LECTURE – 03

MOBILE APPLICATION DEVELOPMENT

By: AbuBakar Ubaid

ANDROID

BUILD YOUR FIRST ANDROID APP

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LAYOUT & RESOURCES FOR THE UI

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

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WHAT IS A VIEW?

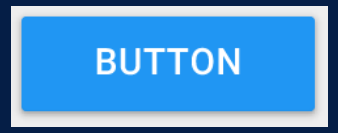
`View` subclasses are basic user interface building blocks

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

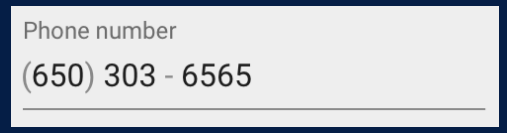
etc.

Examples of VIEW subClass

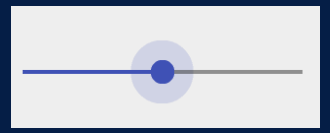
Button



EditText



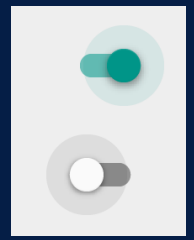
Slider



CheckBox

RadioButton

Switch



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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

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VIEW-GROUP for LAYOUTS

Layouts

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

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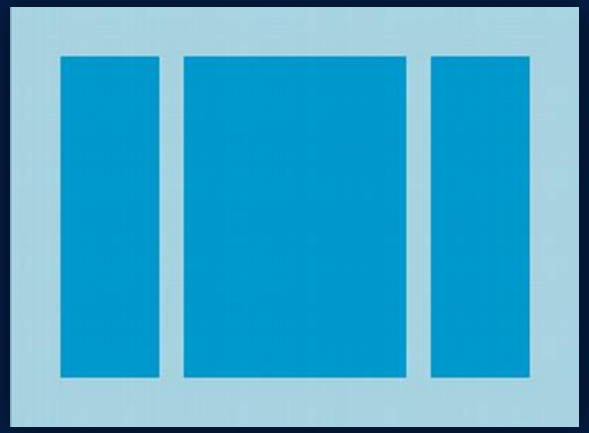
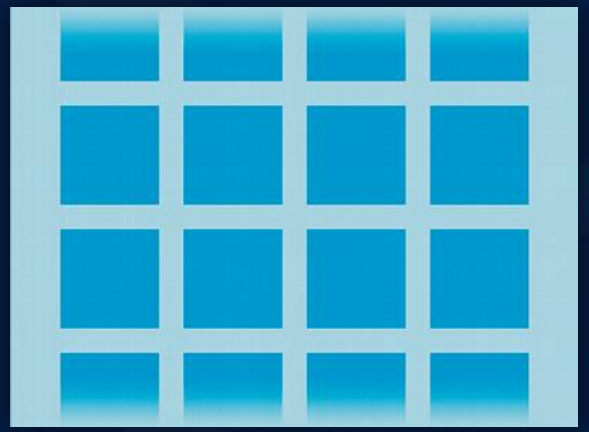
VIEW-GROUP for LAYOUTS

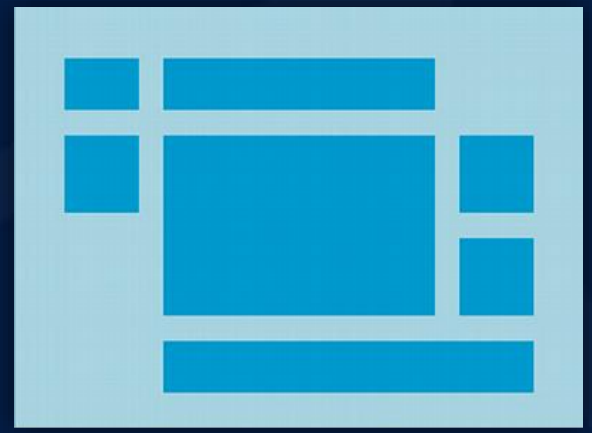


`LinearLayout`

`ConstraintLayout`



`GridLayout`



`TableLayout`

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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

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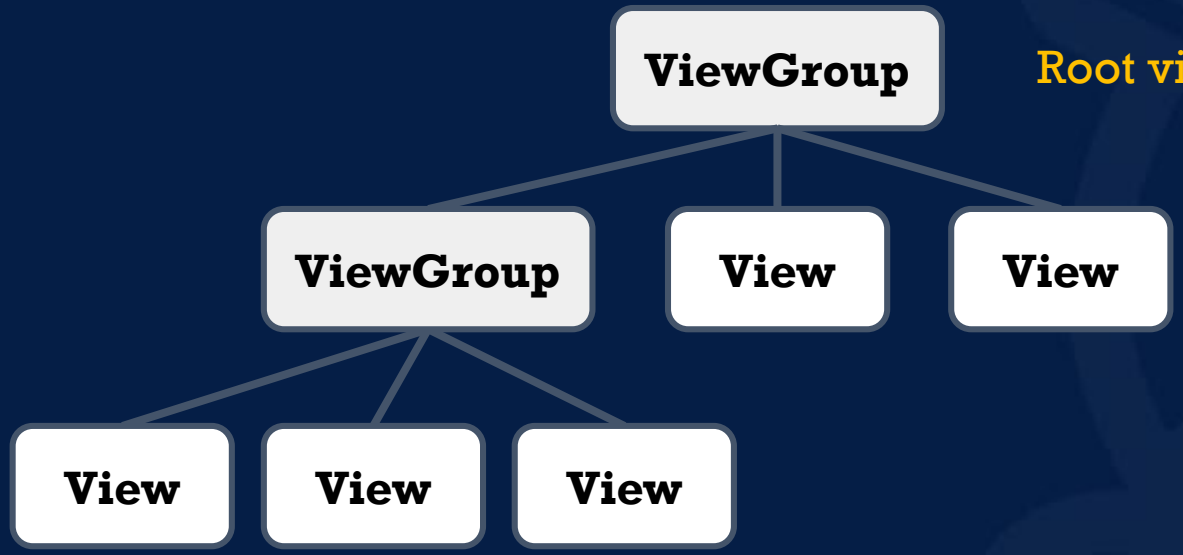
HIERARCHY OF VIEWGROUPS AND VIEWS



Root view is always a `ViewGroup`

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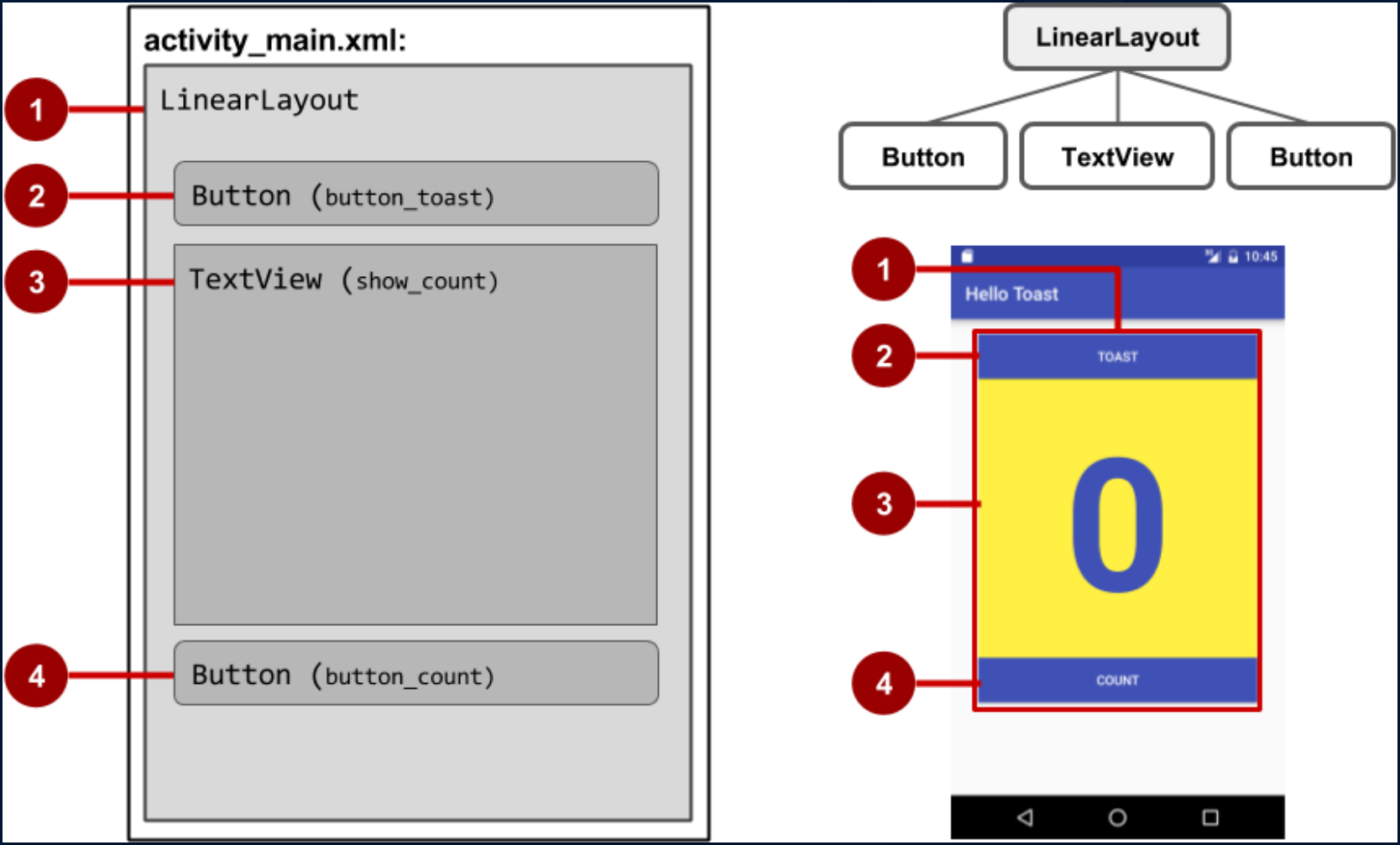

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THANK YOU ☺

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