



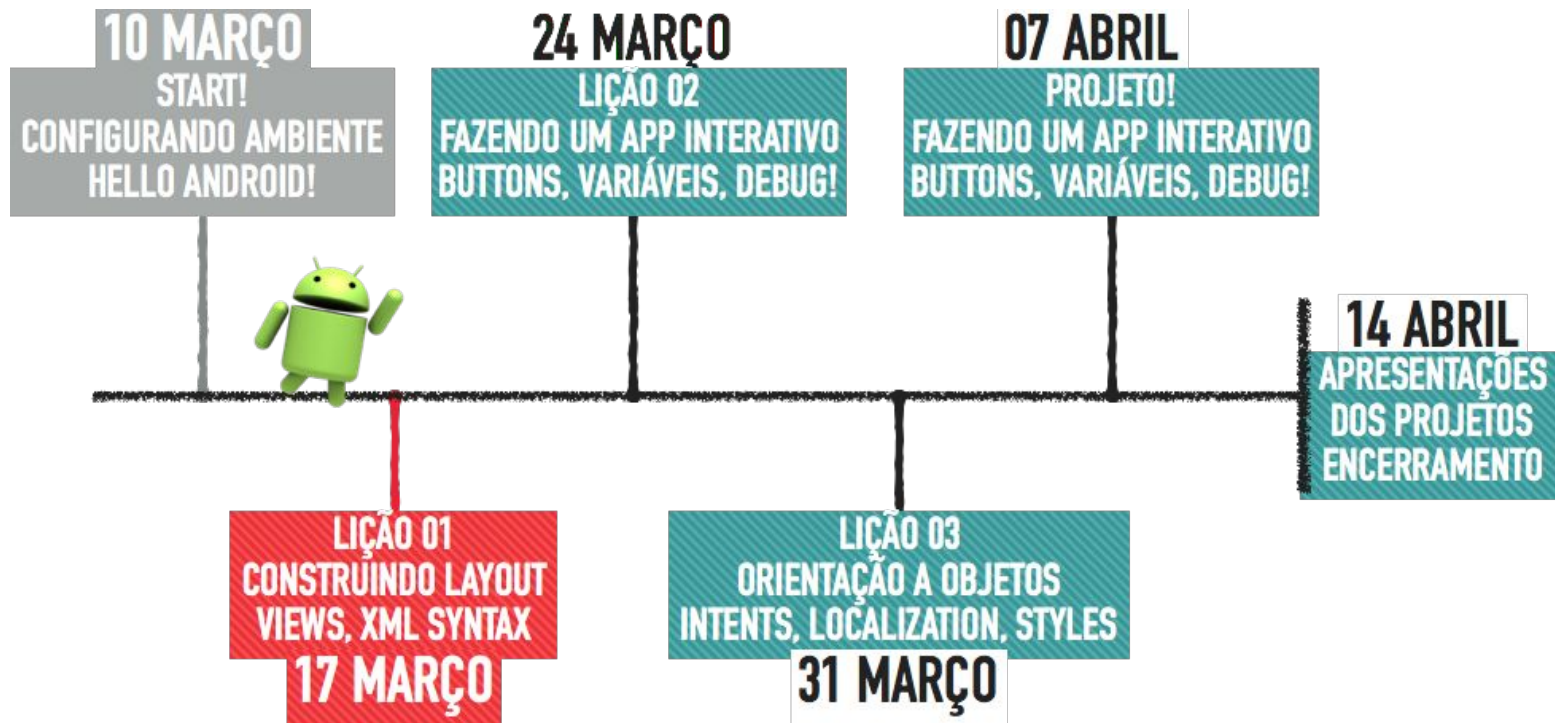
# STWOT JAMS



#  
STUDYJAMS

# AGENDA

— — —



# BUILDING LAYOUTS

## *LESSON 1A*

# Lesson 1A

## Views

Introduz o conceito de views e sua utilização.

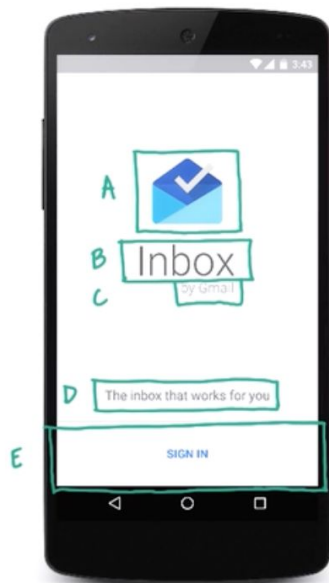
## Vocabulário

TextView

ImageView

Button

CamelCase



## VIEWS

Identify the type of View

- |   |                                |                                 |                              |
|---|--------------------------------|---------------------------------|------------------------------|
| A | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| B | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| C | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| D | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| E | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |

# Lesson 1A

## Views

Introduz o conceito de views e sua utilização.

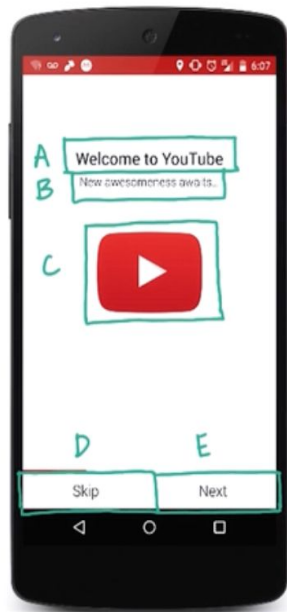
## Vocabulário

TextView

ImageView

Button

CamelCase



## VIEWS

Identify the type of View

- |   |                                |                                 |                              |
|---|--------------------------------|---------------------------------|------------------------------|
| A | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| B | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| C | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| D | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |
| E | <input type="radio"/> TextView | <input type="radio"/> ImageView | <input type="radio"/> Button |

# Lesson 1A

## Using TextView

Introduz o conceito de views e sua utilização.

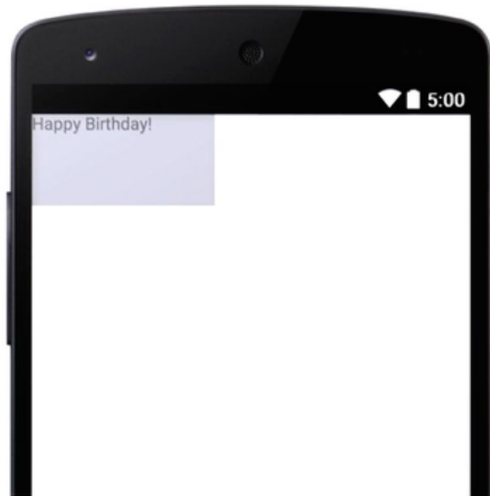
### Vocabulário

TextView  
ImageView  
Button  
CamelCase

TEXTVIEW

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

Write your observations here :



# Lesson 1A

## XML Syntax

Explica os componentes e regras usadas ao escrever XML.

### Vocabulário

XML Element

Tags & Self-closing Tags

Attributes

Syntax

Parent/Child Elements

Density Independent Pixels (dp)

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?

# Lesson 1A

## Change The TextView

Explica os componentes e regras usadas ao escrever XML.

### Vocabulário

XML Element

Tags & Self-closing Tags

Attributes

Syntax

Parent/Child Elements

Density Independent Pixels (dp)

You are  
writing  
XML!

## CHANGE THE TEXTVIEW

- ☐ Change the text in the TextView
- ☐ Try changing the size of the TextView.
- ☐ Try to create an **error** 😞. Then undo it. 😊



## Lesson 1A

# Getting Past Errors

Aborda erros e oferece sugestões para debugar.

— — —

## 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.

## Lesson 1A

# Wrap Content

Como wrap\_content pode ser utilizado para definir a altura e a largura automaticamente.

## Vocabulário

Hard coding  
wrap\_content

## WRAP\_CONTENT

- ☐ Change the width and height of the `TextView` to `wrap_content`
- ☐ Change the text to be more than 1 line of text on the device

Quick! Wrap this mug!



## Lesson 1A

# TextView Text Size

Como alterar o tamanho e a cor dos TextViews.

## Vocabulário

Scale Independent Pixels (sp)


textSize

textColor

Material Design Spec

Hexadecimal Color

## TEXT SIZE

- ❑ Change the TextView font size using sizes from Material Design Spec
- ❑ Try learning about text appearance from  #AndroidDev #Protip

## Lesson 1A

# TextView Text Color

Como alterar o tamanho e a cor dos TextViews.

---

## Vocabulário

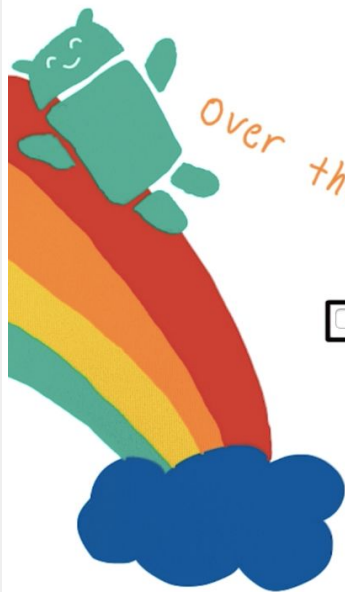
Scale Independent Pixels (sp)

textSize

textColor

Material Design Spec

Hexadecimal Color



TEXT COLOR

Over the rainbow and into a XML visualizer

- ☐ Change the color of the background and text to 2 different colors from the Material Design spec

# BUILDING LAYOUTS

## *LESSON 1B*

## Lesson 1B

# ViewGroups

Introduz o conceito de ViewGroups e sua utilização.

## Vocabulário

ViewGroups

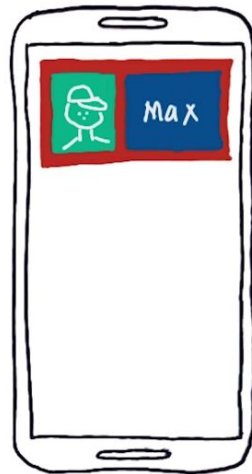
Root View

Parent

Child

Sibling

## VIEW GROUPS



## Lesson 1B

# Types of ViewGroups

Introduz o conceito de ViewGroups e sua utilização.

## Vocabulário

LinearLayout

RelativeLayout

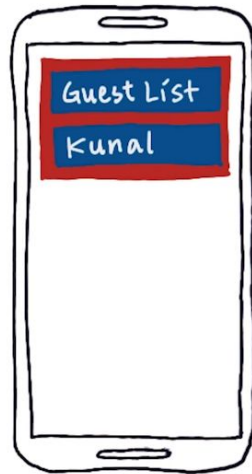
## VIEW GROUPS

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

    <TextView
        android:text="Guest List"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

    <TextView
        android:text="Kunal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

</LinearLayout>
```



## Lesson 1B

# Types of ViewGroups

Introduz o conceito de ViewGroups e sua utilização.

## Vocabulário

LinearLayout  
RelativeLayout

### RELATIVE LAYOUT

Relative to parent



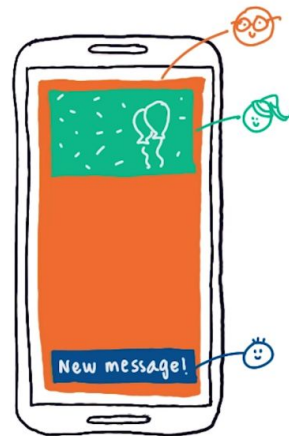
Ray  
RelativeLayout



Tommy  
TextView



Ivy  
ImageView



### LINEAR LAYOUT

Vertical column



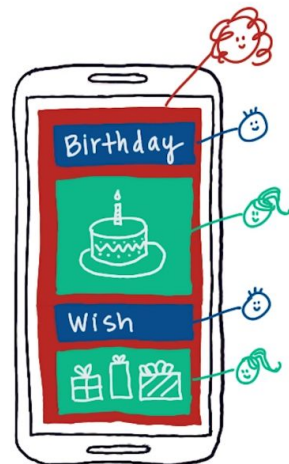
Laura  
LinearLayout



Tommy  
TextView



Ivy  
ImageView





## Lesson 1B

# LinearLayout

Introduz o conceito de ViewGroups e a utilização do LinearLayout.

## Vocabulário

Orientation

vertical

horizontal

## LINEAR LAYOUT

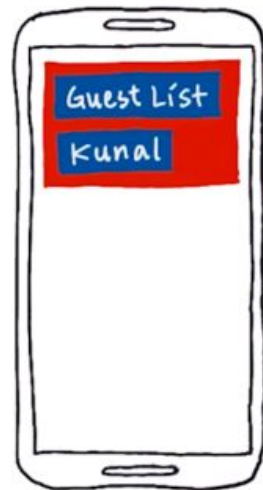
- ☐ Add more TextViews to the parent LinearLayout View Group
- ☐ Change the LinearLayout orientation attribute

Vertical



or

Horizontal



## Lesson 1B

# Width and Height

Descreve os atributos de altura e largura e a atribuição de valores para eles.

## Vocabulário

match\_parent

ViewGroup layout parameter

DIFFERENT HEIGHTS ON CHILD VIEWS

200 dp



wrap-content



match-parent



# Lesson 1B

## Weight

Como distribuir as views igualmente em um LinearLayout.

## Vocabulário

layout\_weight


udacity.github.io/android-layout/#/android/equal-space-children

### XML Layout Code

```
1 <LinearLayout
2   xmlns:android="http://schemas.android.com/apk/res/android"
3   android:orientation="vertical"
4   android:layout_width="wrap_content"
5   android:layout_height="wrap_content">
6
7   <TextView
8     android:text="Tom"
9     android:layout_width="wrap_content"
10    android:layout_height="200dp"
11    android:textSize="24sp" />
12
13   <TextView
14     android:text="Tim"
15     android:layout_width="wrap_content"
16     android:layout_height="200dp"
17     android:textSize="24sp" />
18
19   <TextView
20     android:text="Todd"
21     android:layout_width="wrap_content"
22     android:layout_height="200dp"
23     android:textSize="24sp" />
24
25 </LinearLayout>
```

AVAILABLE IMAGES

CHEAT SHEET



# Lesson 1B

## Weight

Como distribuir as views igualmente em um LinearLayout.

## Vocabulário

layout\_weight

## HANGOUTS APP



Horizontal LinearLayout



	ImageView	EditText	ImageView
Height	wrap_content	wrap_content	wrap_content
Width	wrap_content	0dp	wrap_content
weight	0	1	0

## Lesson 1B

# RelativeLayout

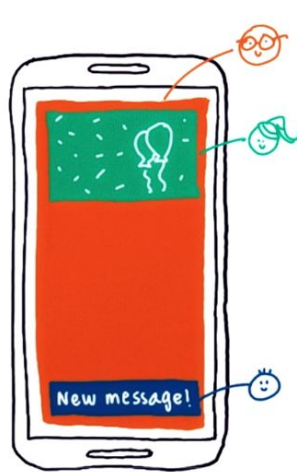
Introduz o conceito de ViewGroups e a utilização do RelativeLayout.

---

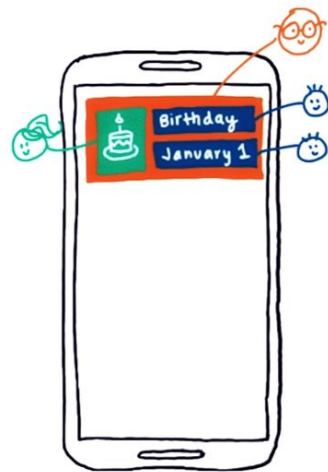
## Vocabulário

RelativeLayout

## RELATIVE LAYOUT



Relative to Parent



Relative to other children

## Lesson 1B

# Align to Parent

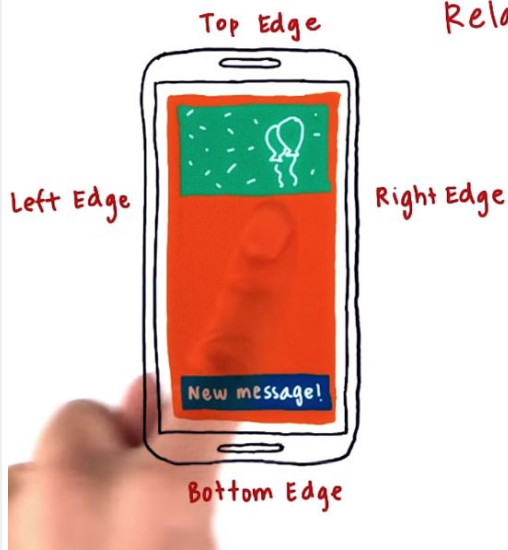
Introduz o conceito de ViewGroups e a utilização do RelativeLayout.

## Vocabulário

`layout_alignParent`  
`layout_centerVertical`

## RELATIVE LAYOUT

Relative to Parent



ImageView attributes:

`android:layout_alignParentTop = "true"`

`android:layout_alignParentBottom = "false"`

`android:layout_alignParentLeft = "true"`

`android:layout_alignParentRight = "true"`

## Lesson 1B

# Align to other Views

Introduz o conceito de ViewGroups e a utilização do RelativeLayout.

---

## Vocabulário

id

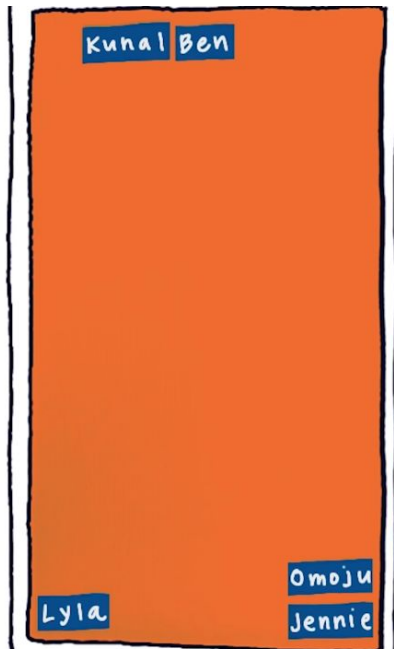
layout\_toRightOf

layout\_toLeftOf

layout\_above

layout\_below

RelativeLayout.LayoutParams



➔ Assigning view ID names

On Jennie TextView:  
`android:id="@+id/jennie-text-view"`

➔ Positioning children relative to other views

on Omoju TextView:  
`android:layout_above =  
"@+id/jennie-text-view"`

## Lesson 1B

# RelativeLayout Item

Descreve a criação de um Item com RelativeLayout.

---

## Vocabulário

id

layout\_toRightOf

layout\_toLeftOf

layout\_above

layout\_below

RELATIVE LAYOUT For a list item

❑ Modify the provided XML to build this

Hint: switch from  
Linear Layout to  
RelativeLayout





## Lesson 1B

# Padding vs Margin

A diferença do padding e margin para o espaçamento das Views.

---

## Vocabulário

Padding

`android:padding`

Margin

`android:layout_margin`

PADDING

8 dp  
padding  
on  
Button

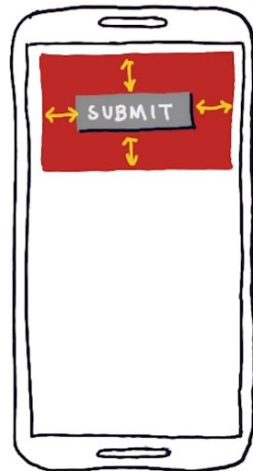


SUBMIT

MARGIN

Need  
ViewGroup

8 dp  
layout  
margin  
on  
Button



## Lesson 1B

# Padding vs Margin

A diferença do padding e margin para o espaçamento das Views.

## Vocabulário

Padding

`android:padding`

Margin

`android:layout_margin`



# PRACTICE SET 1

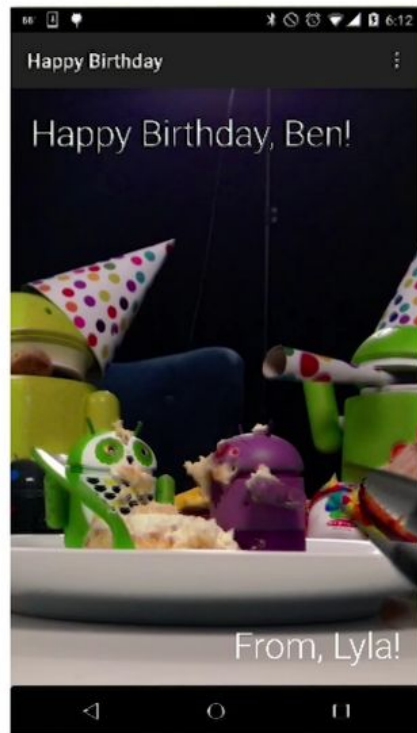
*LESSON 1A e 1B*

# Drawing to Code <sup>In 3 steps!</sup>

Step 1: Select the Views

Step 2: Position the Views

Step 3: Style the Views



## Practice Set 1

# Select the Views

Identificando as views antes de começar.

---

## Resposta

2 TextViews  
ImageView

Step 1: Select the Views

What Views are included in this layout?



## Practice Set 1

# Position the Views

Definindo o posicionamento das Views no Layout.

---

## Resposta

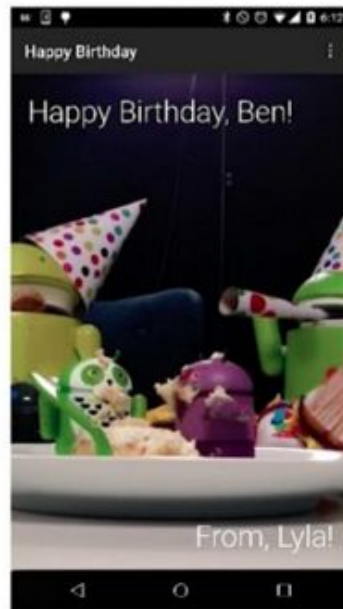
Sobreposição de views  
Atributos de posicionamento

Step 2: Position the Views

What View Group should you use?

- ☐ Linear Layout
- ☒ Relative Layout

Why?



## Practice Set 1

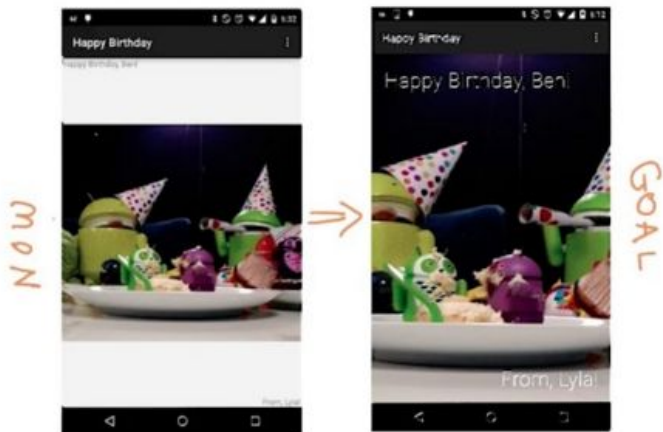
# Style the Views

Ajustando posicionamento, dimensões e cores das Views.

## Resposta

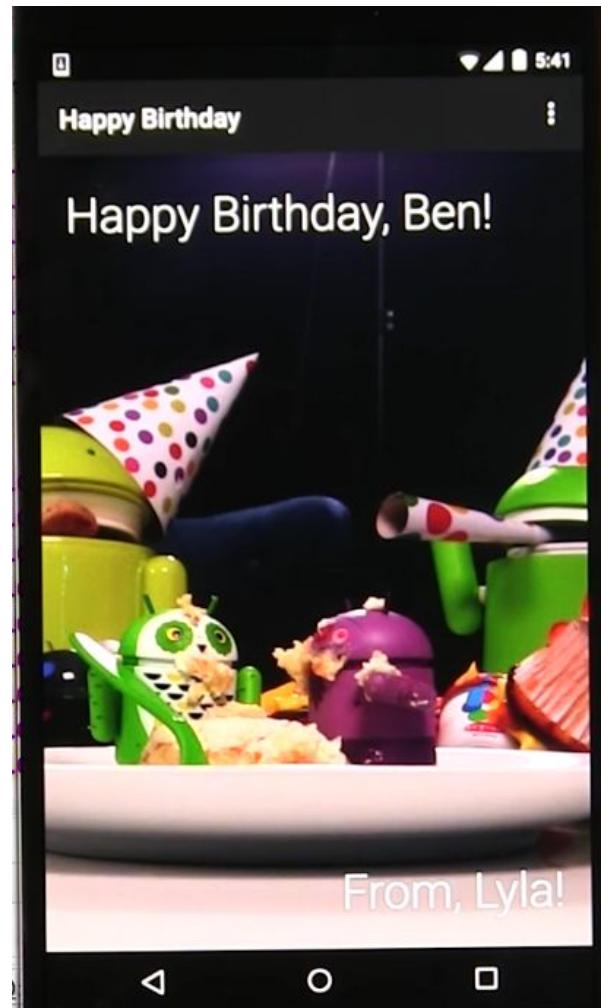
- O texto é maior
- O texto é branco
- A fonte do texto é diferente
- A imagem ocupa toda a tela
- O texto possui um espaçamento

## Step 3: Style the Views



Write down all the differences you see between what we have NOW and the end GOAL:

## Practice Set 1 - Birthday Card!





# PRACTICE

*LESSON 1A e 1B*

## Practice

# Building new Layout

Vamos construir esse novo layout, o que precisaremos?

— — —



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## Practice

# Building new Layout

Vamos construir esse novo layout, o que precisaremos?

## Resposta

ImageViews

LinearLayout

TextViews

RelativeLayout

View (height: 1px)



# Referências

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- <https://goo.gl/eDJVIY> ← **essa apresentação**
- <http://www.gdgbh.org>
- [gdgbh.slack.com](http://gdgbh.slack.com) (Private Channel: **#android-study-jam**)
- <https://goo.gl/dhwwY5> (Android Development for Beginners)
- <https://developers.google.com>
- <http://www.google.com/design/spec/style/typography.html#typography-styles>
- <http://www.google.com/design/spec/style/color.html#color-color-palette>
- <http://goo.gl/fWwL27> (Nearby Places com: Google Maps + Google Places API)

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