

Intro to Auto Layout

Hands On Challenges

Introduction to Auto Layout Hands-On Challenges

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Challenge D: Priorities

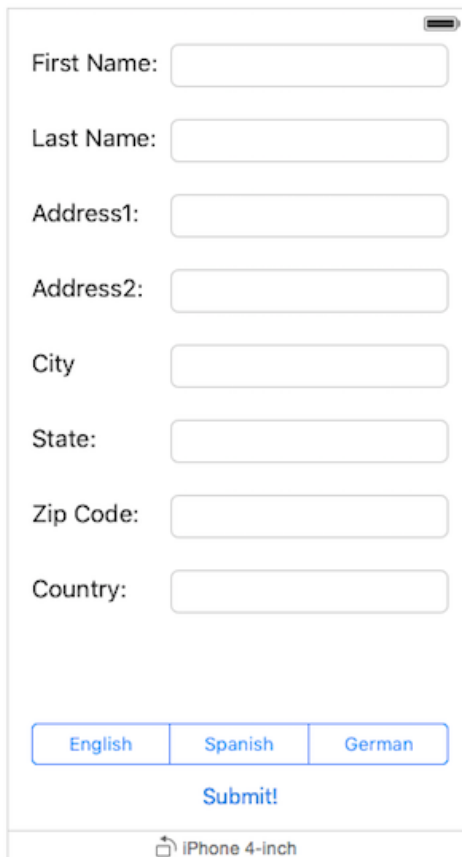
So far you've learned a lot about constraints and how to create and edit them. If you find yourself still struggling with constraints, then you should stop now and start all over again. Keep iterating until you really understand how to create them. Feel free to ask questions in the comments.

You may have noticed, you can only get so far setting simple constraints. For instance, a button may look just right in one orientation, but may look too high in another orientation. Or everything looks great in one language, but when you add a localization, things don't look the way you want any more.

Thankfully you can set priorities on your constraints. For instance, you may want to have a button vertically centered, but under certain conditions, you may want the button to be eight points above the bottom layout guide.

This is the power of priorities. They really make your layouts sing.

Here's what you'll build in this challenge:



First Name:

Last Name:

Address1:

Address2:

City:

State:

Zip Code:

Country:

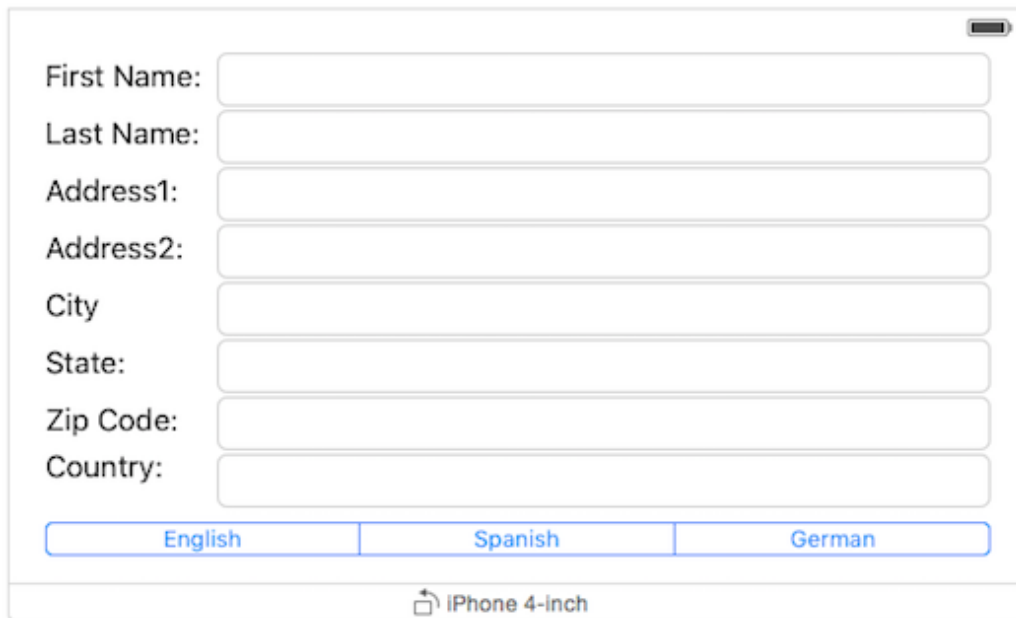
English Spanish German

Submit!

iPhone 4-inch



As you can see the labels and text fields are equally spaced from each other. When rotated, the layout should look like this:



First Name:

Last Name:

Address1:

Address2:

City

State:

Zip Code:

Country:

iPhone 4-inch

As you can see, the spacing between the controls tighten when the orientation changes.



Challenge Hint

Remember, you can add multiple constraints onto a single view. You can assign priorities to these constraints.

For example, you can assign a constraint that says the spacing between text fields must be larger than 8 points and another constraint that says it must not be greater than 40 points.



Challenge Solution

As always, the very first thing that you should do is layout your app.

- 1) Drag a label onto the view controller. Give it the name "**First Name:**". Set the following: **x: 20, y: 27, width: 88, height: 21**
- 2) Drag a label onto the view controller. Give it the name "**Last Name:**". Set the following: **x: 20, y: 79, width: 88, height: 21**
- 3) Drag a label onto the view controller. Give it the name "**Address1:**". Set the following: **x: 20, y: 131, width: 88, height: 21**
- 4) Drag a label onto the view controller. Give it the name "**Address2:**". Set the following: **x: 20, y: 183, width: 88, height: 21**
- 5) Drag a label onto the view controller. Give it the name "**City:**". Set the following: **x: 20, y: 235, width: 88, height: 21**
- 6) Drag a label onto the view controller. Give it the name "**State:**". Set the following: **x: 20, y: 287, width: 88, height: 21**
- 7) Drag a label onto the view controller. Give it the name "**Zip Code:**". Set the following: **x: 20, y: 339, width: 88, height: 21**
- 8) Drag a label onto the view controller. Give it the name "**Country:**". Set the following: **x: 20, y: 391, width: 88, height: 21**
- 9) Drag a text field onto the view controller. Set the following: **x: 116, y: 24, width: 464, height: 30**
- 10) Drag a text field onto the view controller. Set the following: **x: 116, y: 76, width: 464, height: 30**
- 11) Drag a text field onto the view controller. Set the following: **x: 116, y: 128, width: 464, height: 30**
- 12) Drag a text field onto the view controller. Set the following: **x: 116, y: 180, width: 464, height: 30**
- 13) Drag a text field onto the view controller. Set the following: **x: 116, y: 232, width: 464, height: 30**
- 14) Drag a text field onto the view controller. Set the following: **x: 116, y: 284, width: 464, height: 30**
- 15) Drag a text field onto the view controller. Set the following: **x: 116, y: 336, width: 464, height: 30**
- 16) Drag a text field onto the view controller. Set the following: **x: 116, y: 388, width: 464, height: 30**



17) Drag a segmented control onto the view controller. Set the following: **x: 20, y: 526, width: 560, height: 29**. Set the following names for the segments: **English, Spanish, and German**.

18) Drag a new button near the bottom of the view controller. Give it the name, **Submit!**. In the size inspector, set the following: **x: 274, y: 562, width: 53, height: 30**.

19) Select all the labels, then click the pin button. Check the **Equal Widths** constraint and set **Align to Leading Edges**. Add the constraints.

20) Select just the **First Name** label, then click the pin button. Set the **left and right I-beam** and change the left value to **0** and the right value to **standard**. Add the constraints.

21) Select all the text fields and click the align button. Check the **Leading Edges** and **Trailing Edges** constraints. Add all the constraints.

22) Select just the **First Name** text field and click the pin button. Set the **top and right I-beam** and add the constraints.

23) Control drag from the **First Name label** to the **First Name text field** and choose **Baseline**. Repeat for each label to its text field.

24) Control drag from the **First Name** text field to the **Last Name** text field and choose **Vertical Spacing**. Control drag again between the same two controls and choose **Vertical Spacing** again (Even though it has a dot to show there is already a constraint, it will let you create another one). Edit one of the constraints and change the **constant** to **22** and the **priority** to **250**.

Edit the other constraint and change the relation to **Greater Than or Equal** and set the **constant** to **2**.

Do this for all the text fields.

25) Select the segmented control, and click the pin button. Select all **four I-beams**. Set the **left** and **right** values to **0**. Add all constraints.

26) Select the vertical constraint from the segmented control to the text field above it. Set the **relation** to be **Greater Than or Equal**. Set the **constant** to be **8**.

27) Select the submit button. Click the pin button, and click the bottom I-beam. Add the constraint. With the button still selected, click the alignment button. Check the **Horizontally in Container**. Add the constraint.

28) Compare the code from the solution to hook up the segmented control and change the language.

