation

- Propriedade *orientation*: vertical

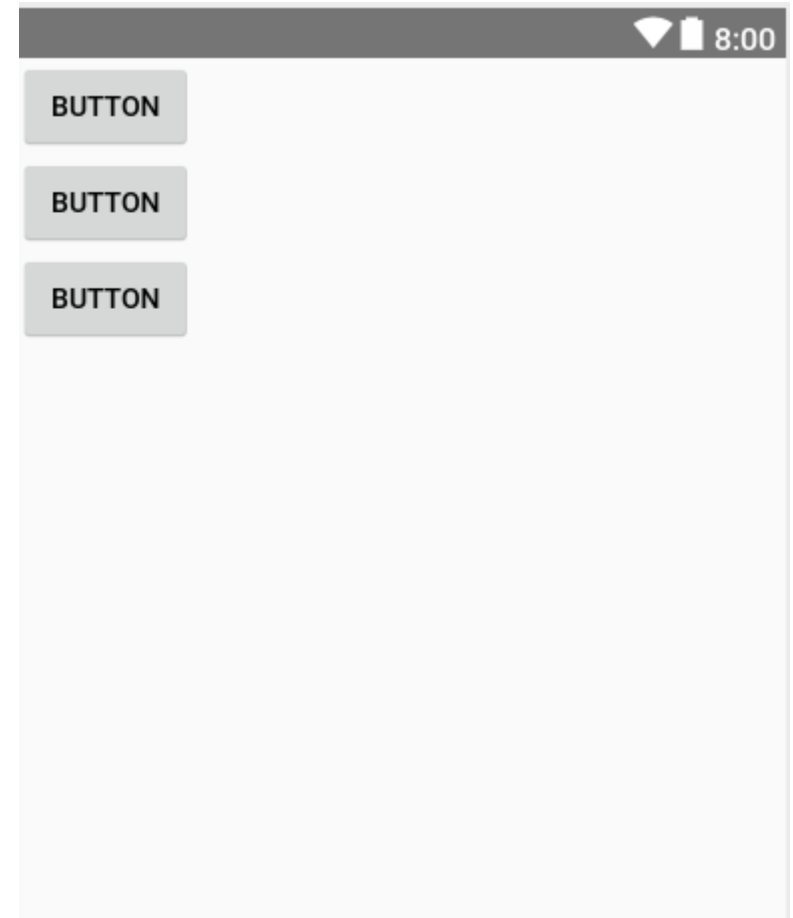
```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical" >

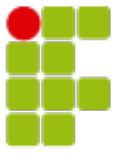
    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Button" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="TextView" />

    <!-- mais componentes aqui... -->

</LinearLayout>
```



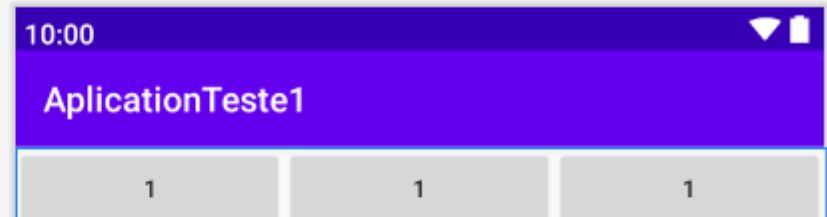


LinearLayout Propriedade Weight

A propriedade peso (Weight) permite controlar o peso na visualização que cada *view* terá.

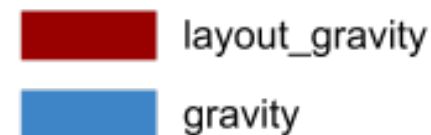
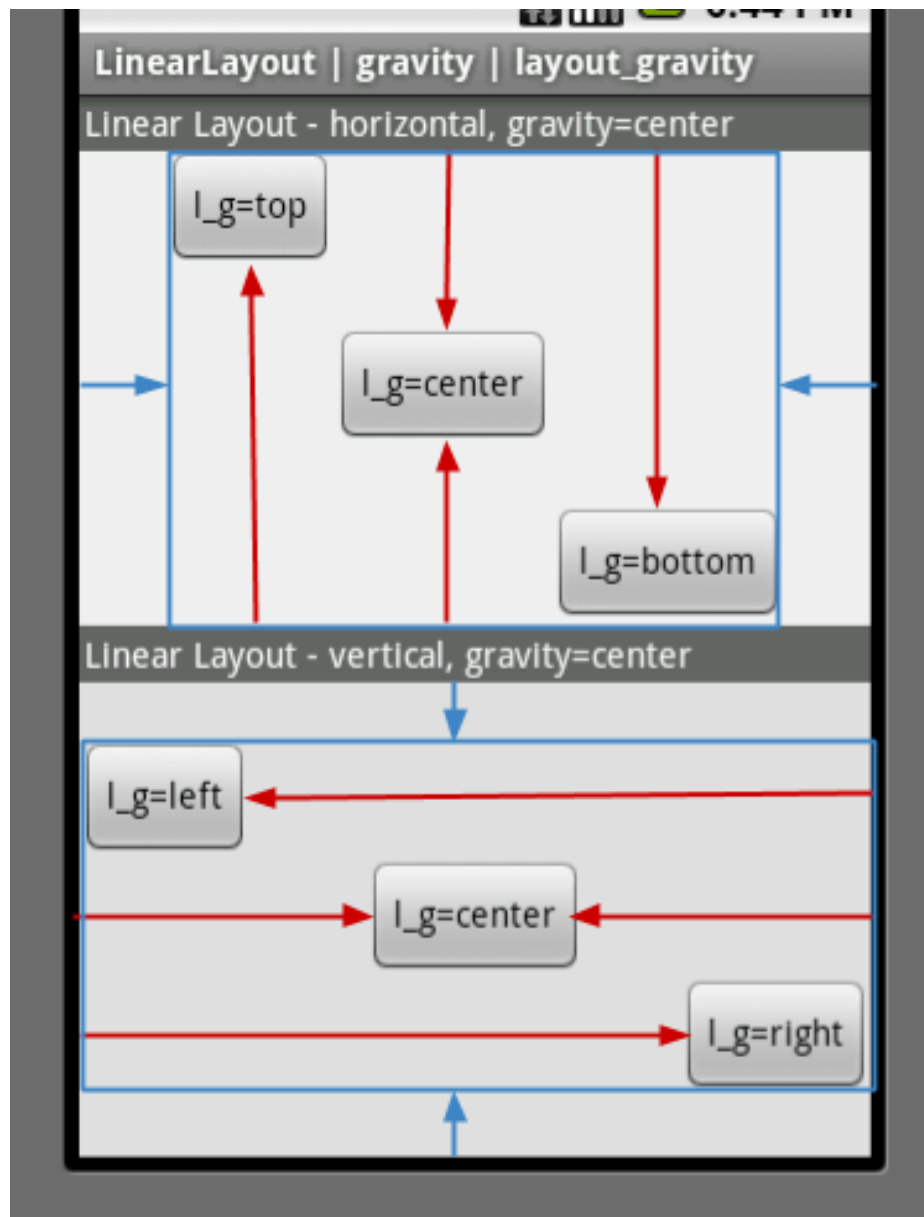
- O peso definido para uma *view* definirá a proporção de espaço que será destinado a ela.

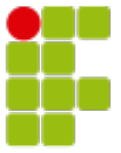
```
<Button
    android:id="@+id/button1"
    android:layout_weight="1"
    android:text="1" />
<Button
    android:id="@+id/button2"
    android:layout_weight="1"
    android:text="1" />
<Button
    android:id="@+id/button3" android:layout_w
    android:layout_weight="1"
    android:text="1" />
```





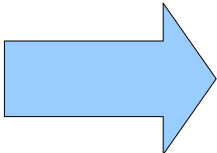
Gravity



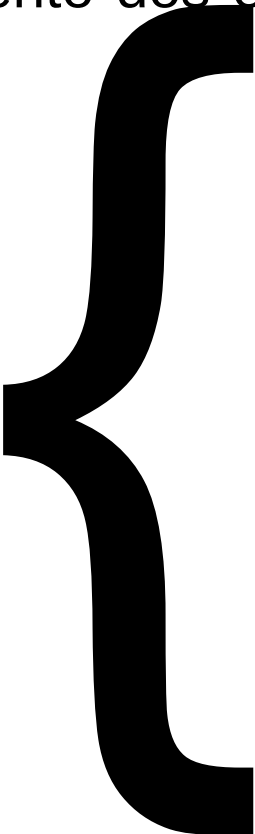


Posicionando Linear Layout *Gravity*

O *Viewgroup* linear permite definir o posicionamento dos elementos por meio do atributo *gravity*.



```
<LinearLayout
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:gravity="center"
  android:orientation="horizontal">
  <!-- mais componentes aqui... -->
</LinearLayout>
```

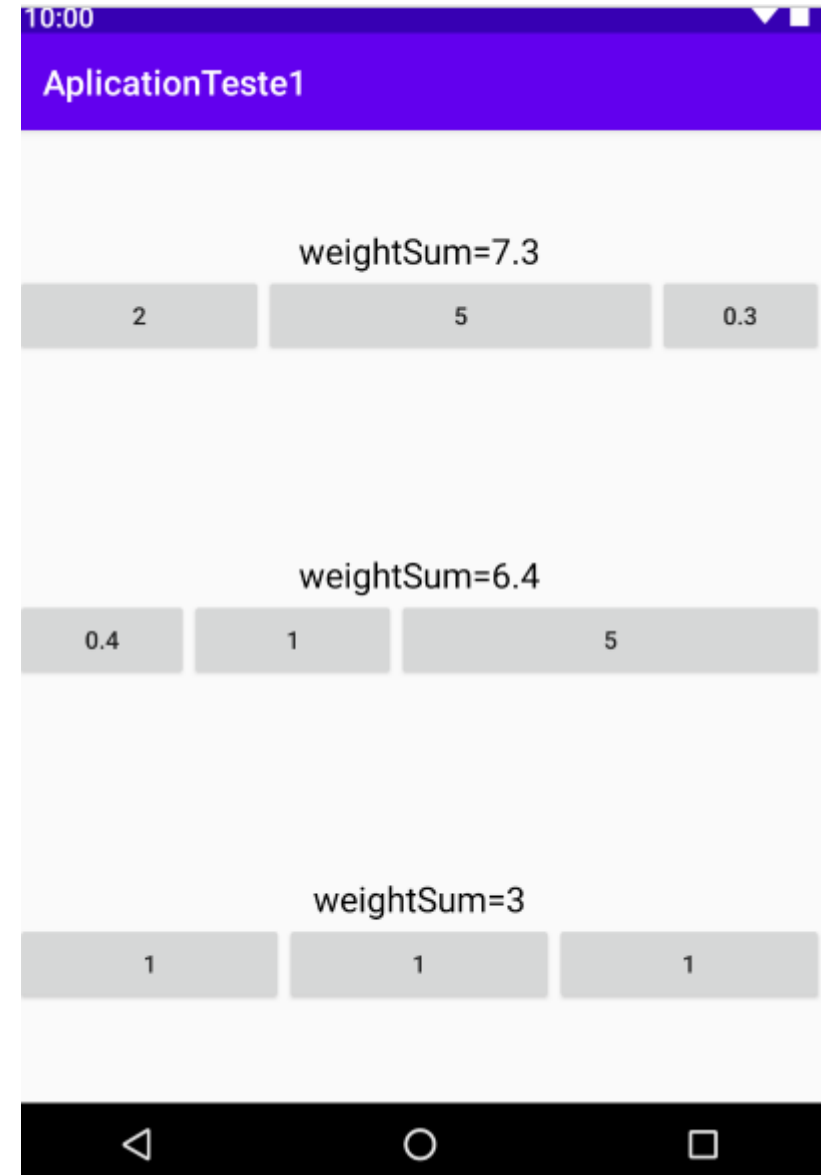


- top
- bottom
- left
- right
- center_vertical
- fill_vertical
- center_horizontal
- fill_horizontal
- center
- fill
- clip_vertical
- clip_horizontal
- start
- end



LinearLayout Weight

A propriedade *weight* permite definir quanto do espaço que sobra do layout, no eixo da orientação, cada *view* irá utilizar de forma proporcional ao peso definido.





Uma possibilidade é encadear um linear layout dentro do outro, como no exemplo

The image shows the Android Studio interface with three main components:

- XML Editor (Left):** Displays the following XML code:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3   xmlns:app="http://schemas.android.com/apk/res/app"
4   android:orientation="vertical" android:id="@+id/main"
5   <TextView
6     android:layout_width="wrap_content" android:layout_height="wrap_content"
7     <LinearLayout
8       android:orientation="horizontal" android:id="@+id/linearLayout1"
9       <Button...>
10      <Button...>
11      <Button...>
12    </LinearLayout>
13    <TextView android:text="weightSum=6.4" android:id="@+id/textView1"
14    <LinearLayout
15      android:orientation="horizontal" android:id="@+id/linearLayout2"
16      <Button...>
17      <Button...>
18      <Button...>
19    </LinearLayout>
20    <TextView android:text="weightSum=3" android:id="@+id/textView2"
21    <LinearLayout
22      android:orientation="horizontal" android:id="@+id/linearLayout3"
23      <Button...>
24      <Button...>
25      <Button...>
26    </LinearLayout>
27  </LinearLayout>
```
- Component Tree (Middle):** Shows a hierarchy of views:
 - LinearLayout (vertical)
 - TextView "weightSum=6.4"
 - LinearLayout (horizontal)
 - button1 "2"
 - button2 "5"
 - button3 "0.3"
 - TextView "weightSum=6.4"
 - LinearLayout (horizontal)
 - button4 "0.4"
 - button5 "1"
 - button6 "5"
 - TextView "weightSum=3"
 - LinearLayout (horizontal)
 - button7 "1"
 - button8 "1"
 - button9 "1"
- Preview (Right):** Shows a visual representation of the UI with a purple header "AplicaçãoTeste1". It displays three horizontal LinearLayouts, each with a "weightSum" label and three buttons:
 - Top: weightSum=7.3, buttons with values 2, 5, and 0.3.
 - Middle: weightSum=6.4, buttons with values 0.4, 1, and 5.
 - Bottom: weightSum=3, buttons with values 1, 1, and 1.

Básica

Livro Deitel, P., Deitel, H., Deitel, A. e Morgano, M.. Android para Programadores.. 1a ed.. Bookman. 2012

Livro Darwin, I. F. Android Cookbook.. 1ª. Novatec,,. 2013

Complementar

Livro Saudate, A.. SOA Aplicado: Integrando com WebServices e além. 1ª. São Paulo: Casa do código. 2012

Livro Stark, J e Jepson, B.. Construindo Aplicativos Android com HTML, CSS e JavaScript.. 1ª. Novatec. 2012

Livro Querino Filho, L. C.. Desenvolvendo seu Primeiro Aplicativo Android.. 1ª. Novatec. 2013

Livro Lecheta, R. Google Android: Aprenda a criar aplicações para dispositivos móveis. 3a Ed. Novatec, 2013.

<http://developer.android.com/>