

Intro to Auto Layout

Debugging Auto Layout

Layout Constraints

- ⚙ **NSLayoutConstraint** - public
- ⚙ **NSContentSizeLayoutConstraint** - private
- ⚙ **NSAutoresizingMaskLayoutConstraint** - private
- ⚙ **NSIBPrototypingLayoutConstraint** - private
- ⚙ **_UILayoutSupportConstraint** - private



Debugging Logs

2015-08-28 10:10:20.857 TestALGuides[21001:3686224] Unable to simultaneously satisfy constraints.

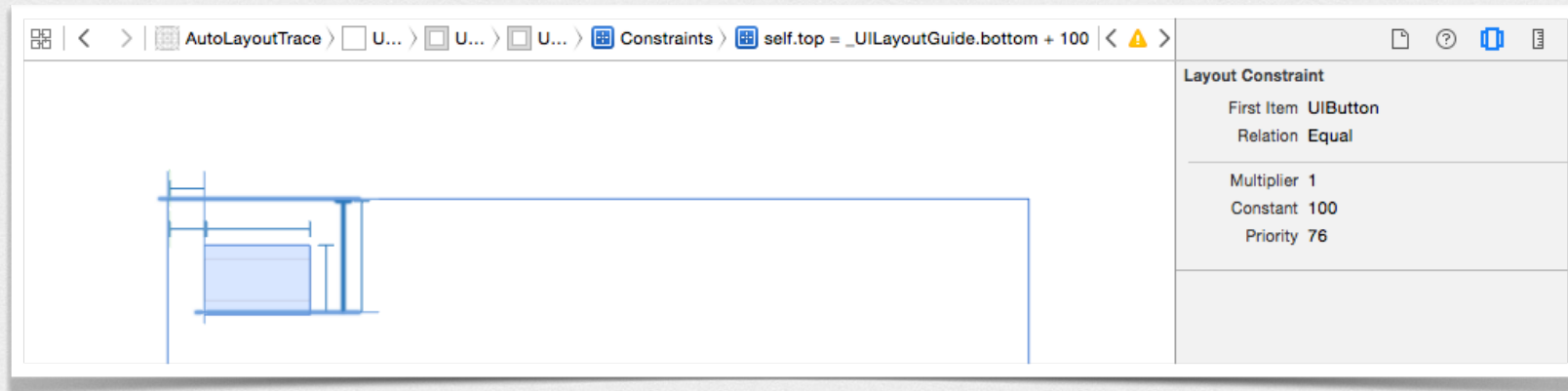
Probably at least one of the constraints in the following list is one you don't want. Try this: (1) look at each constraint and try to figure out which you don't expect; (2) find the code that added the unwanted constraint or constraints and fix it. (Note: If you're seeing `NSAutoresizingMaskMaskLayoutConstraints` that you don't understand, refer to the documentation for the `UIView` property

```
(  
    "<NSLayoutConstraint:0x7fe2f0e5a530 UIView:0x7fe2f0e57240.leadingMargin == UIButton:0x7fe2f0e58930'Button'.leading>",  
    "<NSLayoutConstraint:0x7fe2f0e5a620 'spaceSaveButton' UIView:0x7fe2f0e57240.leadingMargin == UIButton:  
0x7fe2f0e58930'Button'.leading + 200>"  
)
```

Make attempt to recover by breaking constraints
<NSLayoutConstraint:0x7fe2f0e5a620 'spaceSaveButton' UIView:0x7fe2f0e57240.leadingMargin == UIButton:
0x7fe2f0e58930'Button'.leading + 200>

Make a symbolic breakpoint at `UIViewAlertForUnsatisfiableConstraints` to catch this in the debugger.
The methods in the `UIConstraintBasedLayoutDebugging` category on `UIView` listed in `<UIKit/UIView.h>` may also be helpful.

Using Xcode

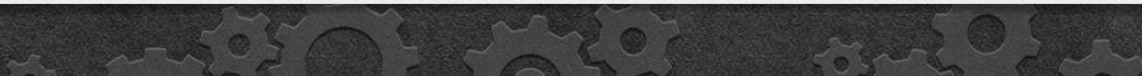


UIView debug methods

```
po label.hasAmbiguousLayout()
expr label.exerciseAmbiguityInLayout()
```

```
▽ 5 elements
- [0] : <NSContentSizeLayoutConstraint:0x7feb0a447280 H:[UILabel:
0x7feb0a516060'Label'(42)] Hug:251 CompressionResistance:750>
- [1] : <NSLayoutConstraint:0x7feb0a52a020 UILabel:0x7feb0a516060'Label'.centerX ==
UIButton:0x7feb0a51cc70'Button'.centerX>
- [2] : <NSLayoutConstraint:0x7feb0a52a070 UIButton:0x7feb0a51cc70'Button'.centerX
== UIView:0x7feb0a526780.centerX>
- [3] : <NSAutoresizingMaskLayoutConstraint:0x7feb0a40b910 h=-&- v=-&- 'UIView-
Encapsulated-Layout-Left' H:|-(0)-[UIView:0x7feb0a526780] (Names:
'|':UIViewControllerWrapperView:0x7feb0a648610 )>
- [4] : <NSLayoutConstraint:0x7feb0a40d600 'UIView-Encapsulated-Layout-Width' H:
[UIView:0x7feb0a526780(320)]>
```

Demo



Challenge

