# WIX3004
# MOBILE APPLICATION DEVELOPMENT
## VIEW AND VIEWGROUP

Created and Updated by S. Ong

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simying.ong@um.edu.my

# LAYOUT

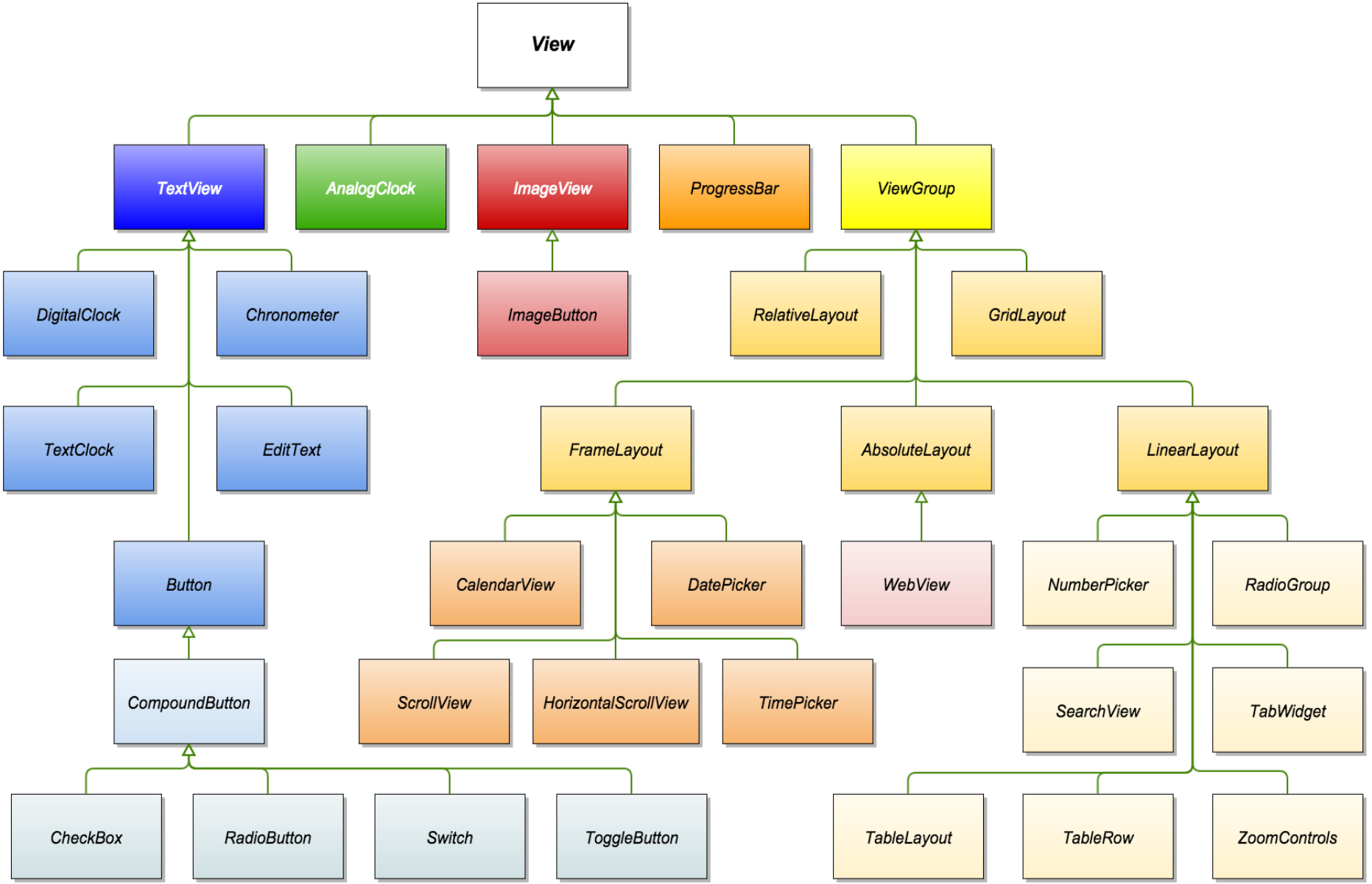
- Defines the **structure of interface** in your app.
- All elements in layout are built using a hierarchy of View and ViewGroup objects.
- **View**:
  - Draw something users can see and interact with.
  - Usually called widget
  - E.g., Button, TextView, EditText, ListView, ProgressBar, etc.
- **ViewGroup**:
  - Invisible container that defines the layout structure.
  - Usually called layout
  - E.g., LinearLayout and ConstraintLayout

# LAYOUT

- Three ways to define layout:
  - **Declare UI elements in XML** – either write it in XML or use the drag-and-drop feature in Layout's Editor
  - **Instantiate elements at runtime** – do it programmatically
  - Or **hybrid**!

# SOME SUBCLASSES OF VIEW CLASS





# TODAY, WE WILL COVER…

- ✓EditText
- ✓Button
- ✓TextView
- ✓CheckBox

- ✓Listener
- ✓Toast

# LET'S DEVELOP SOME MOBILE APPS TOGETHER!

# MOBILE APP 1
## ADDITION FUNCTION

1. Place two *EditText* Decimal on your xml layout file, with hint "Enter first number" and "Enter second number".
2. Place a *Button* with text of "ADD".
3. Place a *TextView* to the activity.
4. Associate an action to the Button to obtain the integer from EditText Decimal elements and perform addition. Display the result in the TextView element.
5. **EXTRA EXERCISE**: Develop this app with or without the manual use of onClick property. Try to use Listener.

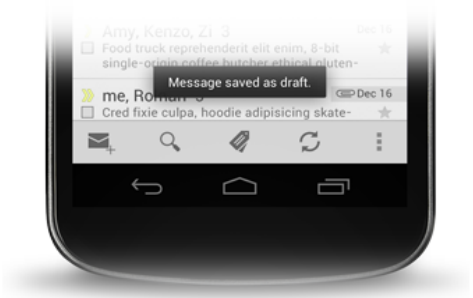
# MOBILE APP 2
## COLOR SELECTIONS

1. Place three *CheckBox-es* Red, Green, Blue on an activity.
2. Associate each selected CheckBox with toast action.

Develop › API Guides › User Interface

### Toasts

A toast provides simple feedback about an operation in a small popup. It only fills the amount of space required for the message and the current activity remains visible and interactive. For example, navigating away from an email before you send it triggers a "Draft saved" toast to let you know that you can continue editing later. Toasts automatically disappear after a timeout.




If user response to a status message is required, consider instead using a Notification.

# MOBILE APP 2
## COLOR SELECTIONS

3. Place a button at bottom of the checkboxes.
4. After multiple selections are selected, when user click the button, it will display a toast message showing all the selected selections.

Advanced level

- Change some labels or background color when different colors are selected.

# SUBMISSION

- Screenshot both apps and paste it in a OneNote page. You can write down any note for further explanation in the page, if needed.