

# **MAD9132**

# **Android Application Development**

Relative Layout

# Relative Layout

- RelativeLayout is a ViewGroup that displays child Views in relative positions.
- The position of each View can be specified as relative to either:
  - Positions relative to the parent RelativeLayout (e.g. aligned to the top, bottom, left, right, center).
  - Or another sibling element (e.g. left-of or below another View)

# Relative to Parent

- A child element nested inside of a RelativeLayout can be positioned to the parent's:
  - Top edge
  - Bottom edge
  - Left edge
  - Right edge
- Child View attributes:
  - android:layout\_alignParentTop="true" or "false"
  - android:layout\_alignParentBottom="true" or "false"
  - android:layout\_alignParentLeft="true" or "false"
  - android:layout\_alignParentRight="true" or "false"
  - Default value is "false"

# Position to Corners

- To position a TextView in the top left corner:
  - `android:layout_alignParentTop="true"`
  - `android:layout_alignParentLeft="true"`
  
- To position in the bottom right corner:
  - `android:layout_alignParentBottom="true"`
  - `android:layout_alignParentRight="true"`

# Centering

- A View can be centered within the RelativeLayout
  - Center horizontally
  - Center vertically
- To position a TextView to be in the center of the screen:
  - `android:layout_centerHorizontal="true"`
  - `android:layout_centerVertical="true"`

# Positioning Relative to other Views

- For example, one TextView can be above another TextView
- Or, an ImageView to the left of a TextView
- Attributes:
  - android:layout\_toLeftOf=<some View>
  - android:layout\_toRightOf=<some View>
  - android:layout\_above=<some View>
  - android:layout\_below=<some View>

where <some View> identifies another View by its ID

# Assigning View IDs

- Views can be assigned an ID: `android:id="@+id/hello_text_view"`
- Syntax:
  - @ : refers to a resource
  - id : resource type
  - + : first time declaring ID
  - / : slash
  - Name-of-view : no spaces; must start w/ a letter; must be unique
- Usage:
  - Positioning a View relative to another View in RelativeLayout
  - Event Handling (future topic)
- Setting the ID is optional, and not mandatory

# Example

- Available as a Gist on my GitHub account:

<https://gist.github.com/hurdleg/7ceaa966351059e1f0242bfda4887da7>

- Copy the Gist, and paste into activity\_main.xml
  - res > layout > activity\_main.xml



# API Documentation

- RelativeLayout

<https://developer.android.com/reference/android/widget/RelativeLayout.html>

- RelativeLayout.LayoutParams

<https://developer.android.com/reference/android/widget/RelativeLayout.LayoutParams.html>

# References

- Android Basics: User Interface course at [udacity.com](https://www.udacity.com)
  - Building Layouts: Part 2