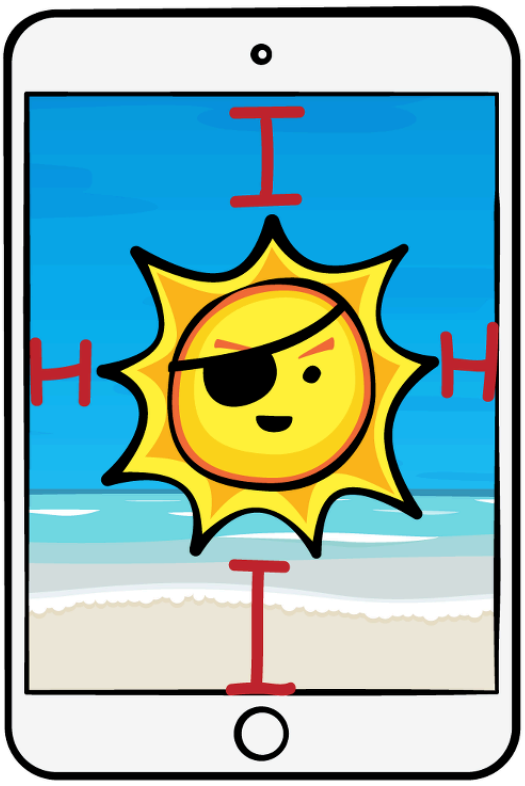
BEGINNING

AUTO LAYOUT



HANDS-ON CHALLENGES

Beginning Auto Layout

Jerry Beers

Notice of Rights

Notice of Liability

Trademarks

Challenge #8: Editing Constraints

By Jerry Beers

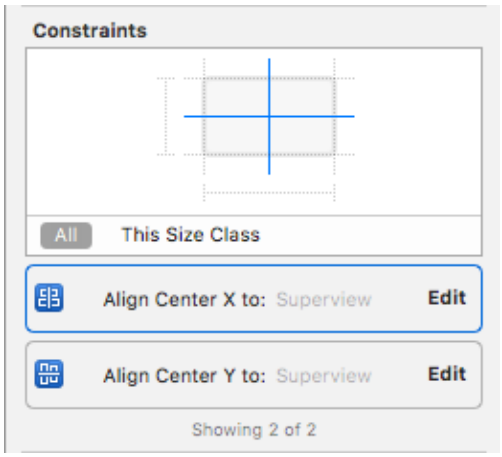
In this challenge, you'll convert the stack view from using a center x constraint to constraints on the edges of the superview. This will give you more control over its width.

First, we need to understand what is currently setting the width of the stack view. There is no constraint on the width of the stack view, just a center x constraint. And there is no constraint on the width of the buttons inside the stack view... or is there?

Remember intrinsic content size? That's the constraint that is setting the width. The "Privacy Policy" and "FAQs" buttons each have an intrinsic content size based on their titles, plus some for the content insets we have defined. The stack view they're in has a distribution set to **Fill**. If we had something else setting the size of the stack view, the "fill" setting would cause the contents to expand to fill the stack view's size. But if the stack view's size isn't fixed, it will resize to fit its content. Since this stack view ends up being the widest view in the top-level stack view, it determines the width.

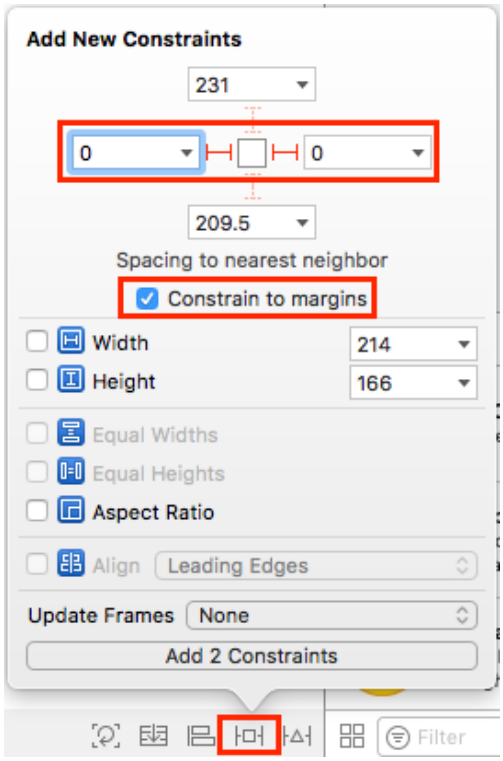
For now, we don't want the width to be flexible, we want it to use all the available horizontal space in the view. Later, you'll see how to handle the iPad differently, so the buttons don't get massive.

First, delete the center x constraint. I find it easiest to select the constraint in the size inspector:



Then just press the **delete** key.

Now you want to add constraints from the leading and trailing edges of the stack view to the superview. At the bottom of the editor, click the **Add new constraints** button:



Leave the "constrain to margins" checkbox checked and set the leading and trailing values to **0**. When you change the value, it will automatically turn on that constraint for you, but if the value is already 0, you'll have to click on the red bar to turn it on. Once those are set, click the **Add 2 Constraints** button at the bottom.

Your stack view probably isn't in the right place now. This is one of those situations where the frame doesn't match the constraints. The constraints are right, you just

want to update the frame to match the constraints. This is so common, the latest version of Xcode has a button just for this:

Click that button and the frame of the stack view will update.

Finally, just to practice editing constraints, lets change them from constrained to the margin to constrained to the view edge instead.

With the stack view selected, in the size inspector, double click on the trailing space constraint. Then, still in the size inspector, click the **First Item** drop down and uncheck "relative to margin". Now your constraint is to the edge of the view. Change the constant from 0 to 20, and repeat this process with the leading space constraint.

> Note: if the superview isn't the first item, you'll have to click on the **Second Item** to uncheck "relative to margin"

One last thing before we're done, Xcode is showing an error because there's a tie between the "Privacy Policy" button and "FAQs" button for horizontal hugging priority. Auto layout doesn't know which button you'd prefer to get larger now that there's more than enough room for them both. But what we really want is for them to be equal. Select the inner stack view for these buttons and change the distribution to **fill equally**. Now the buttons will be the same size.