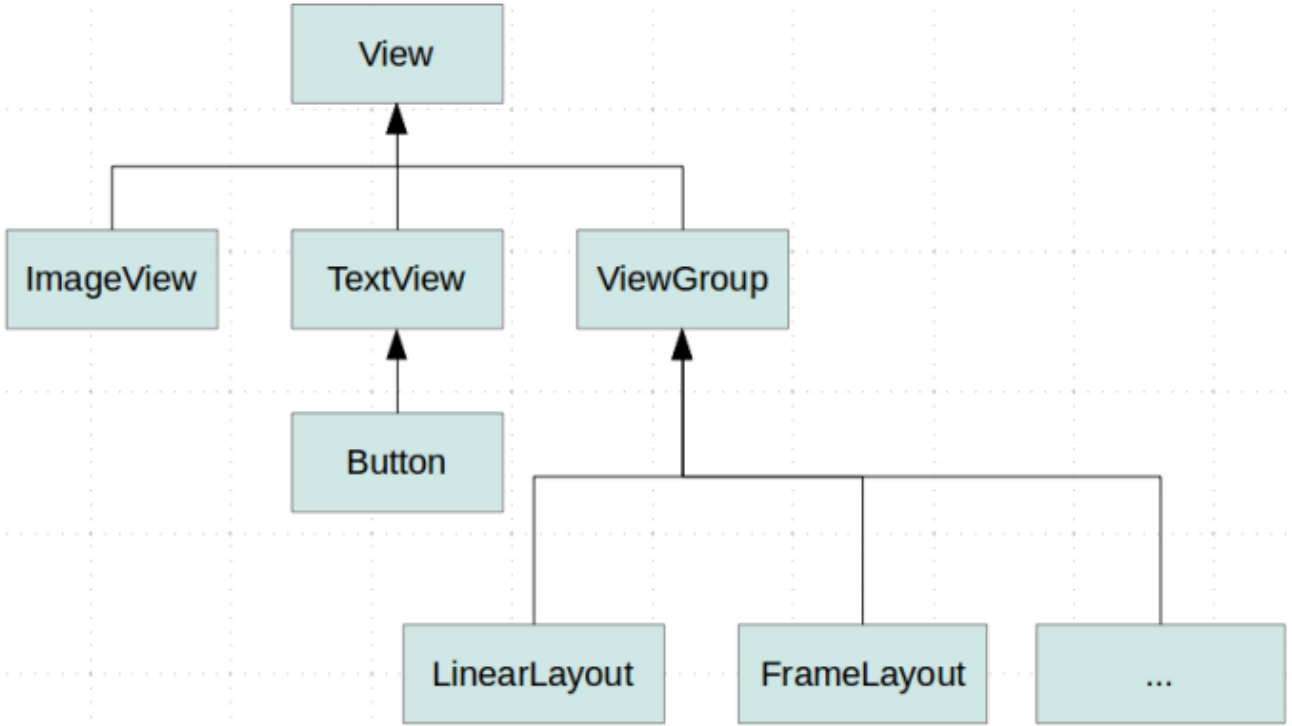
Programação para Dispositivos Móveis

Recursos do Android e Interface Gráfica (Tipos de Layouts)

Layout


View
ImageView
TextView
ViewGroup
Button
LinearLayout
FrameLayout
...

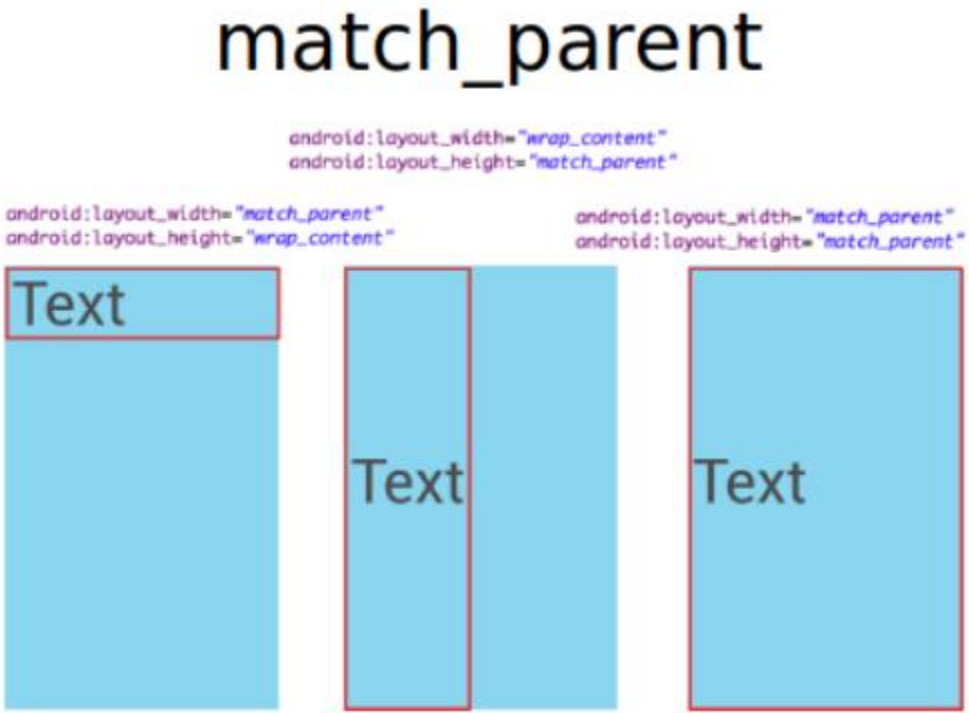
Layout - Atributos Básicos

- android:layout_height (altura)
- android:layout_width (largura)
- android:layout_weight (peso)
- android:layout_gravity (direção)

Layout - Atributos Básicos

- **android:layout_height (altura)**
    - [valor]dp.....
    - [valor]%
    - match_parent / fill_parent
    - wrap_content

Layout - Atributos Básicos



Layout - Atributos Básicos

- **android:layout_width (largura)**
    - [valor]dp.....
    - [valor]%
    - match_parent / fill_parent
    - wrap_content

Layout - Atributos Básicos

- **android:layout_weight (peso)**
  - [valor]

- **android:layout_gravity (direção)**
  - left, center, right, center_horizontal, center_vertical...

Tipos de Layout

- LinearLayout
- RelativeLayout
- TableLayout
- **AbsoluteLayout**
- FrameLayout
- GridView
- ListView

LinearLayout

- Organiza os elementos em uma linha ou em uma coluna.

- É utilizado para mover seus componentes em uma única direção: **vertical ou horizontal.**

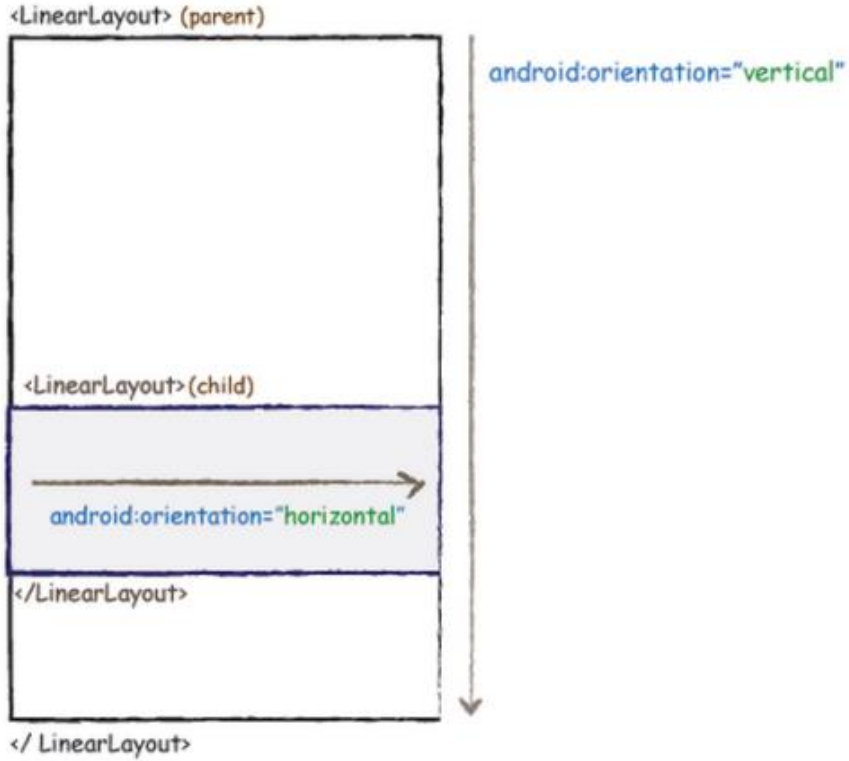
Example of Vertical layout snippet

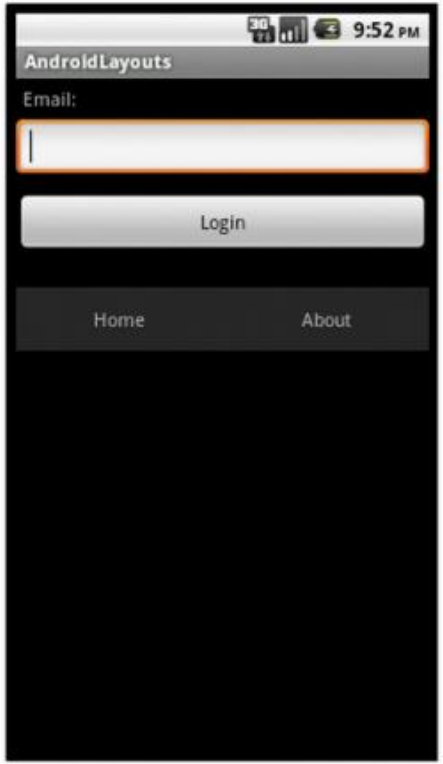
```
<LinearLayout android:orientation="vertical"> .... </LinearLayout>
```

Example of Horizontal layout snippet

```
<LinearLayout android:orientation="horizontal"> .... </LinearLayout>
```

LinearLayout





RelativeLayout

- Organiza seus componentes de forma relativa

- A posição de cada um dos componentes pode ser especificada de acordo com a relação do elemento irmão (tal como para a esquerda, de ou abaixo de outro ponto de vista).

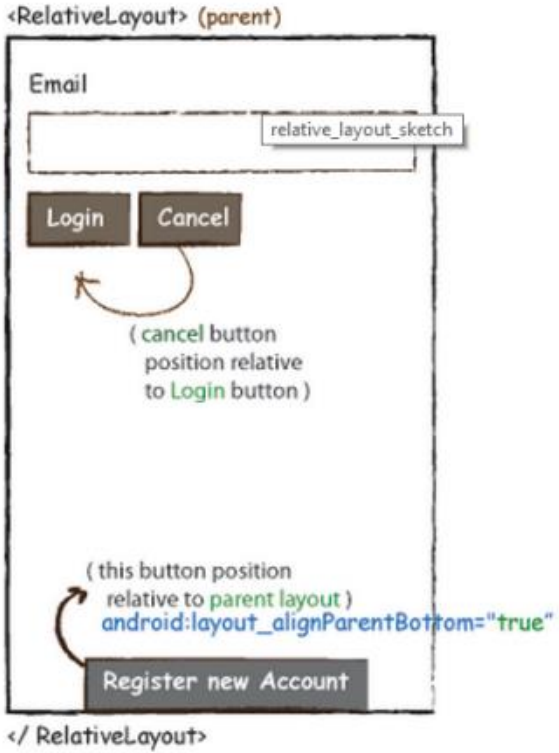
```
<Button android:id="@+id/btnLogin" ..></Button>

<Button android:layout_toRightOf="@id/btnLogin"
            android:layout_alignTop="@id/btnLogin" ..></Button>
```

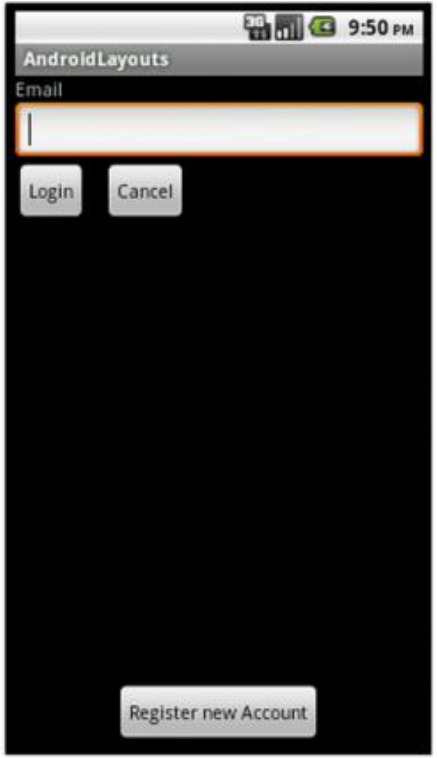
RelativeLayout - Representação

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent">
    <TextView
        android:id="@+id/label"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Type here:"/>
    <EditText
        android:id="@+id/entry"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:background="@android:drawable/editbox_background"
        android:layout_below="@id/label"/>
    <Button
        android:id="@+id/ok"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/entry"
        android:layout_alignParentRight="true"
        android:layout_marginLeft="10dip"
        android:text="OK" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_toLeftOf="@id/ok"
        android:layout_alignTop="@id/ok"
        android:text="Cancel" />
</RelativeLayout>
```

????

RelativeLayout





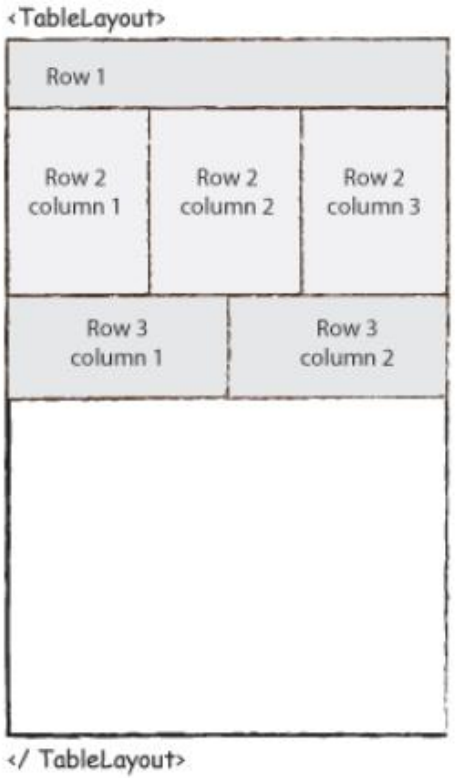
TableLayout

- Comporta seus filhos em linha e colunas

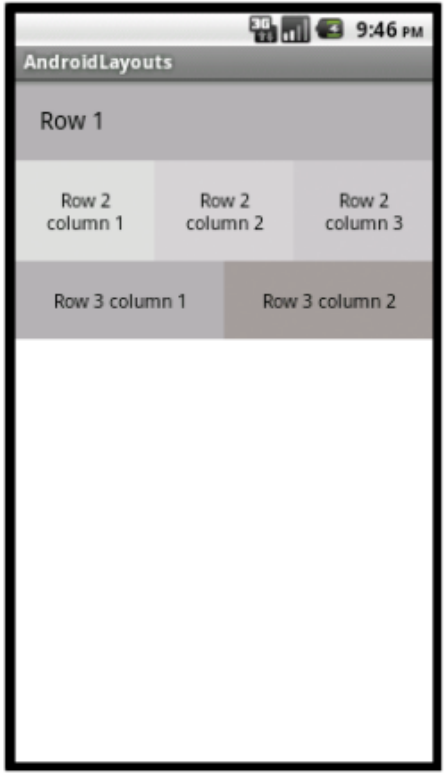
- Cada filho é representado pelo componente TableRow(uma espécie de LinearLayout restrito na direção horizontal)

- **uma ou mais células podem ser adicionadas horizontalmente**

TableLayout




```
<TableLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:shrinkColumns="*"  android:stretchColumns="*" android:background="#f
    <!-- Row 1 with single column -->
    <TableRow
        android:layout_height="wrap_content"
        android:layout_width="fill_parent"
        android:gravity="center_horizontal">
        <TextView
            android:layout_width="match_parent" android:layout_height="wrap_cont
            android:textSize="18dp" android:text="Row 1"  android:layout_span="3
            android:padding="18dip" android:background="#b0b0b0"
            android:textColor="#000"/>
    </TableRow>

    <!-- Row 2 with 3 columns -->
    <TableRow
        android:id="@+id/tableRow1"
        android:layout_height="wrap_content"
        android:layout_width="match_parent">
        <TextView
            android:id="@+id/TextView04" android:text="Row 2 column 1"
            android:layout_weight="1" android:background="#dcdcdc"
            android:textColor="#000000"
            android:padding="20dip" android:gravity="center"/>
        <TextView
            android:id="@+id/TextView04" android:text="Row 2 column 2"
            android:layout_weight="1" android:background="#d3d3d3"
            android:textColor="#000000"
            android:padding="20dip" android:gravity="center"/>
        <TextView
            android:id="@+id/TextView04" android:text="Row 2 column 3"
            android:layout_weight="1" android:background="#cac9c9"
            android:textColor="#000000"
            android:padding="20dip" android:gravity="center"/>
    </TableRow>
```



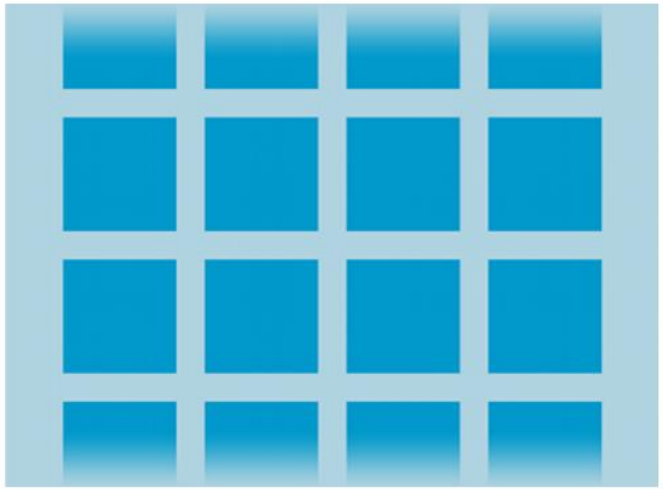
FrameLayout

- É um dos mais simples
- Permite a sobreposição de frames

```
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="fill_parent"
   android:layout_height="fill_parent">

   <ImageView
   android:src="@drawable/ic_launcher"
   android:scaleType="fitCenter"
   android:layout_height="250px"
   android:layout_width="250px"/>

   <TextView
   android:text="Frame Demo"
   android:textSize="30px"
   android:textStyle="bold"
   android:layout_height="fill_parent"
   android:layout_width="fill_parent"
   android:gravity="center"/>
</FrameLayout>
```

GridView

- Permite a exibição de itens através de uma grade de rolagem bidimensional. Os itens são inseridos automaticamente ao layout usando um ListAdapter.



ListView

- Permite a exibição de itens através de uma lista de rolagem.

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

      <ListView
         android:id="@+id/list"
         android:layout_height="wrap_content"
         android:layout_width="match_parent">
      </ListView>

</LinearLayout>
```