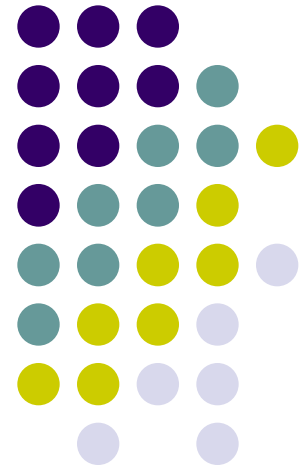
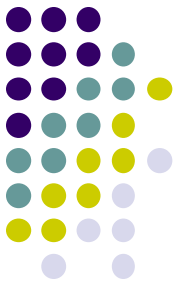


# UI Components and Layouts

Prof. Prasad Koyande  
Vidyalankar Polytechnic



# UNDERSTANDING THE COMPONENTS OF A SCREEN

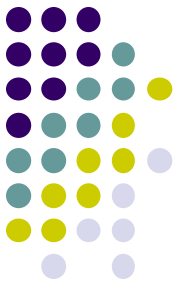


# FUNDAMENTALS OF UI DESIGN



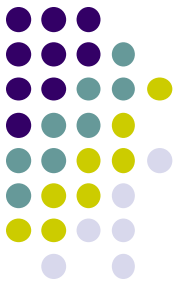
- **Views**

- The basic building block for user interface in Android is a View, which is created from the View class and occupies a rectangular area on the screen and is responsible for drawing and event handling.
- Views are the base class for all visual interface elements (commonly known as controls or widgets).
- All user interface UI controls, including the layout classes, are derived from View.



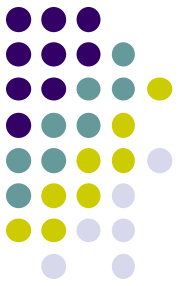
- **View Groups**

- The ViewGroup is a subclass of View and provides invisible container that hold other Views or other ViewGroups and define their layout properties.
- View groups are extensions of the View class that can contain multiple child Views.
- In order to Extend the ViewGroup class to create compound controls made up of interconnected child views.



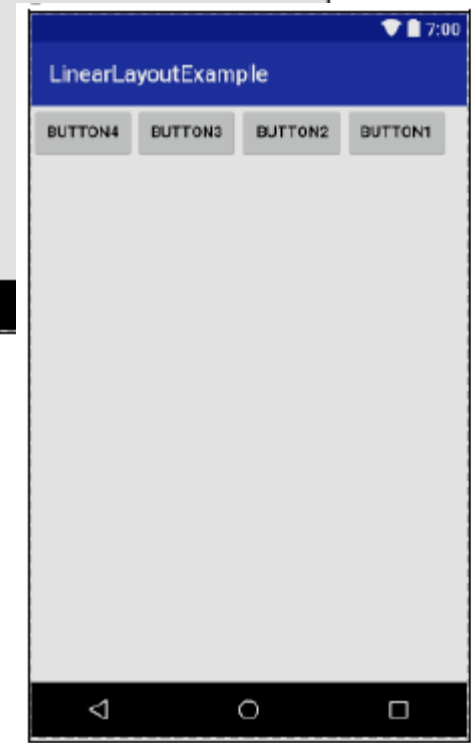
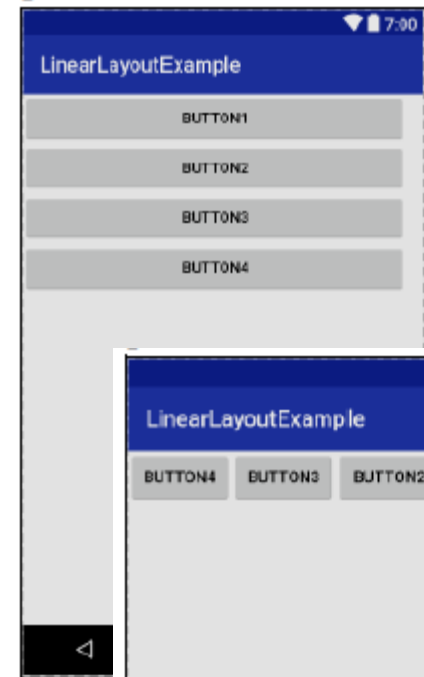
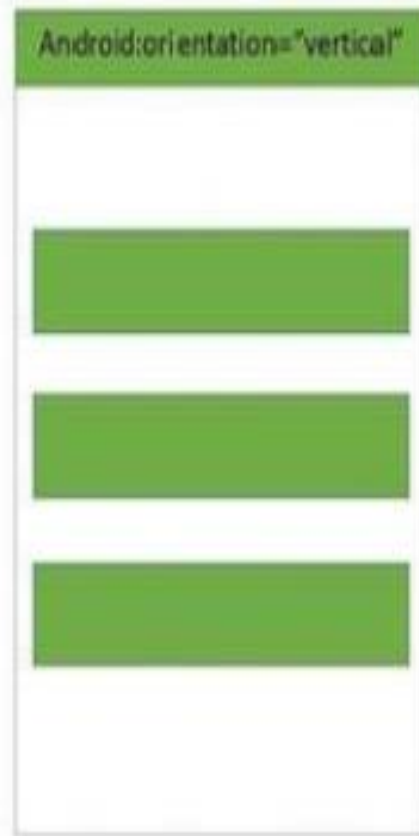
- **Fragments**

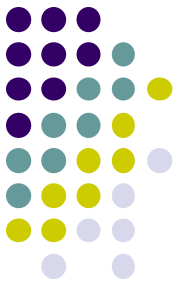
- Fragments represents a portion of user interface in an Activity.
- Each Fragment includes its own user interface (UI) layout and receives the related input events but is tightly bound to the activity into which each must be embedded.



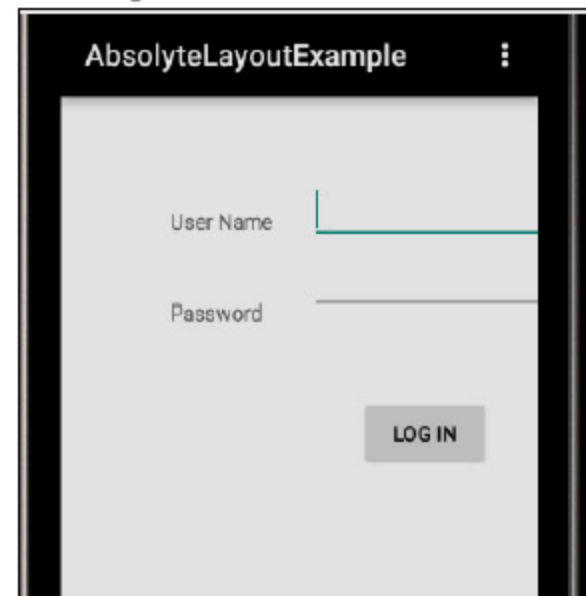
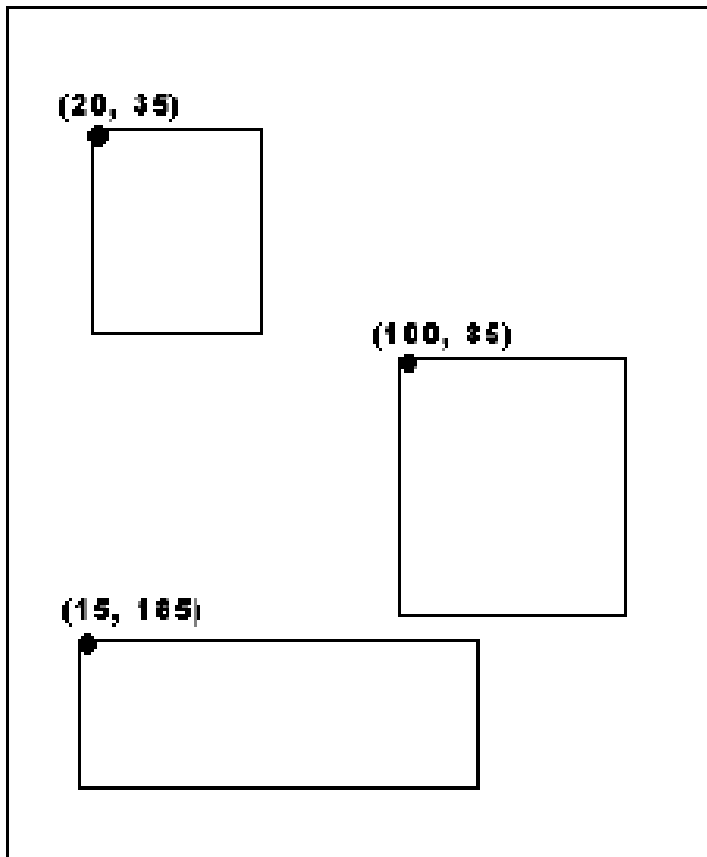
- **Activities**
- Activities dictate the UI and handle the user interaction to the smart phone screen.
- Activities represent a single screen that user interact

# UI LAYOUTS

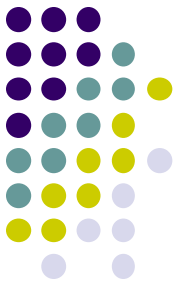




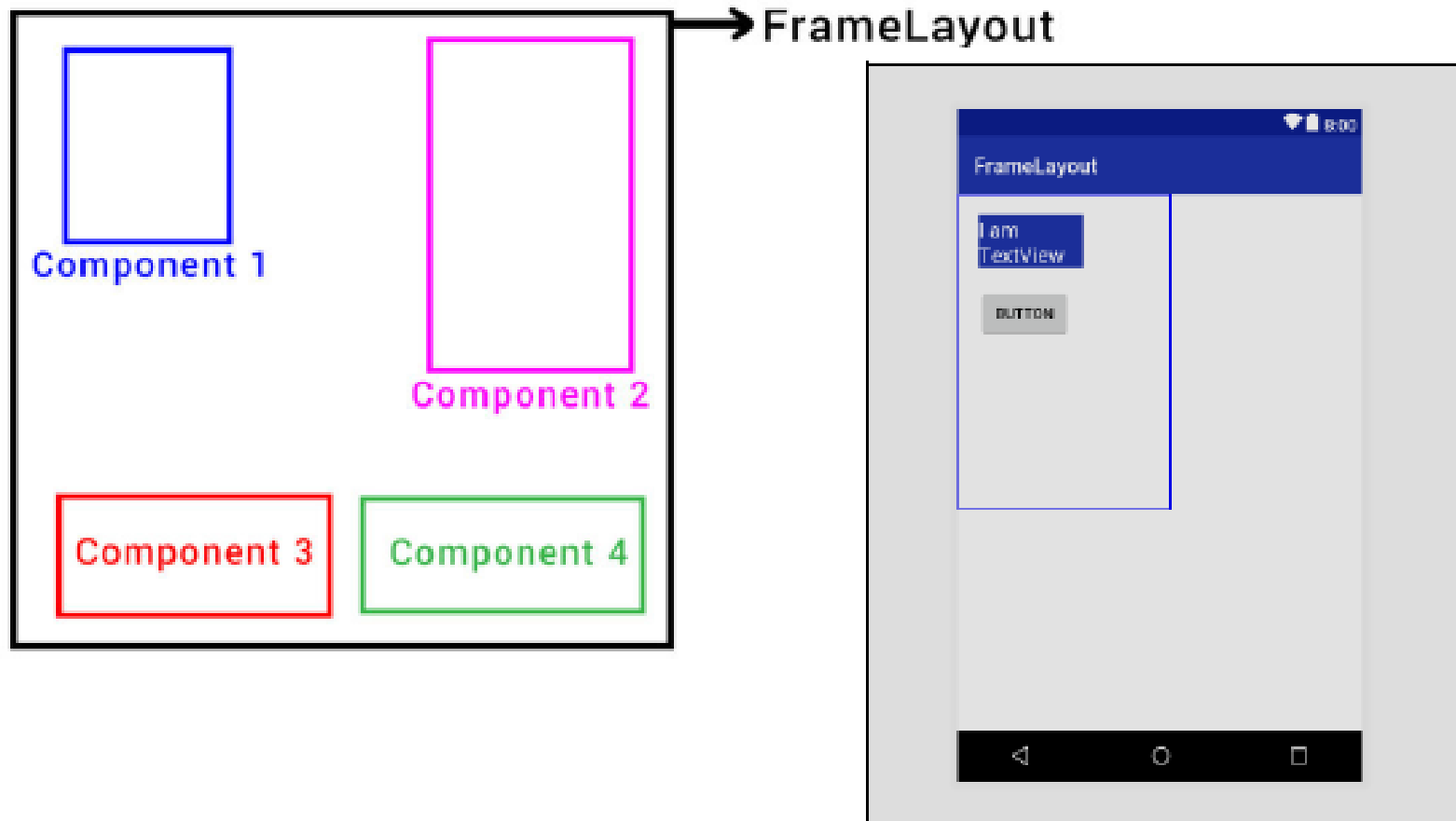
- **Absolute Layout**

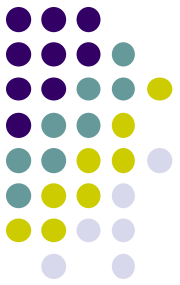






- **Frame Layout**

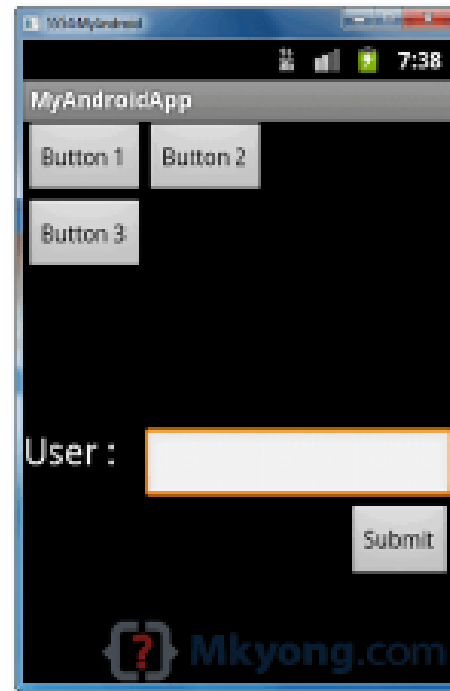


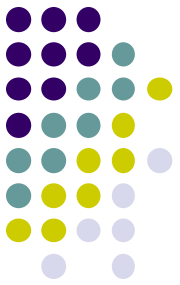


- **RelativeLayout**



**Fig. 3.8: RelativeLayout**





<TableLayout>

Row 1		
Row 2 column 1	Row 2 column 2	Row 2 column 3
Row 3 column 1		Row 3 column 2

</TableLayout>

weather

The screenshot shows an Android weather application interface. At the top, there is a status bar with icons for Wi-Fi, signal strength, battery, and the time 00:06. Below the status bar is a header bar with the text "Tables". The main content area is titled "Weather Table" and displays weather data for five days: Feb 7, Feb 8, Feb 9, Feb 10, and Feb 11. The data is organized into three rows: "Day High", "Day Low", and "Conditions". Each day's data is represented by a temperature value and a weather icon.

	Feb 7	Feb 8	Feb 9	Feb 10	Feb 11
Day High	28°F	26°F	23°F	17°F	19°F
Day Low	15°F	14°F	3°F	5°F	6°F
Conditions					