



11. Lesson 04/04/23

Buttons

Button

Are **Views** that **respond to tapping** (clicking) or **pressing**:

- Usually text or visuals (e.g., an icon) indicate what will happen when tapped/pressed.
- **Buttons** can have the **following desing**:
 - **Text only**
 - **Icon only**
 - **Both text and an icon**

Button image

To **add an icon** to a **button**:

- Search for the attribute of interest in the attributes list.
- Click 'pick a resource' and select the icon.

The following attributes manage how an icon is visualized in a button:

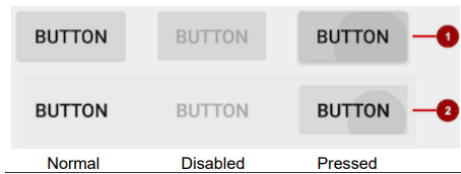
<code>android:drawableBottom</code>	The drawable to be drawn below the text.
<code>android:drawableEnd</code>	The drawable to be drawn to the end of the text.
<code>android:drawableLeft</code>	The drawable to be drawn to the left of the text.
<code>android:drawablePadding</code>	The padding between the drawables and the text.
<code>android:drawableRight</code>	The drawable to be drawn to the right of the text.
<code>android:drawableStart</code>	The drawable to be drawn to the start of the text.
<code>android:drawableTint</code>	Tint to apply to the compound (left, top, etc.) drawables.
<code>android:drawableTintMode</code>	Blending mode used to apply the compound (left, top, etc.) drawables tint.
<code>android:drawableTop</code>	The drawable to be drawn above the text.

Raised and Flat Buttons

Android offers **several types of Button elements**, including:

- Raised buttons
- Flat buttons

Each button has three states:

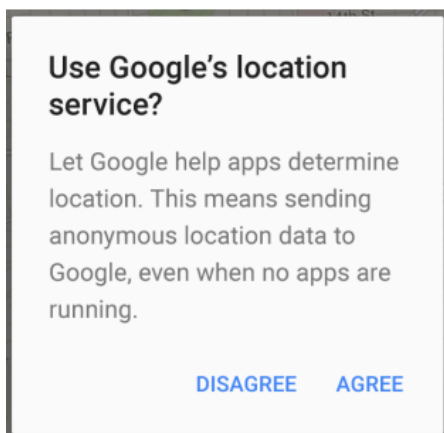


- Normal
- Disabled
- Pressed

- A **raised button** is an outlined rectangle or rounded rectangle that appears lifted from the screen—the shading around it indicates that it is possible to tap or click it. The raised button can show text, an icon, or both (default style)
- A **flat button**, also known as a text button or borderless button, is a text-only button that looks flat and doesn't have a shadow. The major benefit of flat buttons is simplicity: a flat button doesn't distract the user from the main content as much as a raised button does.

Flat buttons

Flat buttons are **useful for dialogs** that require user interaction.



In this case, the button uses the same font and style as the surrounding text to keep the look and feel consistent across all the elements in the dialog.

To create a flat button add the following attribute to your button:

```
style="?android:attr/borderlessButtonStyle"
```

Responding to button taps

In XML: Android Studio provides a shortcut for setting up an `OnClickListener` for the clickable object in your Activity code, and for assigning a callback method: use the `android:onClick` attribute within the clickable object's element in the XML layout.

```
android:onClick
```

```
<Button
    android:id="@+id/button_send"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/button_send"
    android:onClick="sendMessage" />
```

android:onClick

A diagram consisting of a rounded rectangular box containing the text 'android:onClick'. A vertical line descends from the bottom center of this box, and a horizontal line extends to the left from the end of the vertical line, pointing towards the 'android:onClick="sendMessage"' attribute in the XML code block above.

Setting listener with onClick callback

In your code: use `OnClickListener` event listener.

```
Button buttonSend = findViewById(R.id.button_send);
buttonSend.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        // Do something in response to button click
    }
});
```