



# MOBILE APPLICATION DEVELOPMENT (EI-333)

Lecture:03

“Build Your First Android App”

ANDROID

# BUILD YOUR FIRST ANDROID APP



android

# LAYOUT & RESOURCES FOR THE UI

- Views, view groups, and view hierarchy
- The layout editor and ConstraintLayout
- Event handling
- Resources and measurements



# WHAT IS A **VIEW**?

View subclasses are basic user interface building blocks

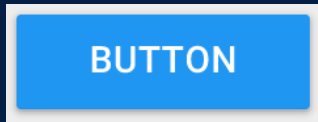
- Display text (TextView class), edit text (EditText class)
- Buttons (Button class), menus, other controls
- Scrollable (ScrollView, RecyclerView)
- Show images (ImageView)
- CheckBox
- RadioButton

etc.

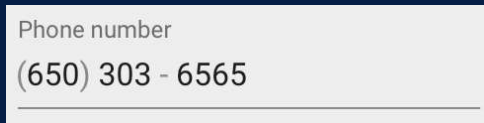


# Examples of **VIEW** subclass

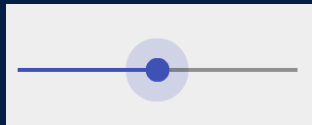
Button



EditText



Slider



CheckBox



RadioButton



Switch



# VIEW ATTRIBUTES

- Color, dimensions, positioning
- May have focus (e.g., selected to receive user input)
- May be interactive (respond to user clicks)
- May be visible or not
- Relationships to other views



# WHAT IS A **VIEW-GROUP**?

ViewGroup contains child views

- **ConstraintLayout**

Positions UI elements using constraint connections to other elements and to the layout edges

- **ScrollView**

Contains one element and enables scrolling

- **RecyclerView**

Contains a list of elements and enables scrolling by adding and removing elements dynamically



# VIEW-GROUP for LAYOUTS

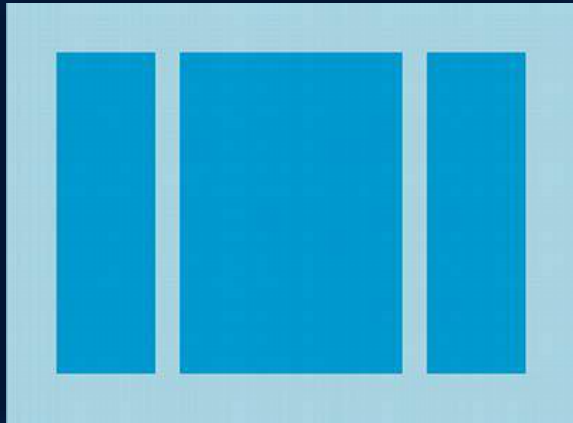
## Layouts

- are specific types of ViewGroups
- contain child views
- can be in a row, column, grid, table, absolute





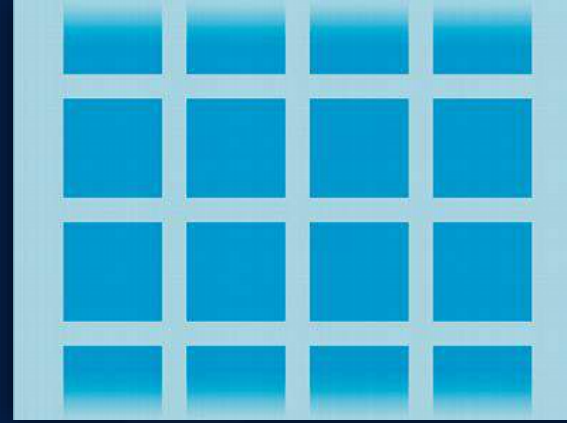
# VIEW-GROUP for LAYOUTS



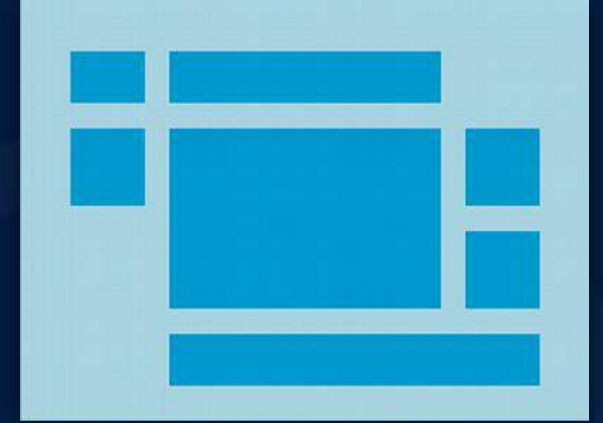
LinearLayout



ConstraintLayout



GridLayout



TableLayout



# COMMON LAYOUTS CLASSES

**ConstraintLayout:** Connect views with constraints

**LinearLayout:** Horizontal or vertical row

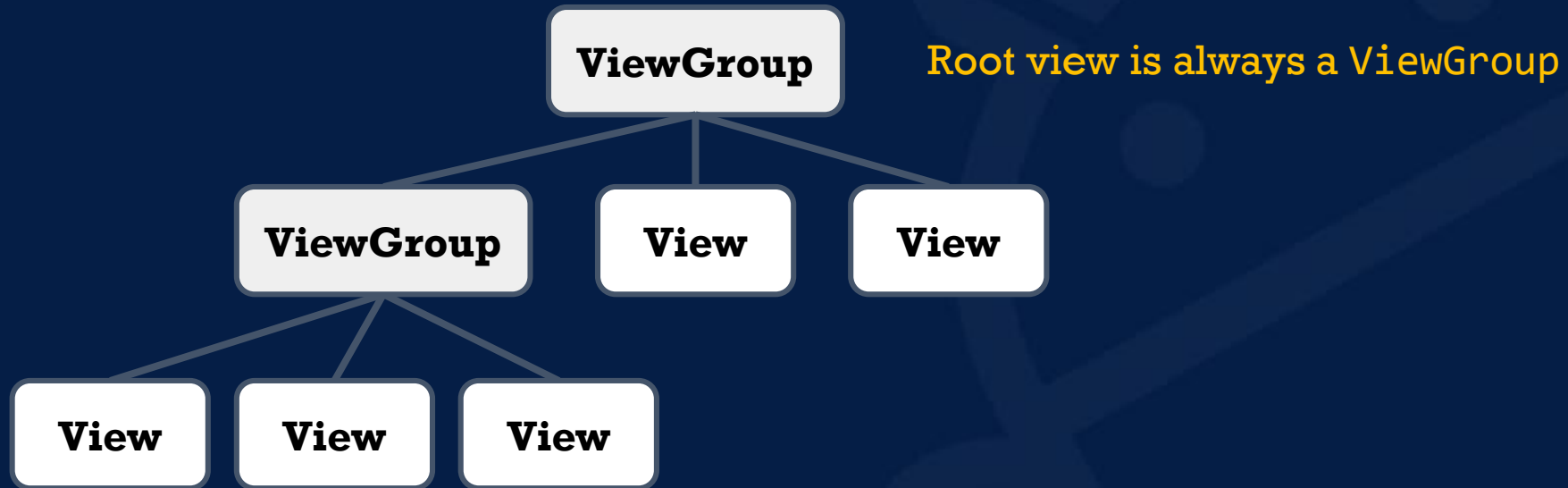
**RelativeLayout:** Child views relative to each other

**TableLayout:** Rows and columns

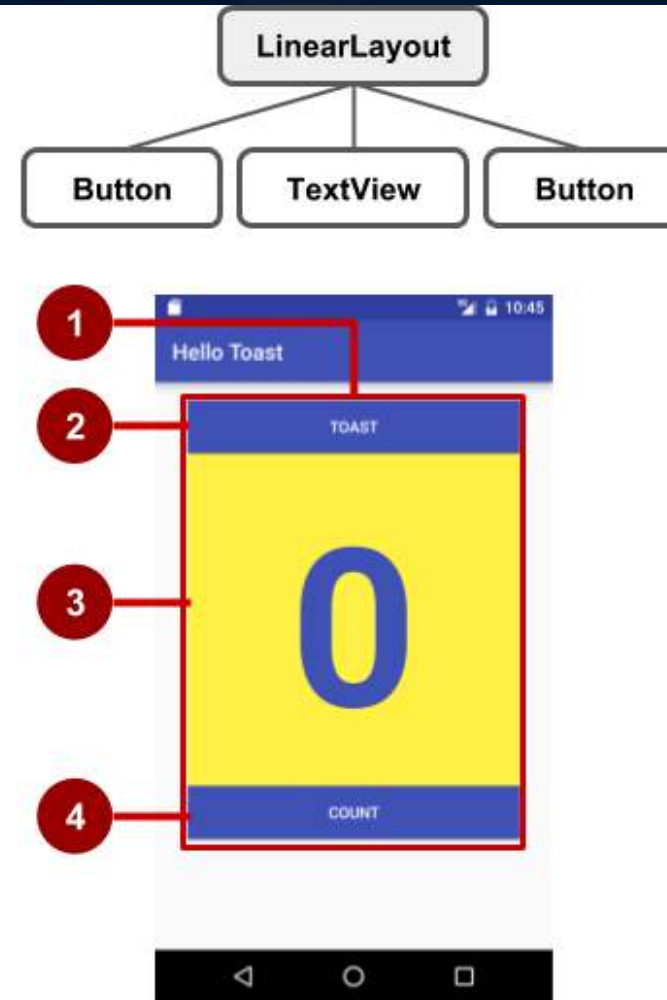
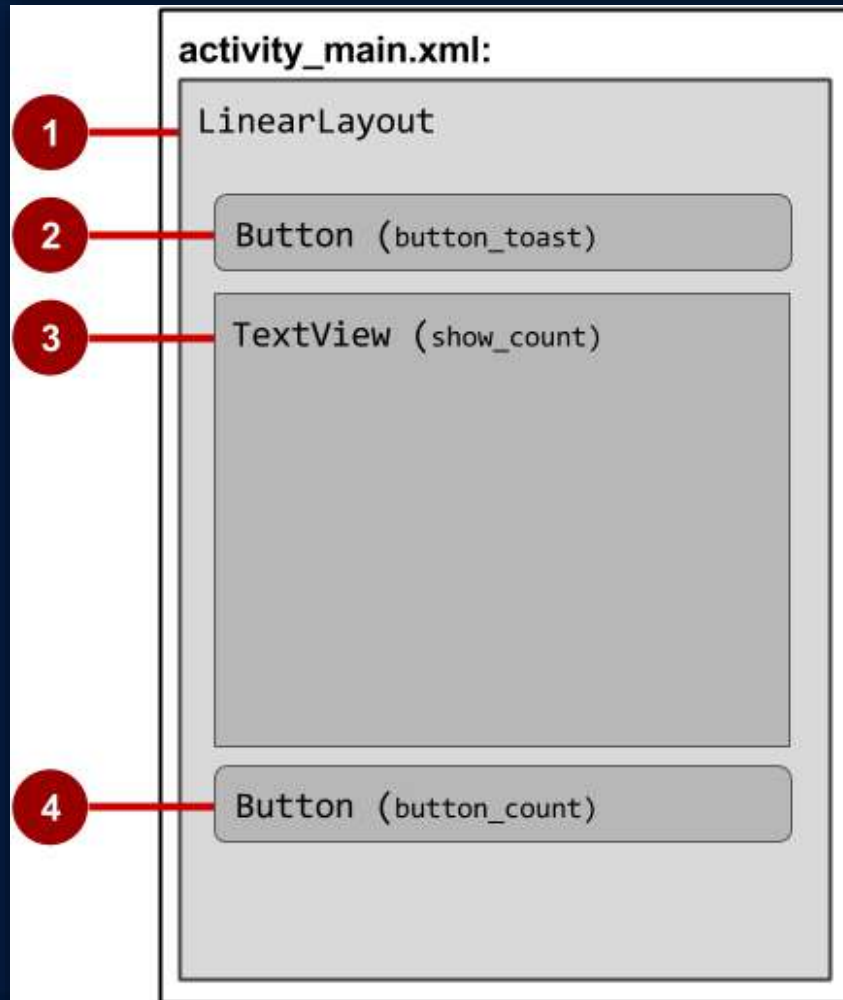
**FrameLayout:** Shows one child of a stack of children



# HIERARCHY OF VIEWGROUPS AND VIEWS



# HIERARCHY OF VIEWGROUPS AND VIEWS



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THANK YOU 😊



ANDROID