Flutter Widgets Overview

# Introduction

Flutter is a framework for building cross-platform applications, and widgets are the basic building blocks of a Flutter application. They define the structure and layout of the UI. Widgets can be classified into different categories based on their functionality.

# 1. Basic Widgets

These are simple and commonly used widgets for displaying content and layout.  
- \*\*Text\*\*: Displays a string of text.  
- \*\*Icon\*\*: Displays a material icon.  
- \*\*Container\*\*: A versatile box model for decorating and positioning other widgets.  
- \*\*Row\*\*: A horizontal layout widget.  
- \*\*Column\*\*: A vertical layout widget.  
- \*\*Image\*\*: Displays images from assets, file, or network.

# 2. Input Widgets

These widgets are used for capturing user input.  
- \*\*TextField\*\*: For text input.  
- \*\*Checkbox\*\*: A box to select a boolean option.  
- \*\*Radio\*\*: A button for selecting one option from multiple.  
- \*\*Switch\*\*: A toggle for turning a setting on/off.  
- \*\*Slider\*\*: For selecting a value from a range.

# 3. Container Widgets

These widgets are used for controlling the size, position, and decoration of other widgets.  
- \*\*Padding\*\*: Adds padding around a widget.  
- \*\*Align\*\*: Aligns a widget within its parent.  
- \*\*SizedBox\*\*: Used to give a fixed size to a widget.  
- \*\*Expanded\*\*: Makes a widget expand to fill available space.

# 4. Layout Widgets

These widgets help organize and arrange the UI elements.  
- \*\*Stack\*\*: Allows widgets to overlap on top of each other.  
- \*\*ListView\*\*: A scrollable list of widgets.  
- \*\*GridView\*\*: A scrollable grid of widgets.  
- \*\*Form\*\*: A widget for collecting user input in a structured way.

# 5. Material Design Widgets

Widgets that follow Material Design guidelines.  
- \*\*Scaffold\*\*: The basic layout structure for a screen.  
- \*\*AppBar\*\*: The top app bar displaying titles or actions.  
- \*\*Drawer\*\*: A slide-in menu used for navigation.  
- \*\*FloatingActionButton\*\*: A circular button that floats above the UI.  
- \*\*BottomNavigationBar\*\*: A navigation bar at the bottom of the screen.

# 6. Cupertino Widgets

Widgets designed for iOS-style UI.  
- \*\*CupertinoButton\*\*: A button styled like iOS.  
- \*\*CupertinoNavigationBar\*\*: A navigation bar in iOS style.  
- \*\*CupertinoAlertDialog\*\*: An iOS-style alert dialog.