



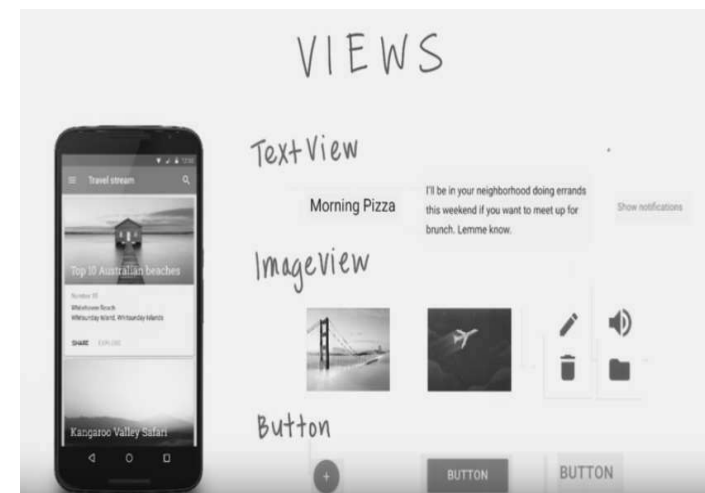
- *eXtensible Markup Language (XML)* dirancang untuk mendeskripsikan data dan memfokuskan diri pada data tersebut.
- HTML didesain untuk menampilkan data dan memfokuskan diri pada bagaimana data ditampilkan.
- XML bukanlah pengganti HTML karena memang dirancang berbeda. Hubungan antara XML dan HTML lebih ke arah pelengkap. Kita dapat menyimpan data dalam sebuah dokumen XML dan mempergunakan HTML untuk menampilkan data tersebut.

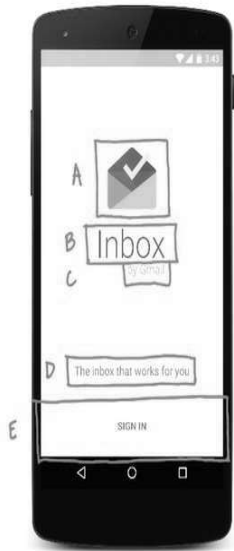
Layout Manager

Berfungsi untuk meletakkan komponen (view) pada layar, android menggunakan layout manager.

• Jenis layout manager:

- ✓ **Table Layout**, TableLayout meletakkan komponen dalam bentuk tabel (baris dan kolom), mirip seperti Table yang digunakan di HTML untuk mengatur layout
- ✓ **Absolute Layout**, Absolute layout didasarkan pada ide sederhana dengan menempatkan masing-masing kontrol pada posisi absolut. Penentuan koordinat x dan y pada layar untuk setiap kontrol, Layout ini jarang digunakan karena membuat tidak fleksibel sehingga sangat berisiko dalam proses perbaikan
- ✓ **Relative Layout**, merupakan sebuah layout dimana posisi dari sebuah komponen dapat diatur terhadap komponen lainnya
- ✓ **Linear Layout**, merupakan layout yang memberikan susunan tata letak komponen secara garis lurus baik vertikal maupun horizontal
- ✓ **Frame Layout**, merupakan layout yang memberikan susunan tata letak komponen yang bertumpuk. Di rancang untuk menyisipkan widget ke dalam widget lainnya





VIEWS

Identify the type of View

- A ☐ TextView ☒ ImageView ☐ Button
- B ☒ TextView ☐ ImageView ☐ Button
- C ☒ TextView ☐ ImageView ☐ Button
- D ☒ TextView ☐ ImageView ☐ Button
- E ☐ TextView ☐ ImageView ☒ Button

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VIEWS

Identify the type of View

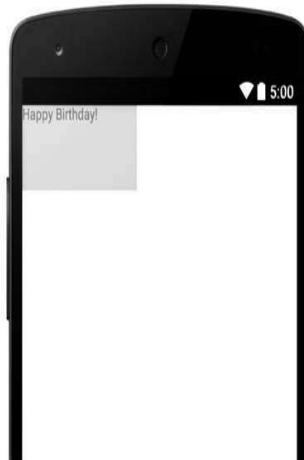
- A ☒ TextView ☐ ImageView ☐ Button
- B ☒ TextView ☐ ImageView ☐ Button
- C ☐ TextView ☐ ImageView ☒ Button
- D ☐ TextView ☐ ImageView ☒ Button

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TEXTVIEW

```
<TextView
    android:text="Happy Birthday!"
    android:background="@android:color/darker_gray"
    android:layout_width="150dp"
    android:layout_height="75dp" />
```

Write your observations here:



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XML SYNTAX

```
<TextView
    android:text="Happy Birthday!"
    android:background="@android:color/darker_gray"
    android:layout_width="150dp"
    android:layout_height="75dp" />
```

↑
Attribute
Name

↑
Attribute
Value in

10

XML SYNTAX

Line numbers ↓

```

1 <TextView
2   android:text="Happy Birthday!"
3   android:textColor="@android:color/white"
4   android:background="@android:color/black"
5   android:layout_width="200dp"
6   android:layout_height="300dp" />

```

1. What's the name of the XML element?
2. List all attribute names (not attribute values) separated by commas
3. On what line number is the tag closed?

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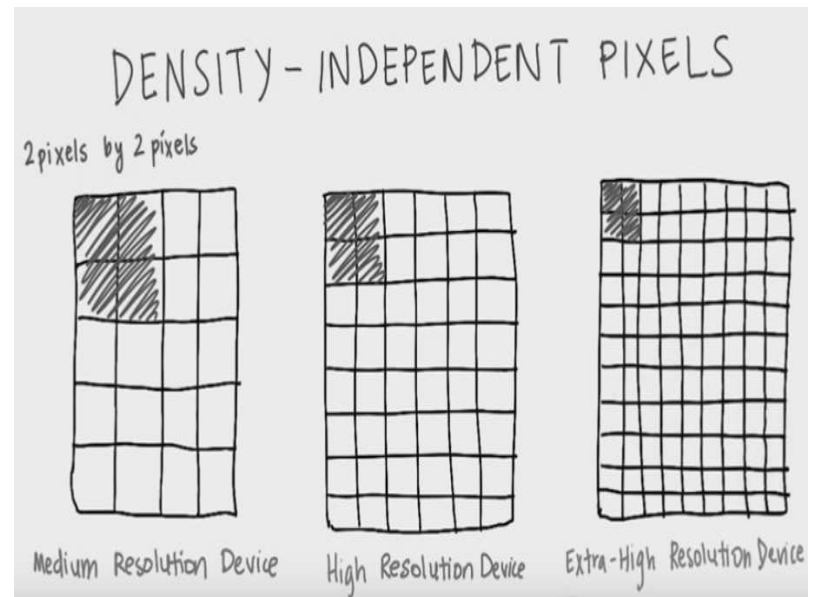


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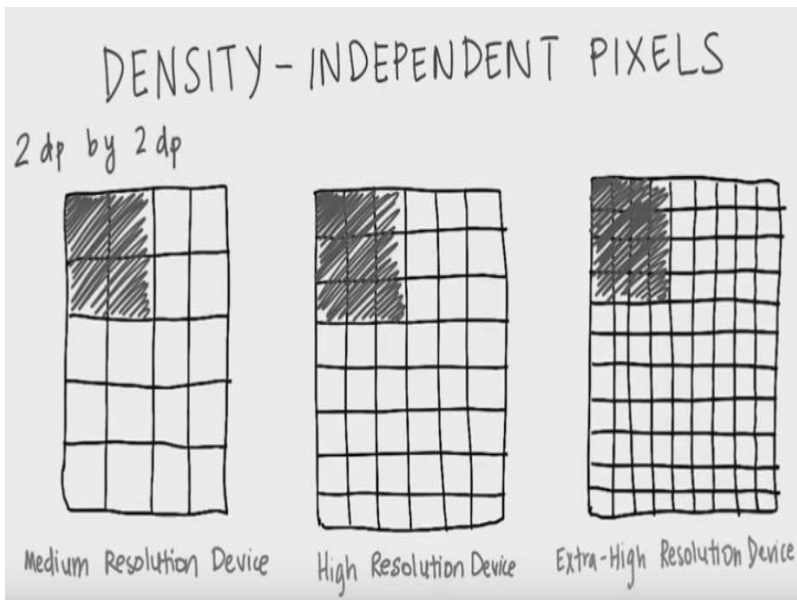
px, dpi, dp, sp

- px (pixel)
- dpi (dots per inch)
- dip/dp (density independent pixel)
- sp (scale independent pixel)

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Common Android Views

View	XML Code	Visual Representation
TextView Displays text	<pre><TextView android:id="@+id/title_text_view" android:layout_width="wrap_content" android:layout_height="wrap_content" android:text="@string/my_photos" android:textAppearance="@android:textAppearanceLarge" android:textColor="#4689C8" android:textStyle="bold" /></pre>	My Photos
ImageView Displays Image	<pre><ImageView android:id="@+id/photo_image_view" android:layout_width="match_parent" android:layout_height="match_parent" android:scaleType="centerCrop" android:src="@drawable/beach" /></pre>	
Button Button with text label	<pre><Button android:id="@+id/next_button" android:layout_width="wrap_content" android:layout_height="wrap_content" android:text="@string/next" /></pre>	NEXT
View Plain rectangle (can be used as a divider)	<pre><View android:layout_width="match_parent" android:layout_height="100dp" android:background="#4E4B4F" /></pre>	

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EditText

Text field that you can type into

```
<EditText
    android:id="@+id/album_description_view"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/album_description"
    android:inputType="textMultiLine" />
```

Album Description

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GETTING PAST ERRORS

```
<Text View
    android:text="Hapy Birthday"
    android:layout_width="150dp"
    android:layout_height="150"
    android:background="@android:color/darker_groy"
>
```

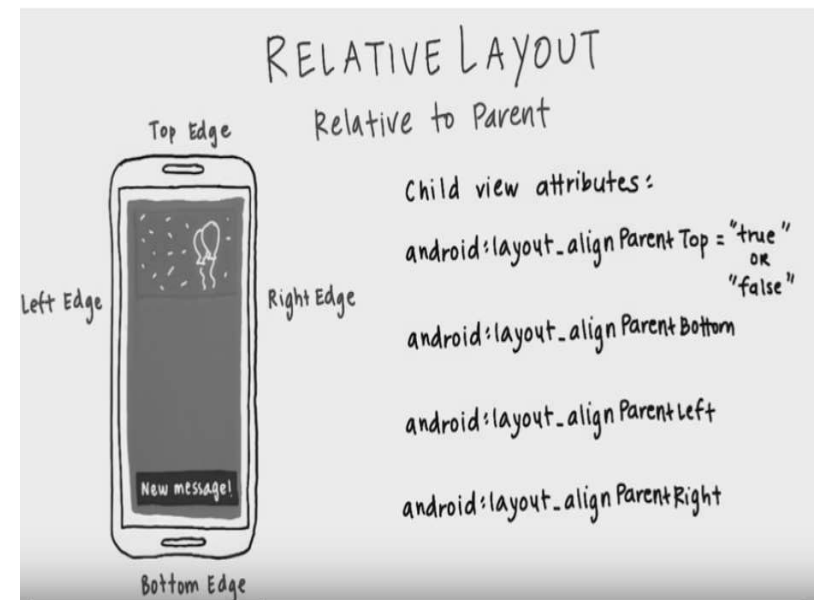
Uh oh! Invalid XML... help!

Describe at least 2 problems you see.

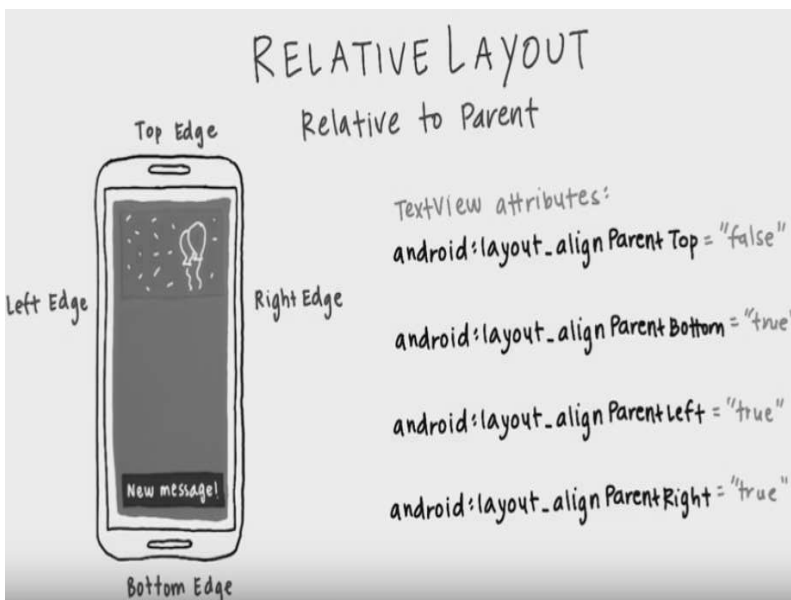
19



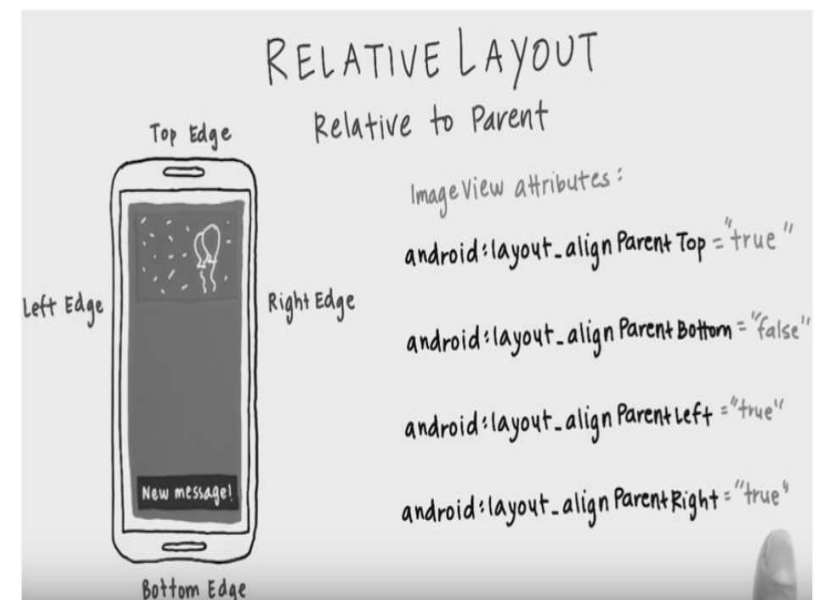
20



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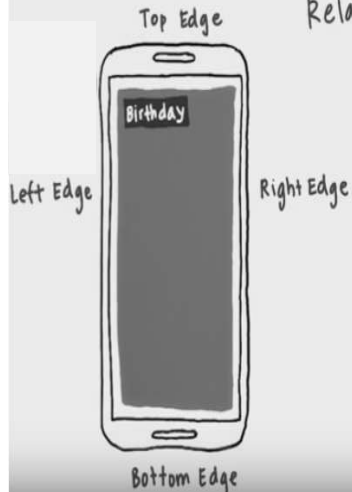
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RELATIVE LAYOUT

Relative to Parent



Child view attributes:

`android:layout_alignParentTop = "true"`

`android:layout_alignParentBottom`

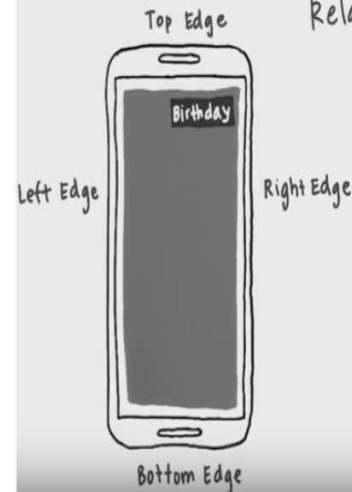
`android:layout_alignParentLeft = "true"`

`android:layout_alignParentRight`

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RELATIVE LAYOUT

Relative to Parent



Child view attributes:

`android:layout_alignParentTop = "true"`

`android:layout_alignParentBottom`

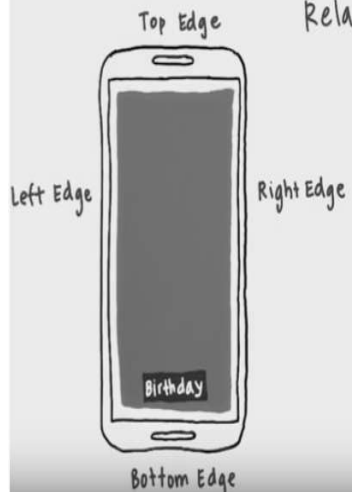
`android:layout_alignParentLeft`

`android:layout_alignParentRight = "true"`

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RELATIVE LAYOUT

Relative to Parent



Child view attributes:

`android:layout_alignParentTop`

`android:layout_alignParentBottom = "true"`

`android:layout_alignParentLeft`

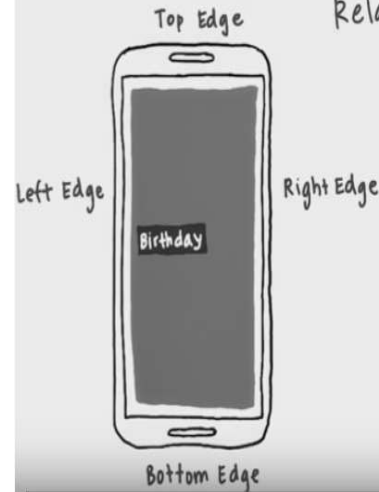
`android:layout_alignParentRight`

`android:layout_centerHorizontal = "true"`

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RELATIVE LAYOUT

Relative to Parent



Child view attributes:

`android:layout_alignParentTop`

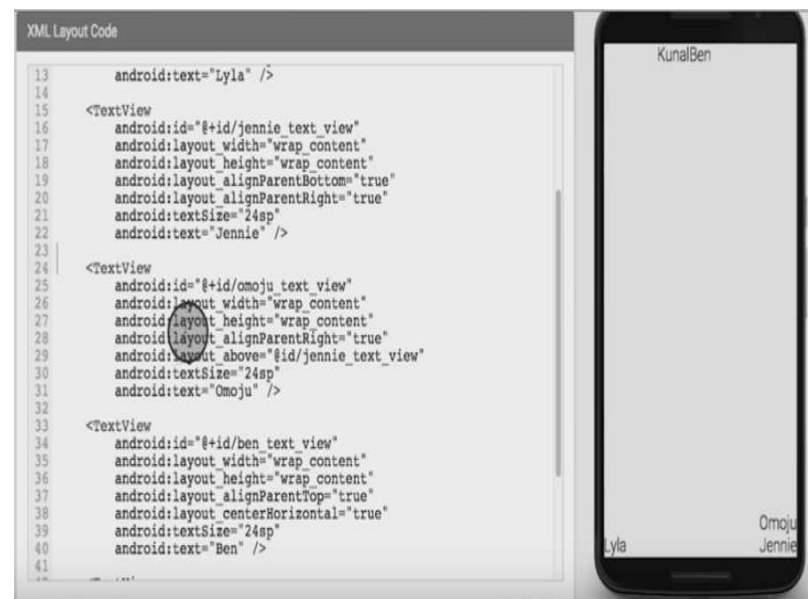
`android:layout_alignParentBottom`

`android:layout_alignParentLeft`

`android:layout_alignParentRight`

`android:layout_centerVertical = "true"`

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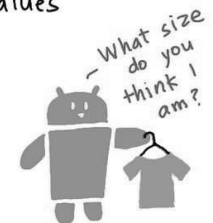
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WIDTH and HEIGHT

- Try different width and height values for each TextView

- fixed dp values
- wrap-content
- match-parent

* Remember that width and height *
don't have to match



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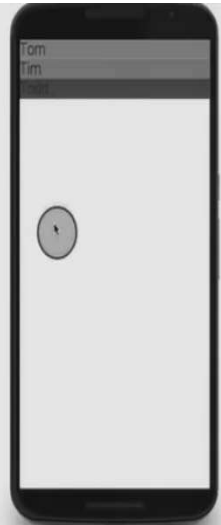
LAYOUT WEIGHT

XML Layout Code

```

1 <LinearLayout
2   xmlns:android="http://schemas.android.com/apk/res/android"
3   android:orientation="vertical"
4   android:layout_width="match_parent"
5   android:layout_height="match_parent">
6
7   <TextView
8     android:text="Tom"
9     android:layout_width="match_parent"
10    android:layout_height="wrap_content"
11    android:textSize="24sp"
12    android:background="#4CAF50" />
13
14   <TextView
15     android:text="Tim"
16     android:layout_width="match_parent"
17     android:layout_height="wrap_content"
18     android:textSize="24sp"
19     android:background="#2196F3" />
20
21   <TextView
22     android:text="Todd"
23     android:layout_width="match_parent"
24     android:layout_height="wrap_content"
25     android:textSize="24sp"
26     android:background="#673AB7" />
27
28 </LinearLayout>

```



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XML Layout Code

```

1 <LinearLayout
2   xmlns:android="http://schemas.android.com/apk/res/android"
3   android:orientation="vertical"
4   android:layout_width="match_parent"
5   android:layout_height="match_parent">
6
7   <TextView
8     android:text="Tom"
9     android:layout_width="match_parent"
10    android:layout_height="0dp"
11    android:layout_weight="1"
12    android:textSize="24sp"
13    android:background="#4CAF50" />
14
15   <TextView
16     android:text="Tim"
17     android:layout_width="match_parent"
18     android:layout_height="wrap_content"
19     android:textSize="24sp"
20     android:background="#2196F3" />
21
22   <TextView
23     android:text="Todd"
24     android:layout_width="match_parent"
25     android:layout_height="wrap_content"
26     android:textSize="24sp"
27     android:background="#673AB7" />
28
29 </LinearLayout>

```



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XML Layout Code

```

1 <LinearLayout
2   xmlns:android="http://schemas.android.com/apk/res/android"
3   android:orientation="vertical"
4   android:layout_width="match_parent"
5   android:layout_height="match_parent">
6
7   <TextView
8     android:text="Tom"
9     android:layout_width="match_parent"
10    android:layout_height="0dp"
11    android:layout_weight="1"
12    android:textSize="24sp"
13    android:background="#4CAF50" />
14
15   <TextView
16     android:text="Tim"
17     android:layout_width="match_parent"
18     android:layout_height="0dp"
19     android:layout_weight="1"
20     android:textSize="24sp"
21     android:background="#2196F3" />
22
23   <TextView
24     android:text="Todd"
25     android:layout_width="match_parent"
26     android:layout_height="0dp"
27     android:layout_weight="1"
28     android:textSize="24sp"
29     android:background="#673AB7" />

```



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XML Layout Code

```

1 <LinearLayout
2   xmlns:android="http://schemas.android.com/apk/res/android"
3   android:orientation="vertical"
4   android:layout_width="match_parent"
5   android:layout_height="match_parent">
6
7   <TextView
8     android:text="Tom"
9     android:layout_width="match_parent"
10    android:layout_height="0dp"
11    android:layout_weight="1"
12    android:textSize="24sp"
13    android:background="#4CAF50" />
14
15   <TextView
16     android:text="Tim"
17     android:layout_width="match_parent"
18     android:layout_height="0dp"
19     android:layout_weight="8"
20     android:textSize="24sp"
21     android:background="#2196F3" />
22
23   <TextView
24     android:text="Todd"
25     android:layout_width="match_parent"
26     android:layout_height="0dp"
27     android:layout_weight="1"
28     android:textSize="24sp"
29     android:background="#673AB7" />

```



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