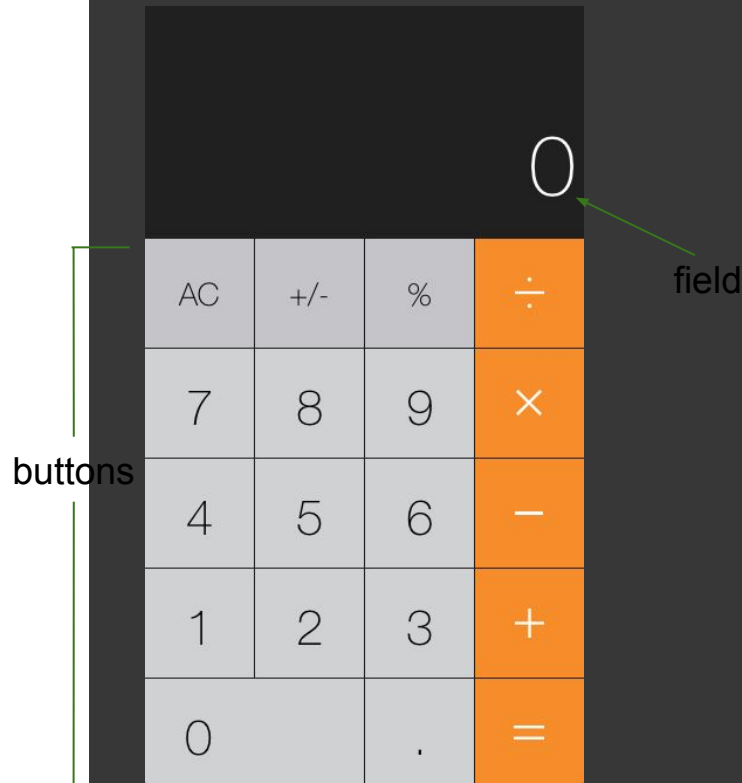


Calculator User Interface

The Calculator app consists of 1 card made up of 19 buttons and 1 field.

We will set up the User Interface based on the Calculator UI specification, which is part of the Resources for this lesson - so download them now if you haven't already done so.

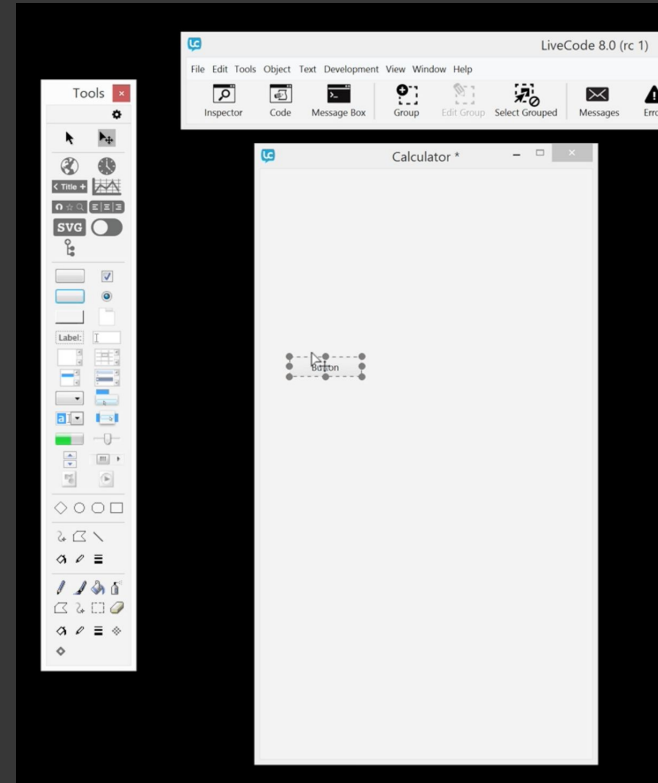


Creating Buttons

Firstly we will:

- create the 19 buttons
- set the size of the buttons
- lay the buttons out on the card

Drag a Button onto your stack from the Tools Palette. You can place it anywhere as we will be setting the size and location in the Property Inspector.



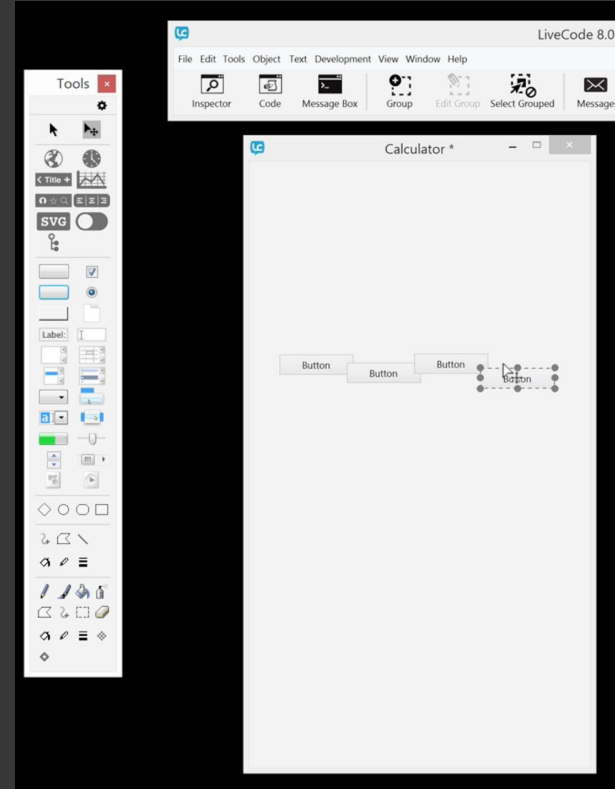
Setting Button Properties

We will set the width, height and other display properties of these buttons using the UI specification as a guide.

We can set the properties of multiple objects at the same time by selecting more than one object and using the Property Inspector to set their common properties.

Select the 4 buttons by dragging across them and opening the Object Inspector from the Object menu.

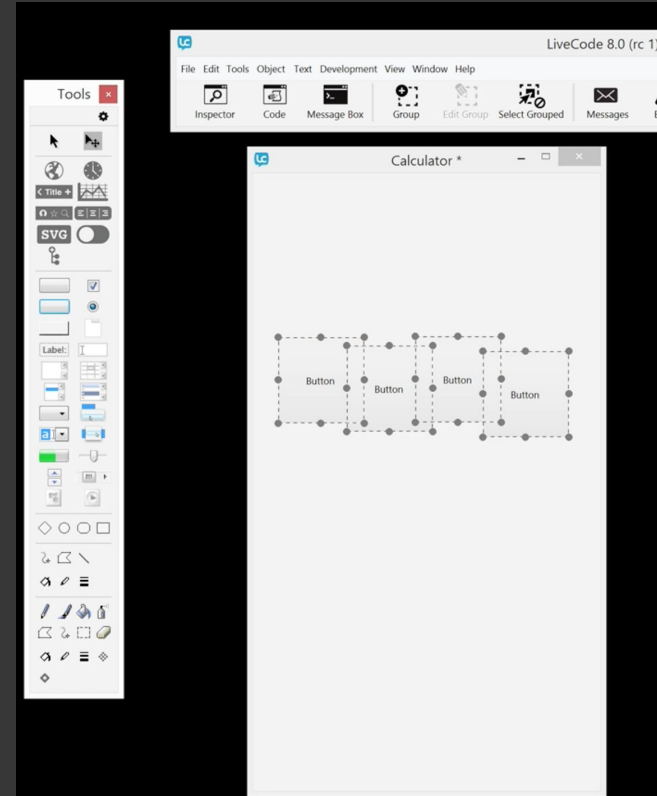
The Property Inspector will show “Multiple Objects” in its title bar.



Setting Button Properties

Set the size of the buttons, where we have used the UI specification (found in the app resources) as a guide:

Pane	Property	Value
Size & Position	Width	93
Size & Position	Height	93

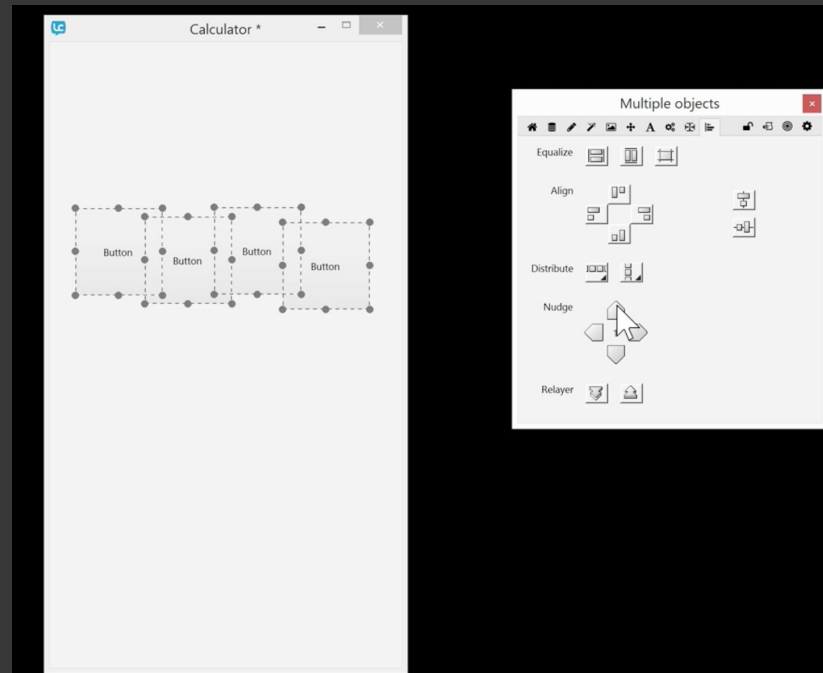


Laying Out the Buttons

To align the buttons:

- Ensure you still have all 4 buttons selected
- Open the Property Inspector for the selected buttons as before
- Go the “Align Objects” pane of the Property Inspector of the multiple buttons
- Choose Align Selected Controls → Top from the Object menu

Don't close the Property Inspector just now, as we will be using it on the next slide.

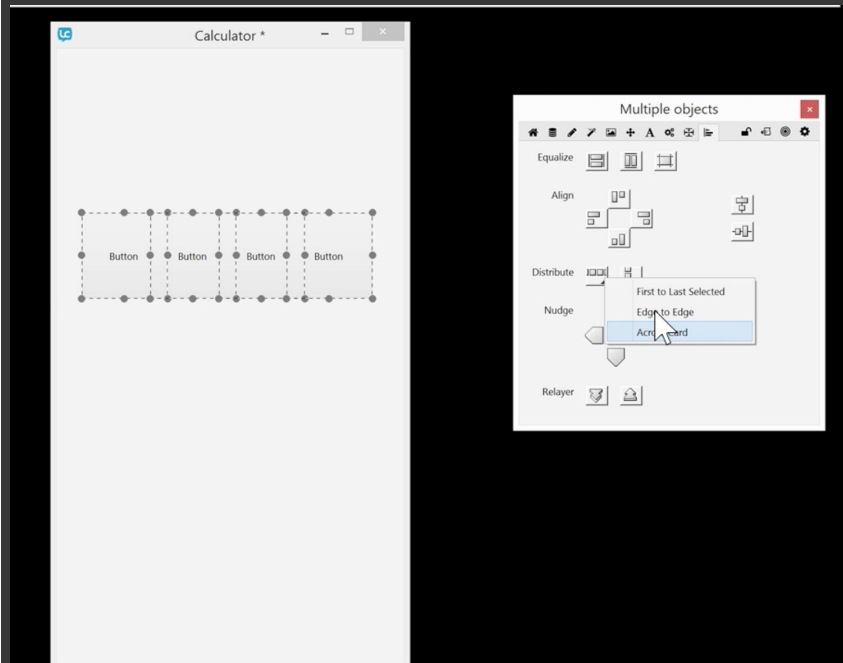


Laying Out the Buttons

To layout the buttons across the card:

- Ensure you are still in the “Align Objects” pane in the Property Inspector of the 4 buttons
- Click the Distribute horizontally button
- Select the Across Card option

You can close the Property Inspector now!



Copying the Row of Buttons

Now we have a full row of buttons, we can save time and effort by copying and pasting.

- Select the 4 buttons
- Select "Copy" from the Edit menu (or use ctrl-c on Windows or cmd-c on Mac)
- Paste the row of buttons and use the arrow keys to move them down below the first row
- Repeat this 3 more times until you have 5 rows of buttons

You may need to move the rows up and down to fit them on the card. You can do this by dragging the selected buttons using your mouse, using the arrow keys or even setting the x and y locations in the Property Inspector!

