

# Lab 1: Layout

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COEN 268

# View & ViewGroup

- Basic user interface building block within Android.
  - Represents a rectangular portion of the screen.
  - Eg: EditText, Button, CheckBox
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- **ViewGroup** is an invisible container of other views (child views) and other viewgroups.
  - ViewGroup is the base class for layouts.
  - Eg: LinearLayout.

# Types of Layouts

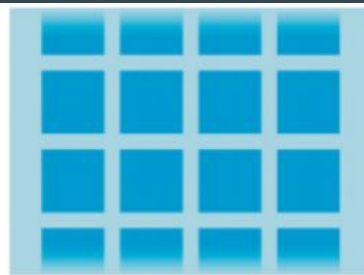
- LinearLayout
- RelativeLayout
- TableLayout
- GridLayout
- FrameLayout
- ConstraintLayout



LinearLayout



RelativeLayout



GridLayout



TableLayout

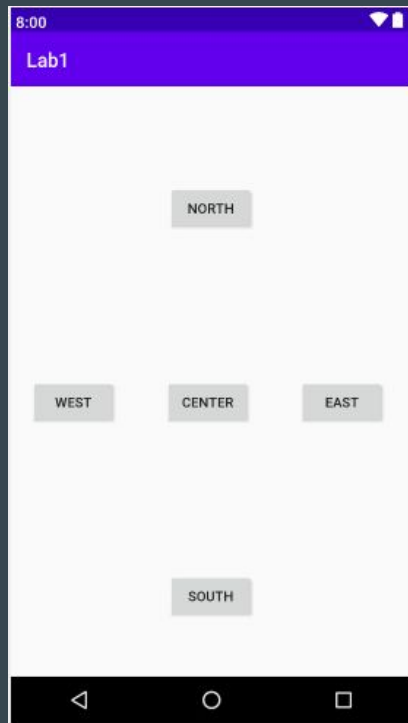
# FrameLayout

- Block out an area on the screen to display a single item.
- Use it to display overlapping content.
- Child views are drawn in a stack, with the most recently added child on top.
- The size of the FrameLayout is the size of its largest child (plus padding).

# ConstraintLayout

- Default layout for android view since android 3.0
- Improves upon RelativeLayout and add some new features.
- Relative positioning, centering positioning, circular positioning.
- Decreases the complexity when working on a complex layout.
- At least one horizontal and one vertical constraint for the view.

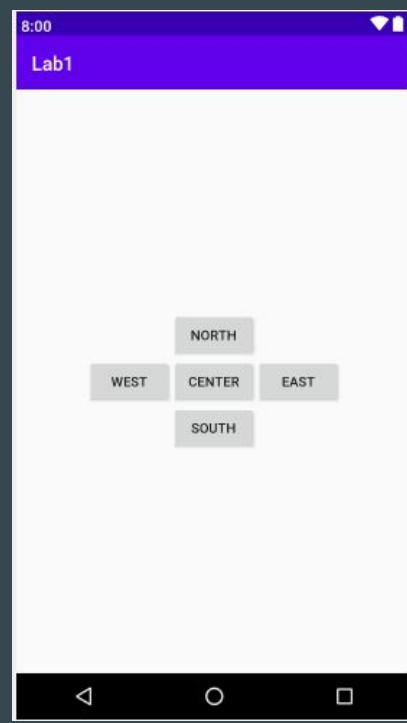
# Lab Practice



LinearLayout

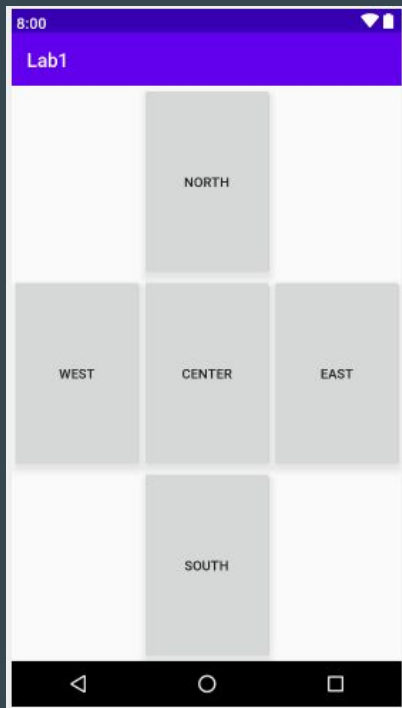


RelativeLayout



TableLayout

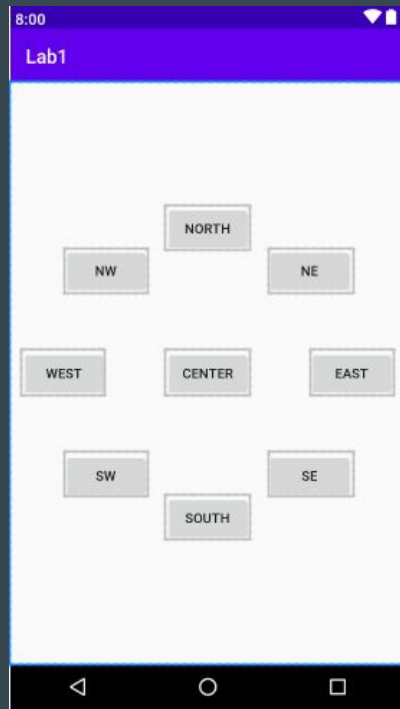
# Lab Practice



GridLayout



FrameLayout



ConstraintLayout

# Reference

<https://developer.android.com/reference/android/support/constraint/ConstraintLayout>

<https://www.codewithc.com/what-is-a-frame-layout-in-android-and-when-to-use-it/>

<https://google-developer-training.github.io/android-developer-fundamentals-course-concepts-v2/unit-1-get-started/lesson-1-build-your-first-app/1-2-c-layouts-and-resources-for-the-ui/1-2-c-layouts-and-resources-for-the-ui.html>