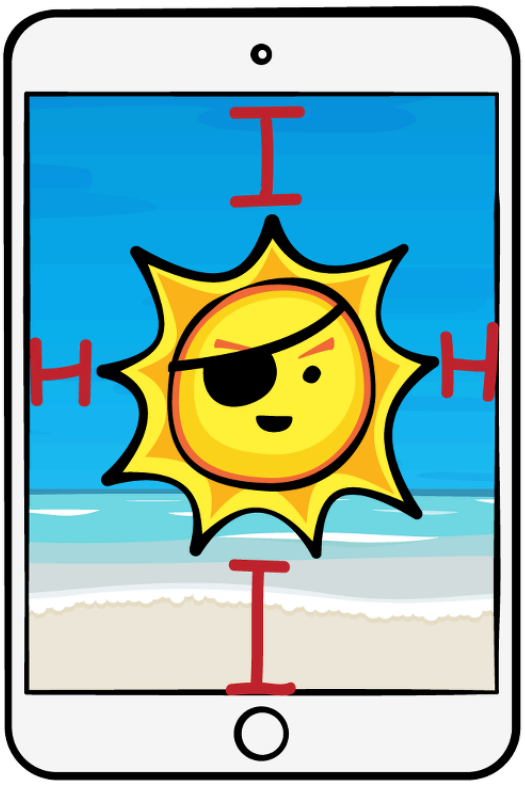
BEGINNING

AUTO LAYOUT



HANDS-ON CHALLENGES

Beginning Auto Layout

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Challenge #2: Autoresizing Masks

By Jerry Beers

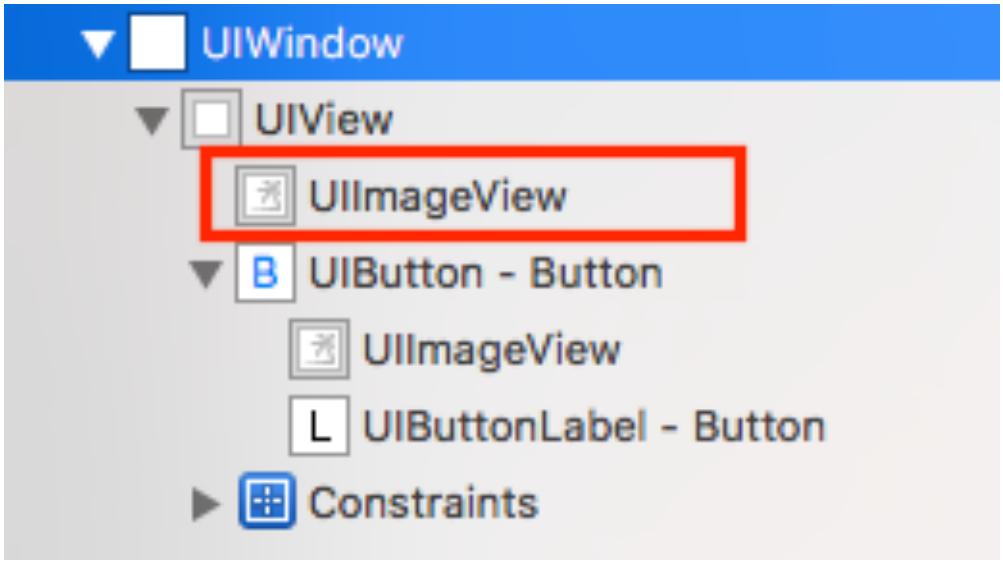
In this challenge, you'll look at one of the tools Xcode 8 provides for debugging views, **Debug View Hierarchy**, and use it to see how the autoresizing mask is reflected on a view.

Debug View Hierarchy

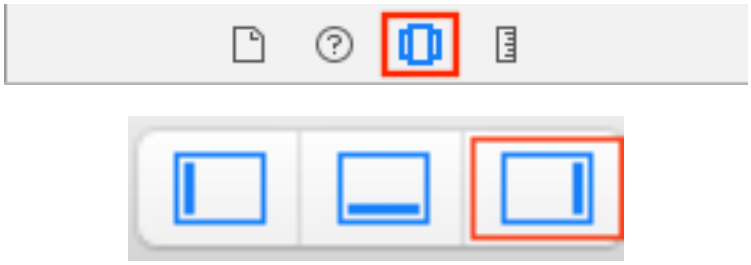
Whenever your app is running, at the bottom of the editor window in Xcode, you'll see a row of buttons:

If you click on the highlighted button, your app will pause, just the same as if you had hit a breakpoint, and Xcode will show you a list of all the views in the view hierarchy. Make sure you have the Debug navigator selected in the left pane:

You should now see a list of all the views:

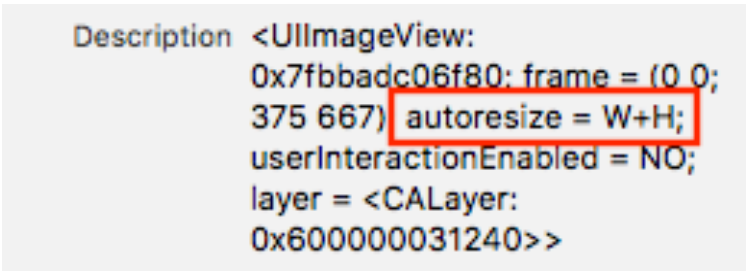


Either click on the highlighted row or anywhere on the background image in the editor window. Then, in the right pane, make sure the Object inspector is selcted:

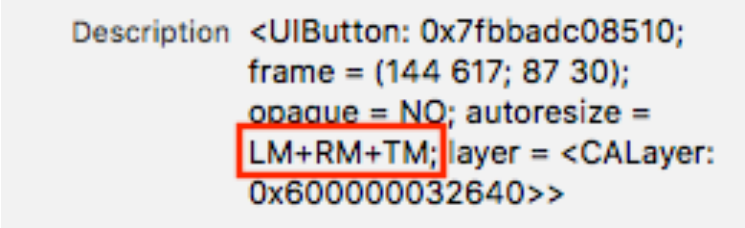


> Note: If the right pane is not visible, click the Utilities button in the upper-right corner

At the bottom of the Object inspector, you should see a **Description** section. In that description is an **autoresize** string:



The description shows which elements are *flexible*, in this case the width and the height. Notice that this is sometimes different from Interface builder, where setting the margin elements indicates that they are *fixed*. Now click on the UIButton in the view hierarchy and notice it's description:



This tells you that the left margin, right margin, and top margin are all flexible, but that everything else is fixed.

Once you know the autoresizing mask for a view, if `translatesAutoresizingMaskIntoConstraints` is `true` for that view, you can know how the framework will create its constraints.