Big Nerd Ranch

6TH EDITION

iOS Programming

THE BIG NERD RANCH GUIDE

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iOS Programming: The Big Nerd Ranch Guide

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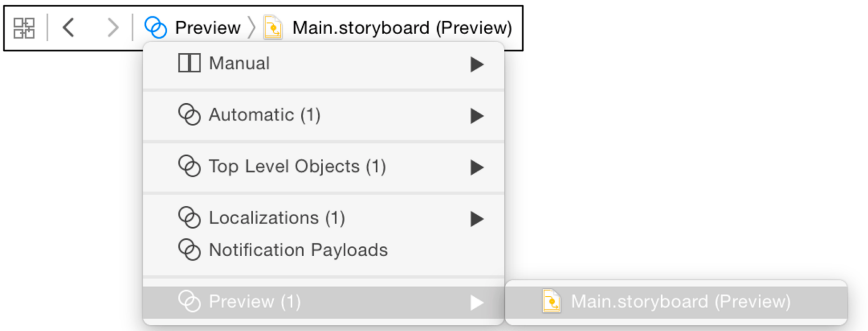
Preparing for localization

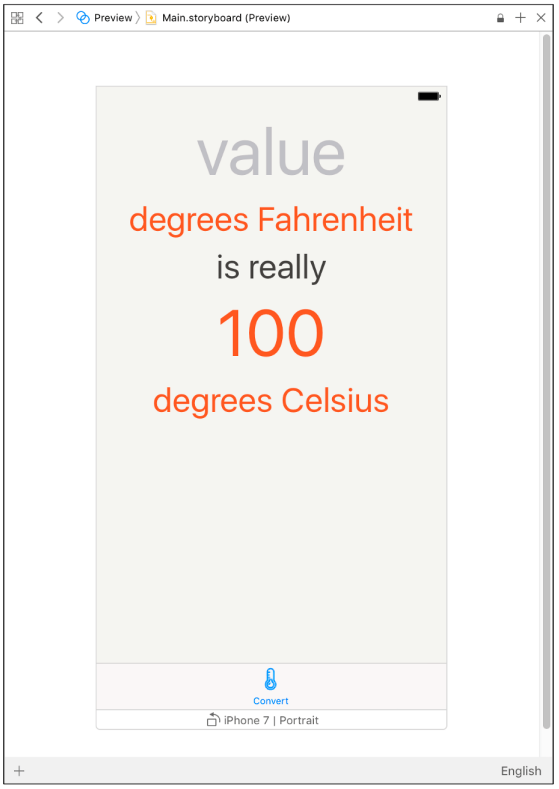
Open `Main.storyboard` and show the assistant editor either by clicking View → Assistant Editor → Show Assistant Editor or with the keyboard shortcut Option-Command-Return. From the jump bar dropdown, select Preview (Figure 7.6). The *preview assistant* allows you to easily see how your interface will look across screen sizes and orientations as well as between different localized languages.

Figure 7.6 Opening the preview assistant



In the storyboard, select the Conversion View Controller to see its preview (Figure 7.7).

Figure 7.7 Preview assistant



Notice the controls in the lower corners of the preview assistant. The + button on the left side allows you to add additional screen sizes to the preview canvas. This allows you to easily see how changes to your interface propagate across screen sizes and orientations simultaneously. The button on the right side allows you to select a language to preview this interface in.

(If your preview is for a configuration other than iPhone 7, use the + button to add this configuration. Then click on whatever preview opened by default and press the Delete key to remove it.)

You have not localized the application into another language yet, but Xcode supplies a *pseudolanguage* for you to use. Pseudolanguages help you internationalize your applications before receiving translations for all of your strings and assets. The built-in pseudolanguage, **`Double-Length Pseudolanguage`**, mimics languages that are more verbose by repeating whatever text string is in the text element. So, for example, “is really” becomes “is really is really.”

Select the Language pop-up that says English and choose Double-Length Pseudolanguage. The labels all have their text doubled (Figure 7.8).

Figure 7.8 Doubled text strings

The double-length pseudolanguage reveals a problem immediately: The labels go off both the left and right edges of the screen, and you are unable to read the entire strings. The fix is to constrain all of the labels so that their leading and trailing edges stay within the margins of their superview. Then you will need to change the line count for the labels to `0`, which tells the labels that their text should wrap to multiple lines if needed. You are going to start by fixing one label, then repeat the steps for the rest of the labels.

In the canvas, select the degrees Fahrenheit label. You are going to add constraints to this label in a new way. Control-drag from the label to the left side of the superview. When you do, a context-sensitive pop-up will appear giving you the constraints that make sense for this direction (Figure 7.9). Select Leading Space to Container Margin from the list.

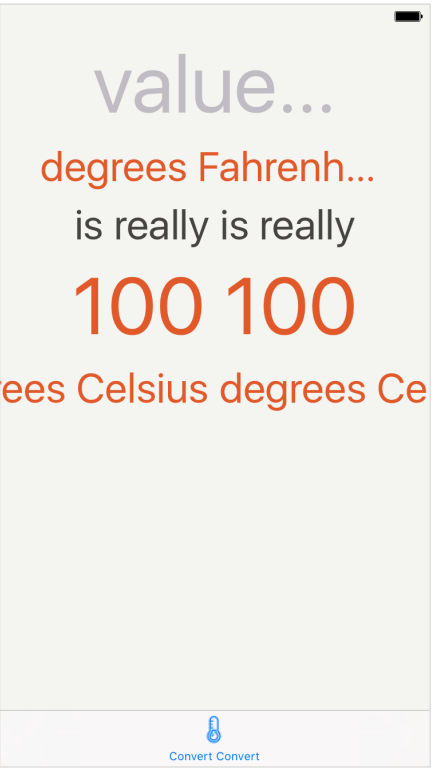
Figure 7.9 Creating constraints by Control-dragging

The direction that you drag influences which possible constraints are displayed. A horizontal drag will show horizontal constraints, and a vertical drag will show vertical constraints. A diagonal drag will show both horizontal and vertical constraints, which is useful for setting up many constraints simultaneously.

Now Control-drag from the degrees Fahrenheit label to the right side of the superview and select Trailing Space to Container Margin.

On their own, these constraints are not very good. They maintain the existing fixed distance between the leading and trailing edges of the label, as you can see in the preview assistant (Figure 7.10).

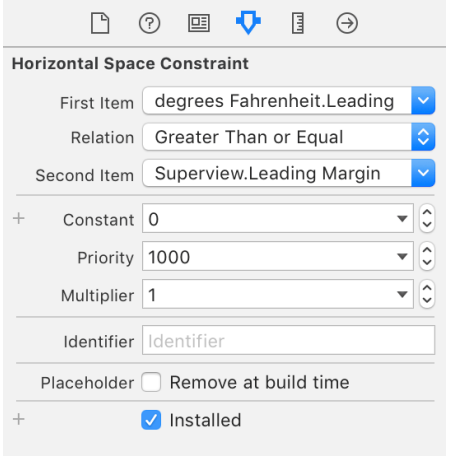
Figure 7.10 Preview assistant with new constraints



What you really want is for the distance between the label and the margins to be greater than or equal to `0`. You can do this with *inequality constraints*.

Select the leading constraint by clicking on the I-bar to the left of the label. Open its attributes inspector and change the Relation to Greater Than or Equal and the Constant to 0 (Figure 7.11).

Figure 7.11 Inequality constraint



Do the same for the trailing constraint. Take a look at the preview assistant; the interface is looking better, but the label is still being truncated.

Select the label and open its attributes inspector. Change the Lines count to `0`. Now take a look at the preview assistant; the label is no longer being truncated and instead the text flows to a second line. Because the other labels are each related to the label above them, they have automatically been moved down.

Repeat the steps above for the other labels. You will need to:

- Add a leading and trailing constraint to each label.
- Set the constraints' relation to Greater Than or Equal and the constant to `0`. (A shortcut for editing a constraint is to double-click on it.)
- Change the label's line count to `0`.