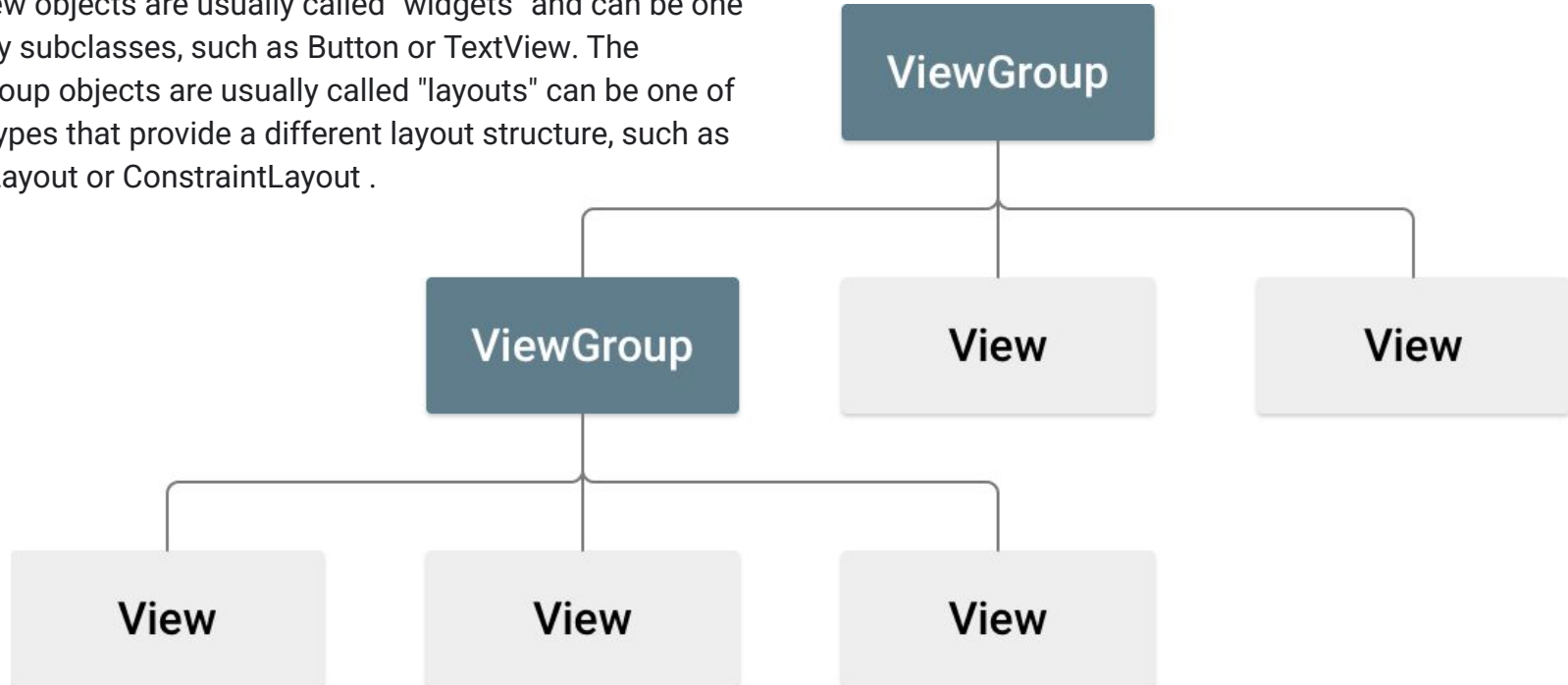


Android Development



Layouts - ViewGroups

The View objects are usually called "widgets" and can be one of many subclasses, such as Button or TextView. The ViewGroup objects are usually called "layouts" can be one of many types that provide a different layout structure, such as LinearLayout or ConstraintLayout .



Main layouts

LinearLayout : orientation

RelativeLayout

ConstraintLayout

GridLayout

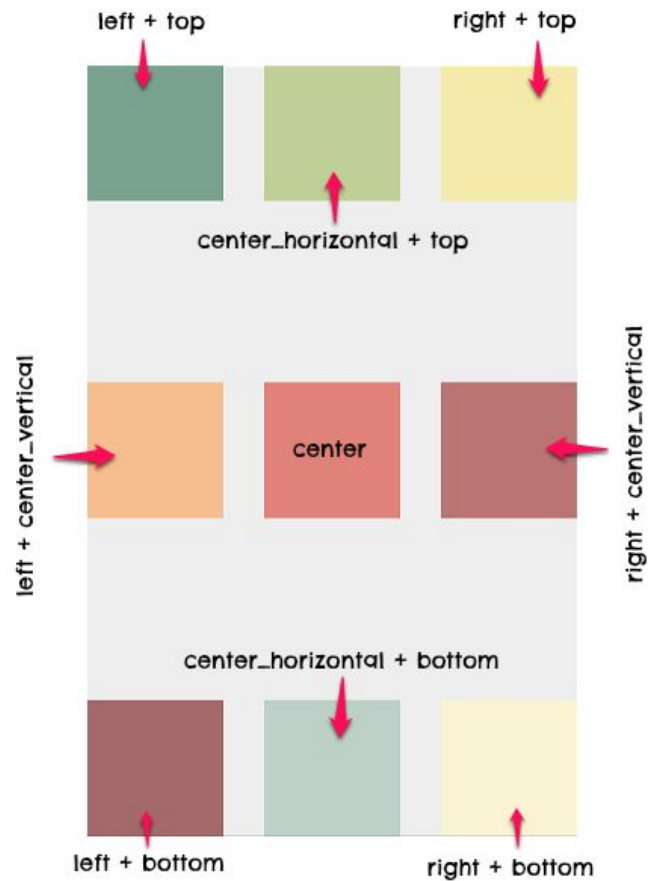
TableLayout

FrameLayout

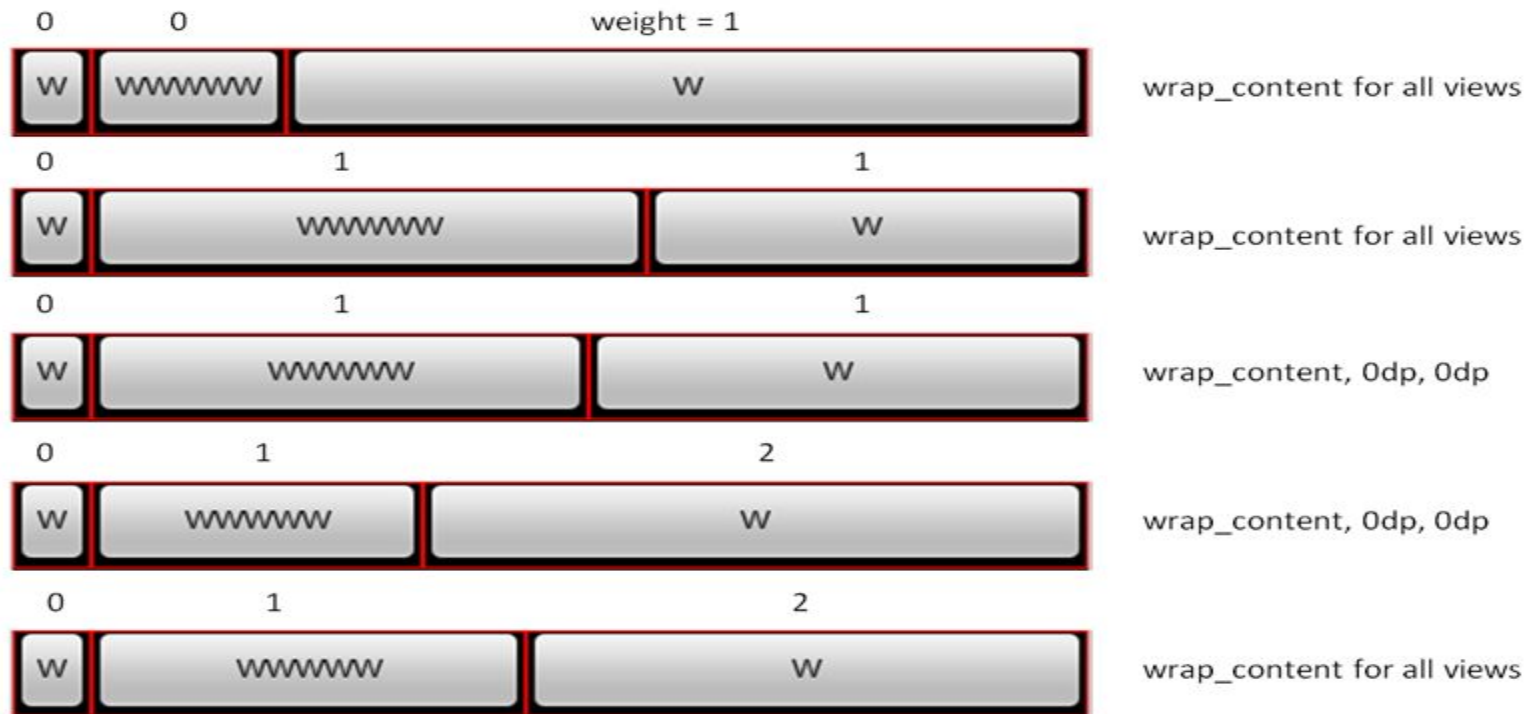
Width and height

1. **Px**
Píxeles.
2. **in**
Pulgadas
3. **Mm**
Millimeters
4. **Pt**
Puntos – 1/72 de pulgada basado en el tamaño físico de la pantalla.
5. **Dp**
Píxeles independientes de densidad
6. **Sp**

Gravity



Weight



Appearance & Styling

These attributes define how a view looks.

- **background** – Sets the background color or drawable.
- **foreground** – Defines a drawable or color on top of the view (useful for ripple effects).
- **elevation** – Adds shadow to create a depth effect (Material Design).
- **alpha** – Adjusts transparency (**1.0** = fully visible, **0.0** = invisible).

Text Appearance (For `TextView`, `Button`, etc.)

- `text` – Defines the text content.
- `textSize` – Sets the font size in `sp`.
- `textColor` – Sets the text color.
- `textStyle` – Defines the font style (`bold`, `italic`).
- `fontFamily` – Custom font support.
- `ellipsize` – Controls how text truncation happens when text is too long.
- `maxLines` – Limits the number of text lines.

Image Properties (For `ImageView`)

- `src` – Defines the image resource.
- `scaleType` – Controls how the image scales inside the `ImageView` (`fitCenter`, `centerCrop`, `centerInside`, etc.).
- `adjustViewBounds` – Adjusts the view bounds to maintain the image aspect ratio.

Visibility & Interaction

- `visibility` – Controls visibility (`visible`, `invisible`, `gone`).
- `clickable` – Enables/disables click events.
- `focusable` – Determines if the view can receive focus.
- `enabled` – Enables/disables the view for user interaction.