AutoLayout

강사 주영민

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Storyboard 사용하기

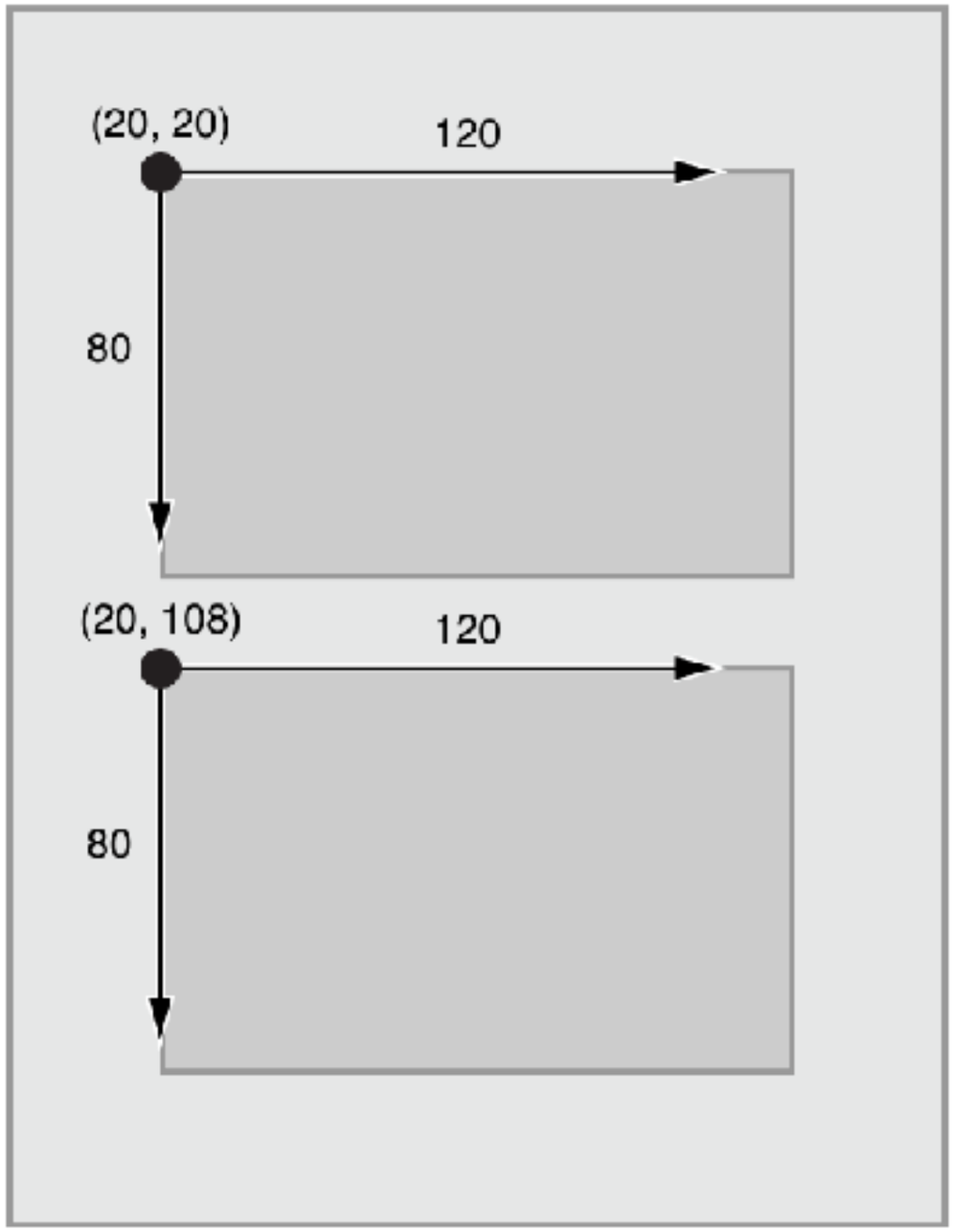
- IBOutlet : UI 아울렛 연결
- IBAction : UI Action 추가

AutoLayout

- Auto Layout dynamically calculates the size and position of all the views in your view hierarchy, based on constraints placed on those views

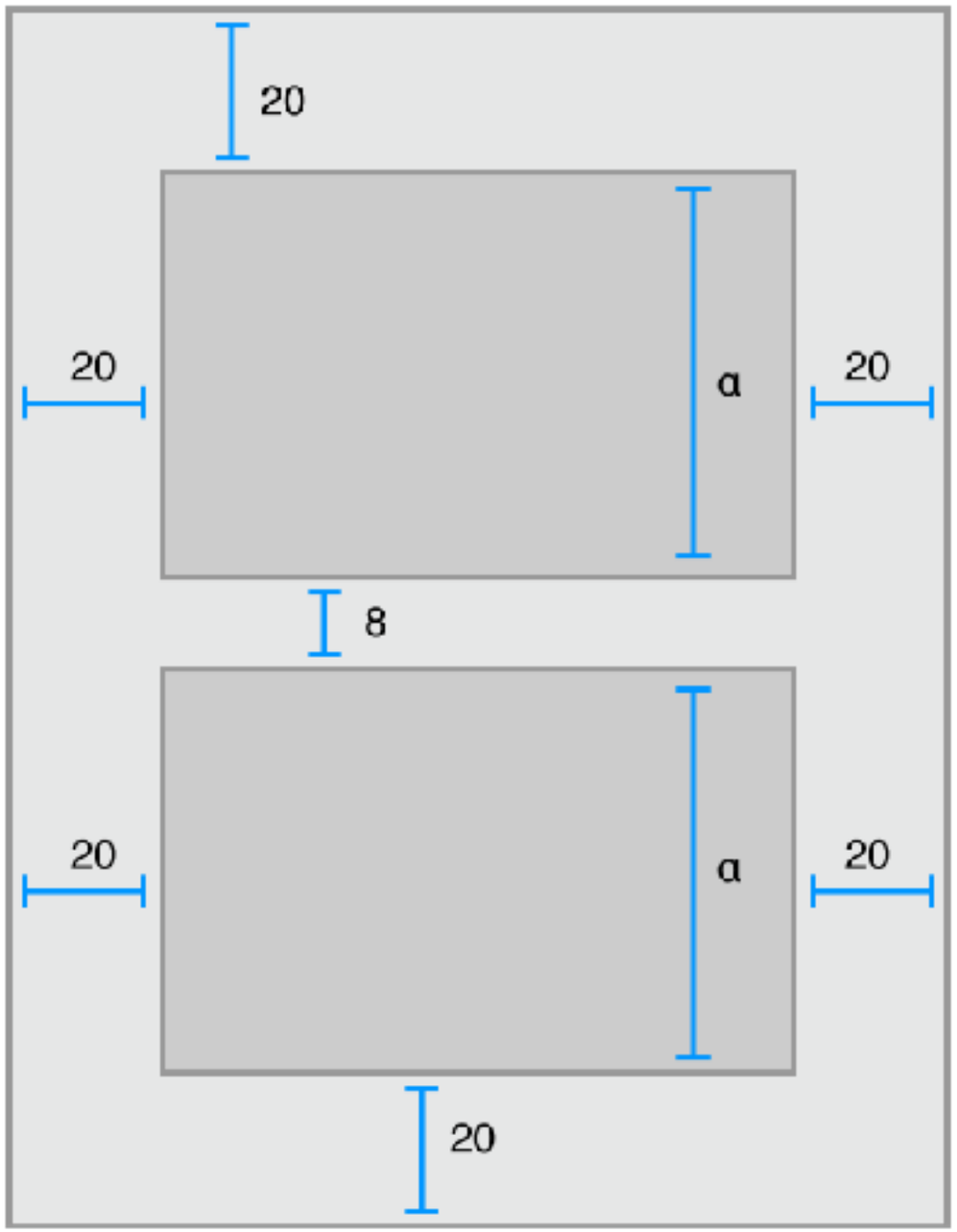
Auto Layout VS Frame-Based Layout

- Frame-Based Layout



Auto Layout VS Frame-Based Layout

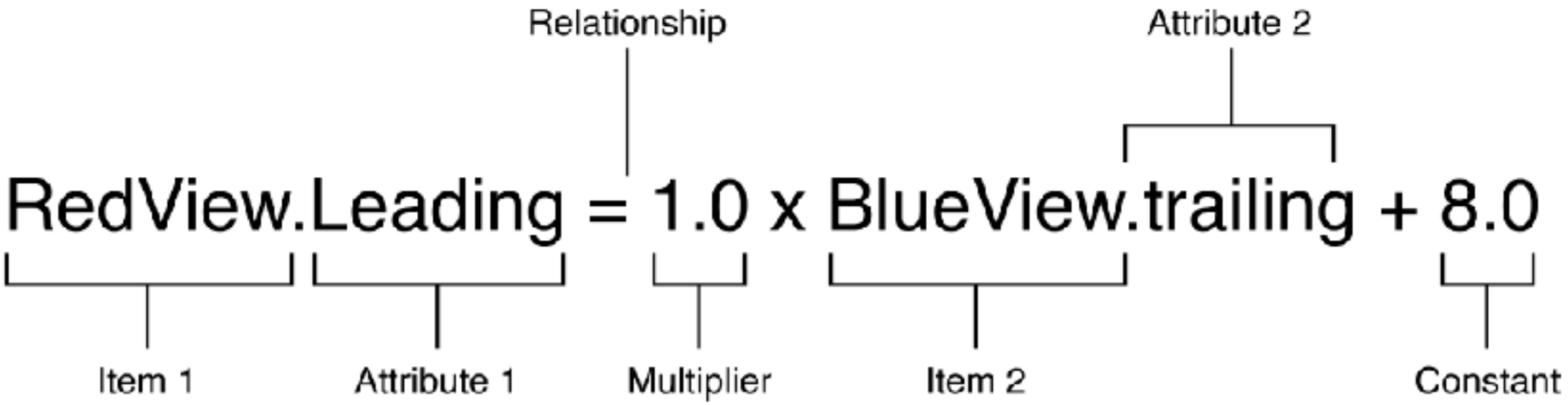
- Auto Layout



Constraint

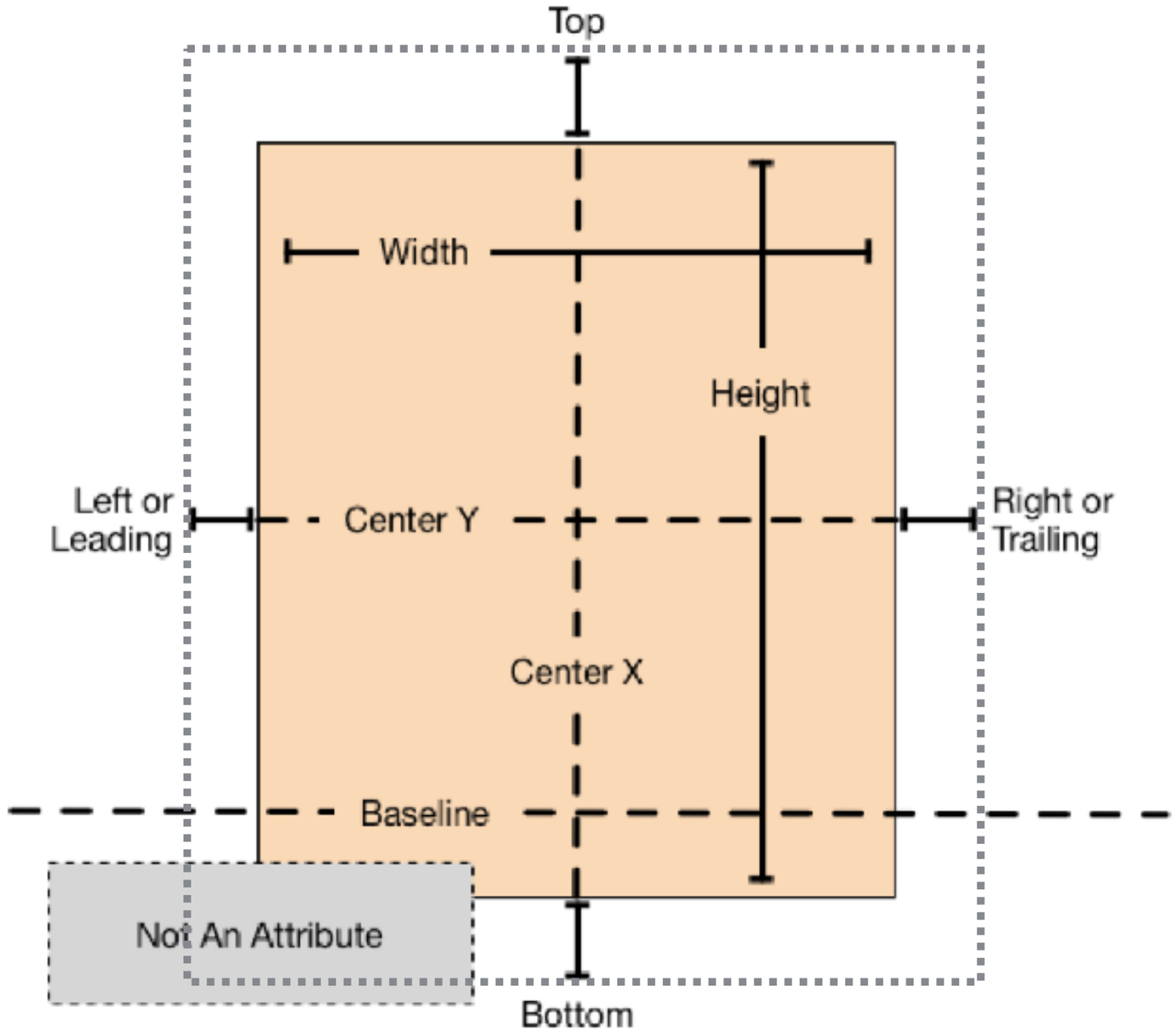
- 각 뷰의 거리, 길이, 위치 등을 표현하기 위한 제약

Constraint 해부



Attribute

- Size attributes
  - ✓ width
  - ✓ height
- Location attributes
  - ✓ Leading
  - ✓ Trailing
  - ✓ Top
  - ✓ Bottom
  - ✓ Vertical
  - ✓ Horizontal



Multiplier

- 비율을 통한 레이아웃 설정을 위한 속성

Constant

- 일정한 간격을 유지하기 위한 속성

Constraint 공식

대상 View의 Attribute는 기준View의 Attribute X 비율 +간격이다.

```
Item1.Attribute = 비율 X Item2.Attribute + 간격
```

제한 사항

- 우리는 AutoLayout을 적용하기 위해, 두 View의 거리, 정렬, 두 뷰간의 상대적 크기, 또는 비율등의 제약을 설정할 것이다.
  하지만 이러한 설정들이 모두 호환가능하진 않다.

  - ✓ You cannot constrain a size attribute to a location attribute.
  - ✓ You cannot assign constant values to location attributes.
  - ✓ You cannot use a nonidentity multiplier (a value other than 1.0) with location attributes.
  - ✓ For location attributes, you cannot constrain vertical attributes to horizontal attributes.
  - ✓ For location attributes, you cannot constrain Leading or Trailing attributes to Left or Right attributes.

StackView

- AutoLayout없이 View를 자동배치

제약사항 만들기

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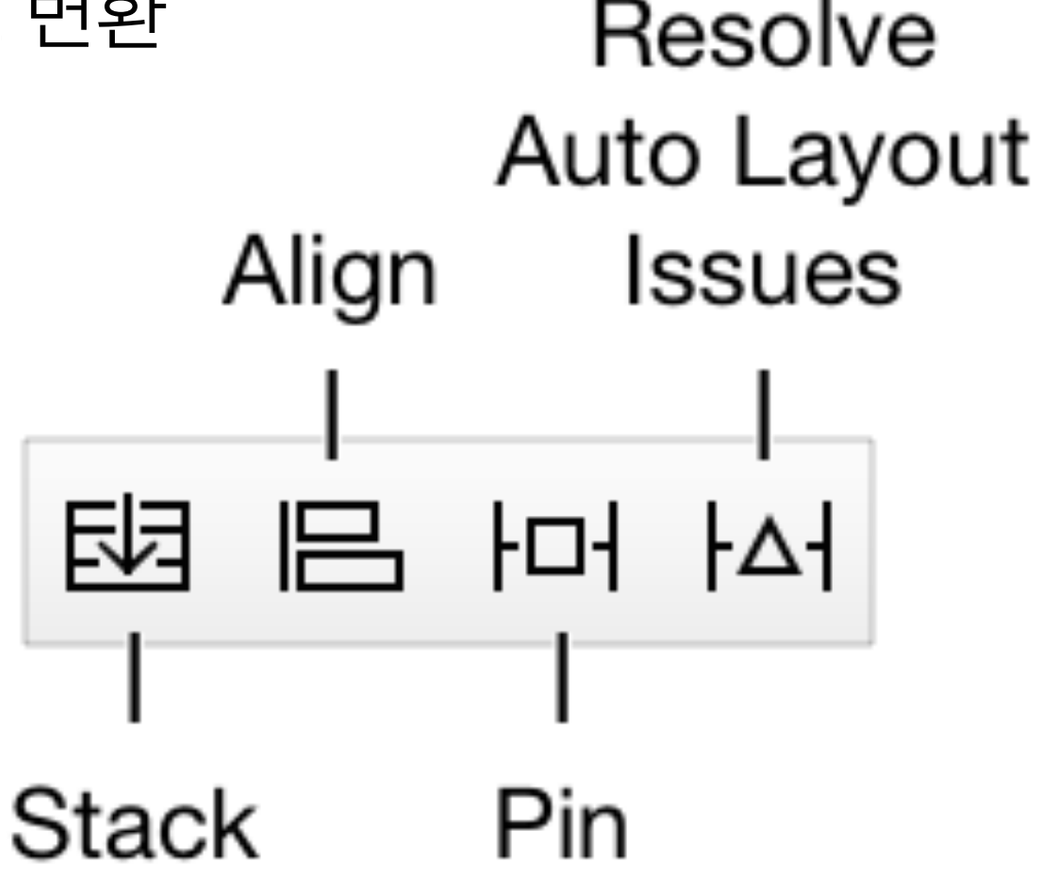
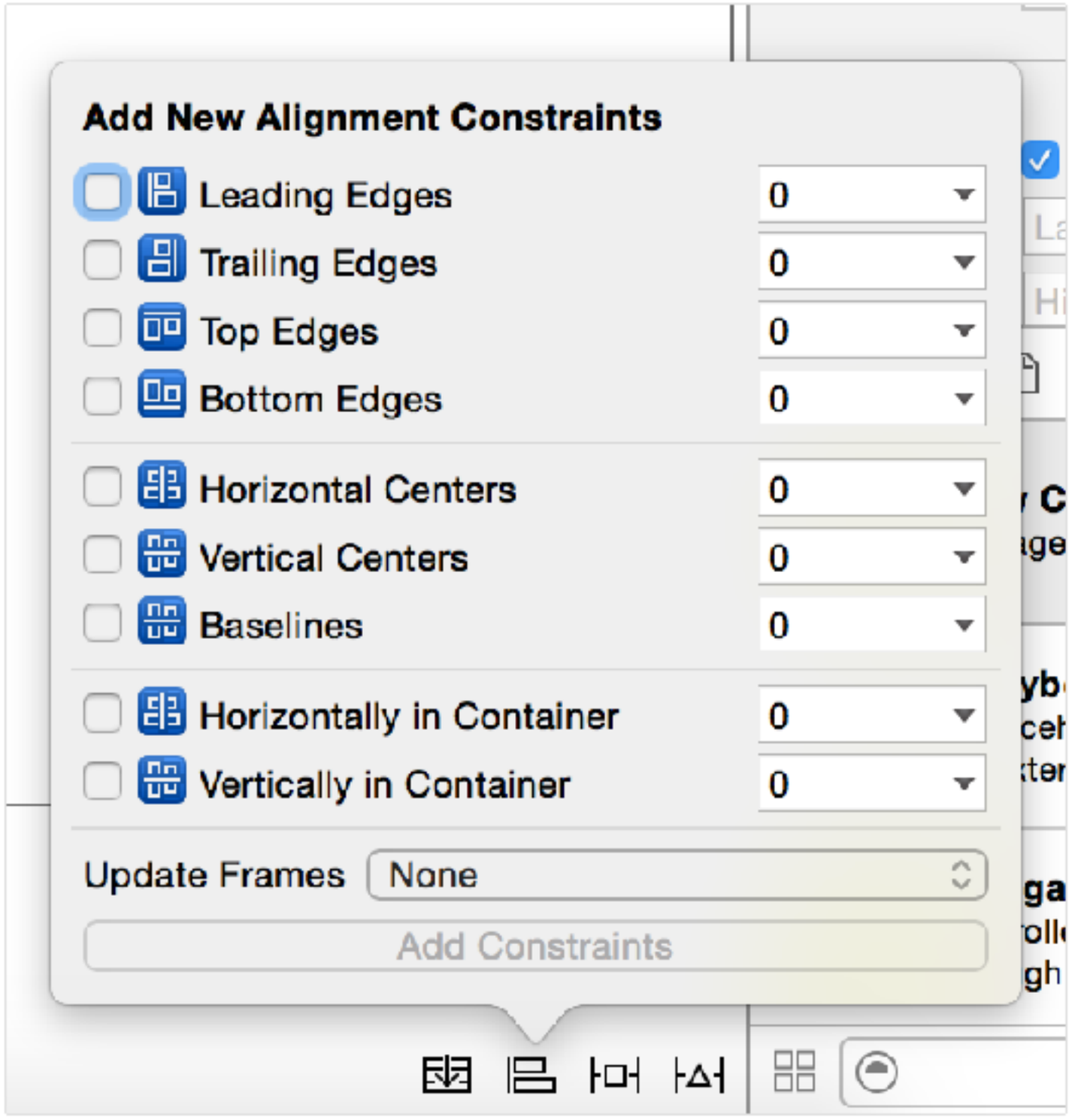
AutoLayout Menu

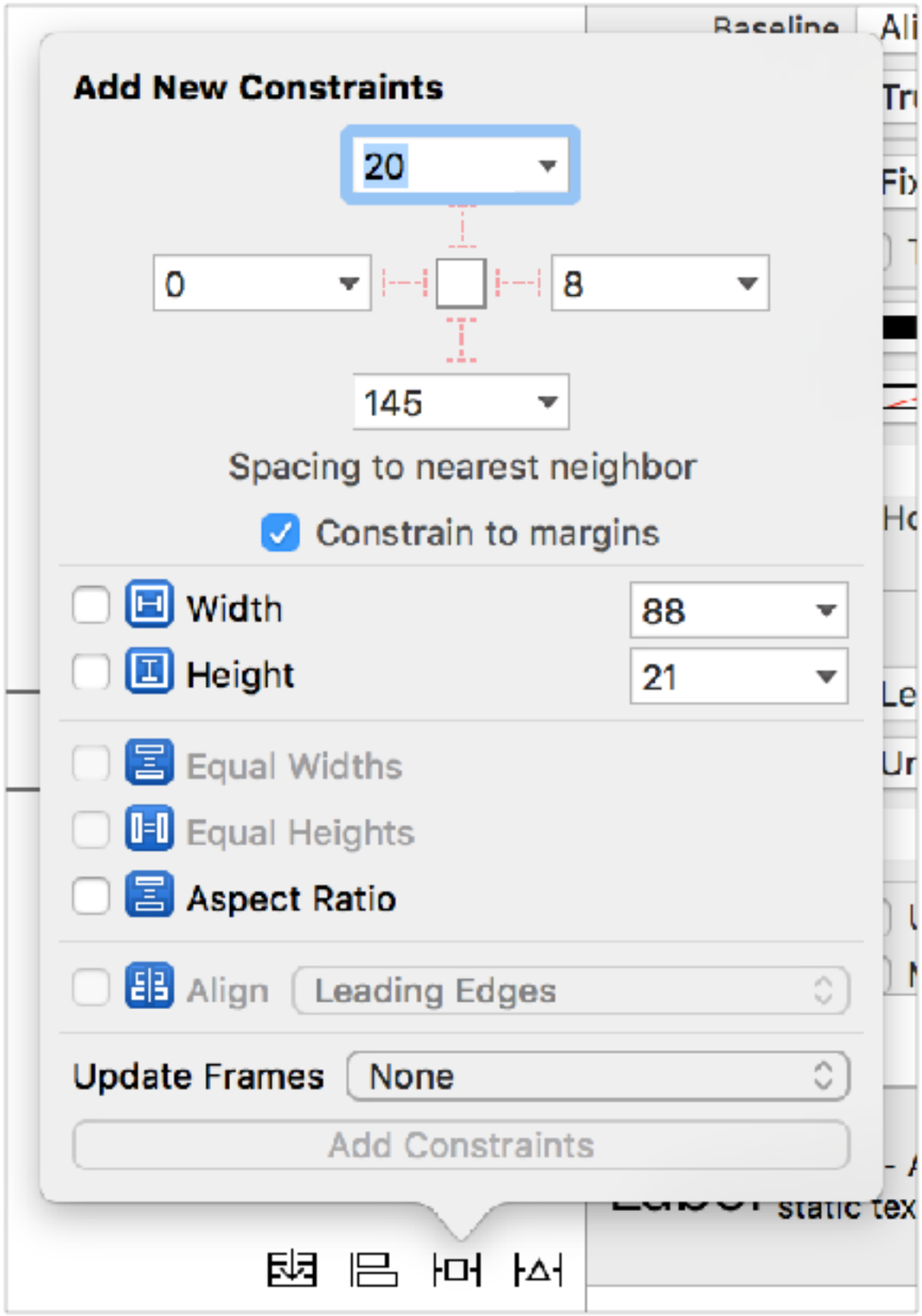
- Stack : 해당 객체들을 하나의 스택 뷰로 변환
- Align : 객체 정렬에 관한 제약사항 추가
- Pin : 객체의 크기 및 객체 간
  거리에 관한 제약사항 추가
- Resolve Issues
  : 오토레이아웃 관련 문제 해결



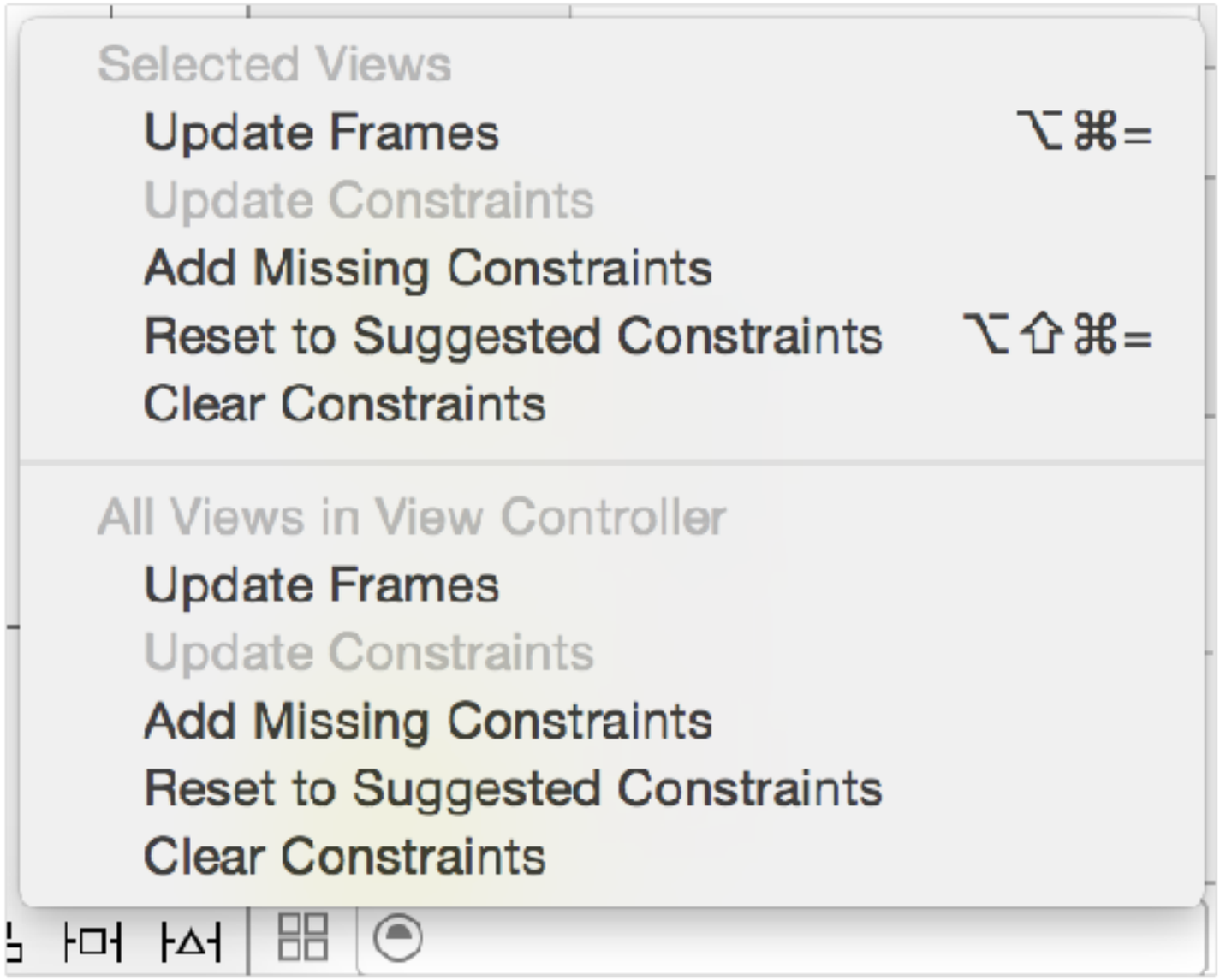
Align



Pin

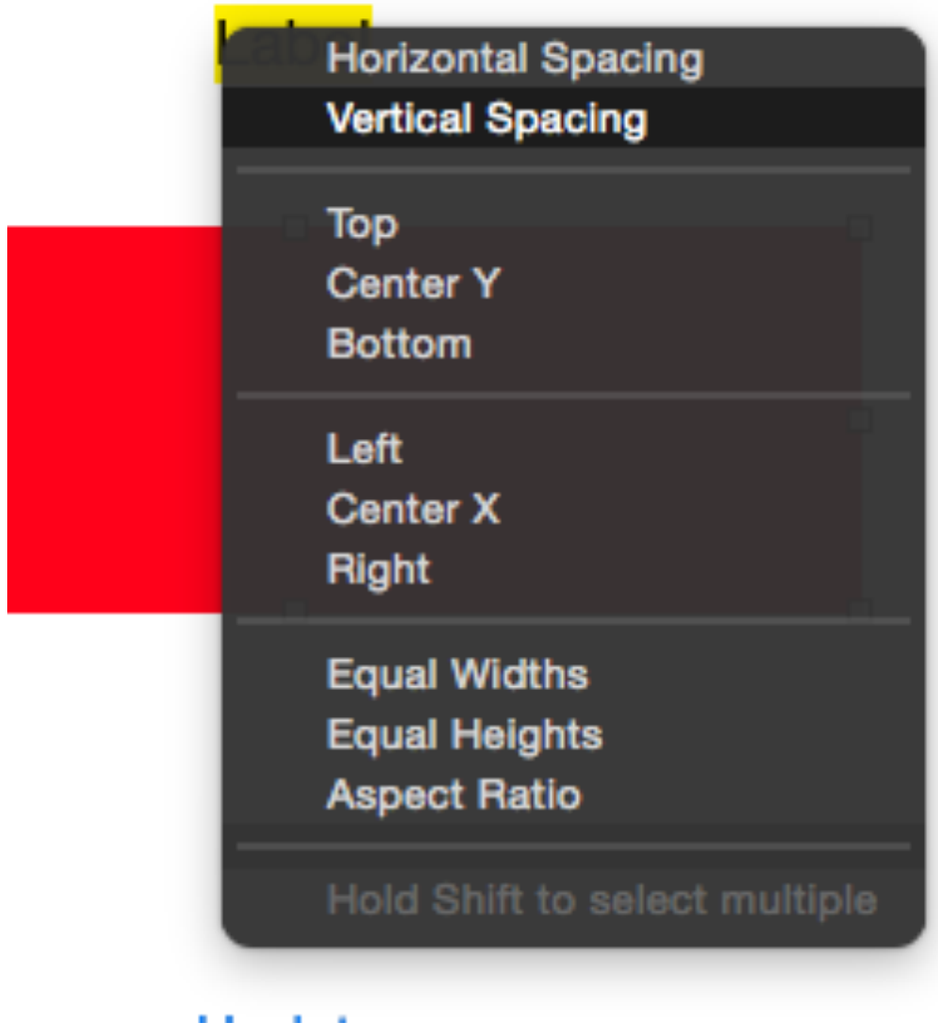


Issues

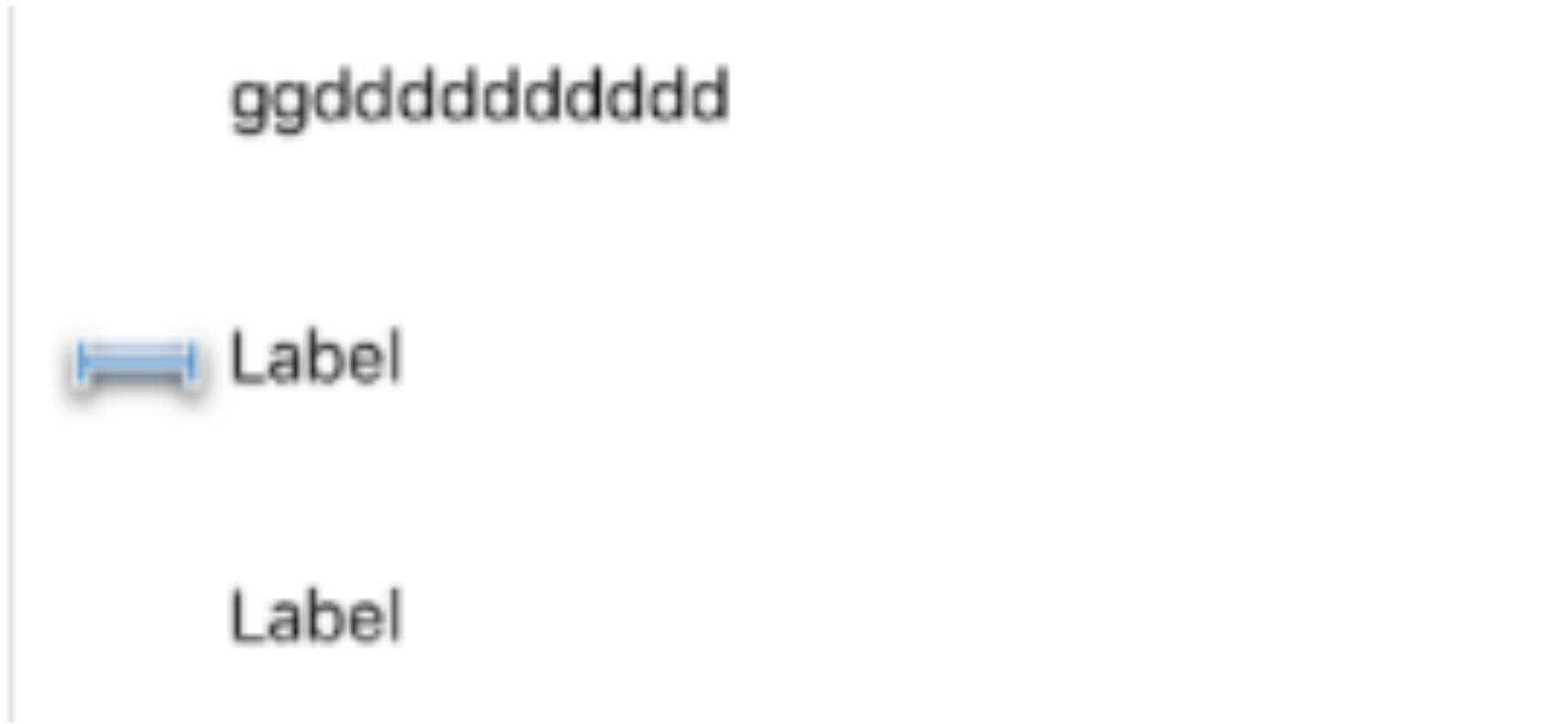


Ctrl + Drag

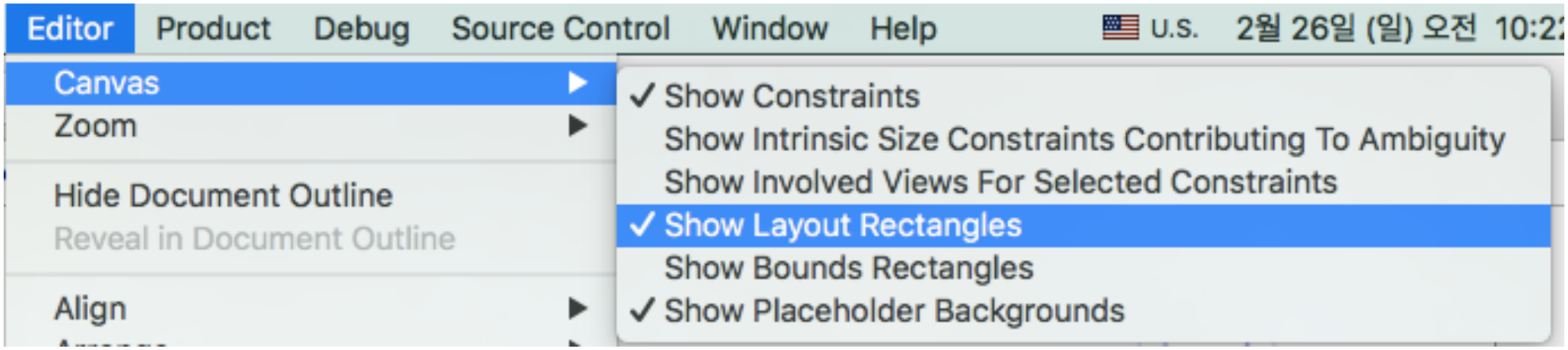
- 드레그의 위치와 방향에 따라 다른 제약 메뉴가 나타난다.



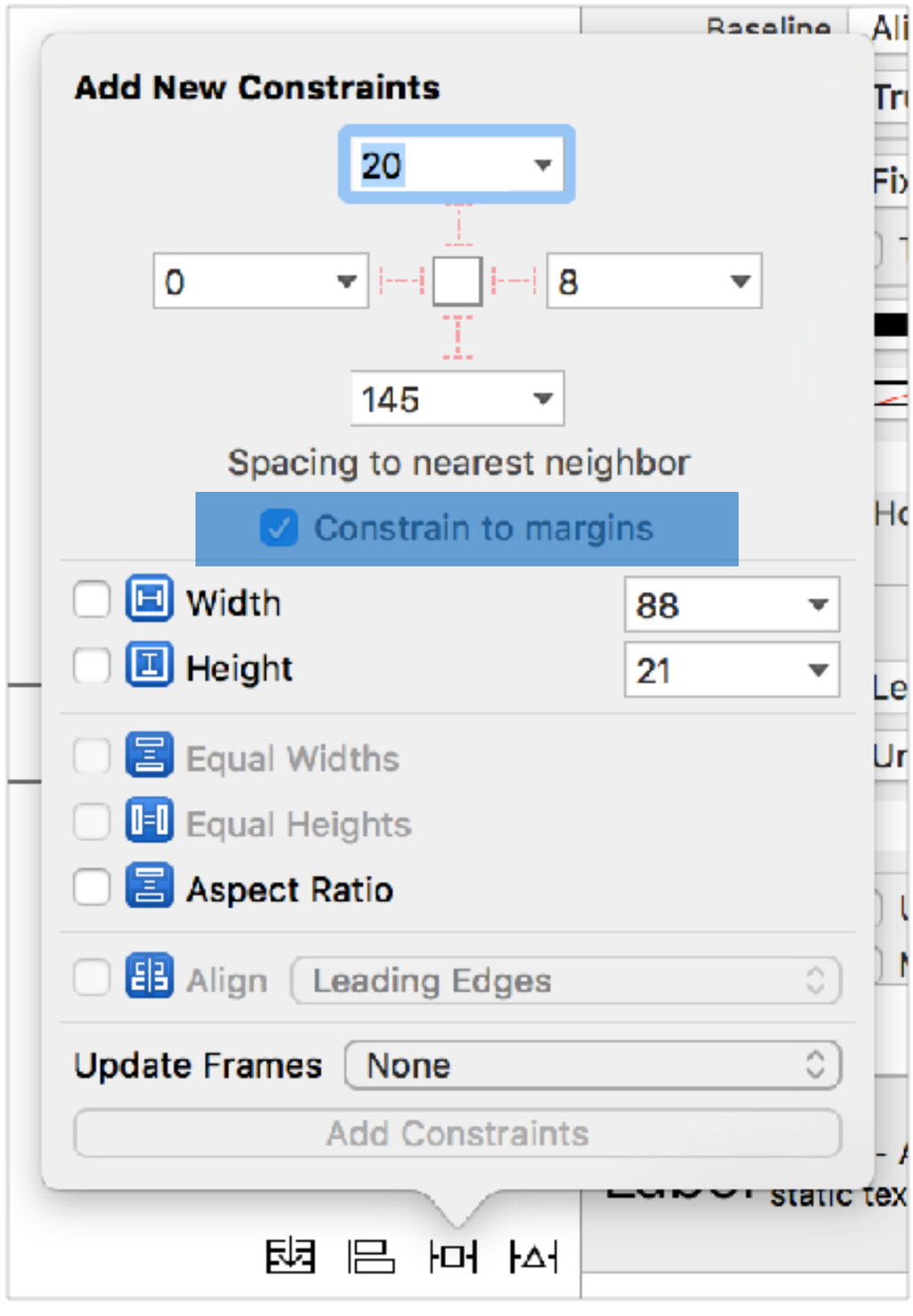
Layout margin

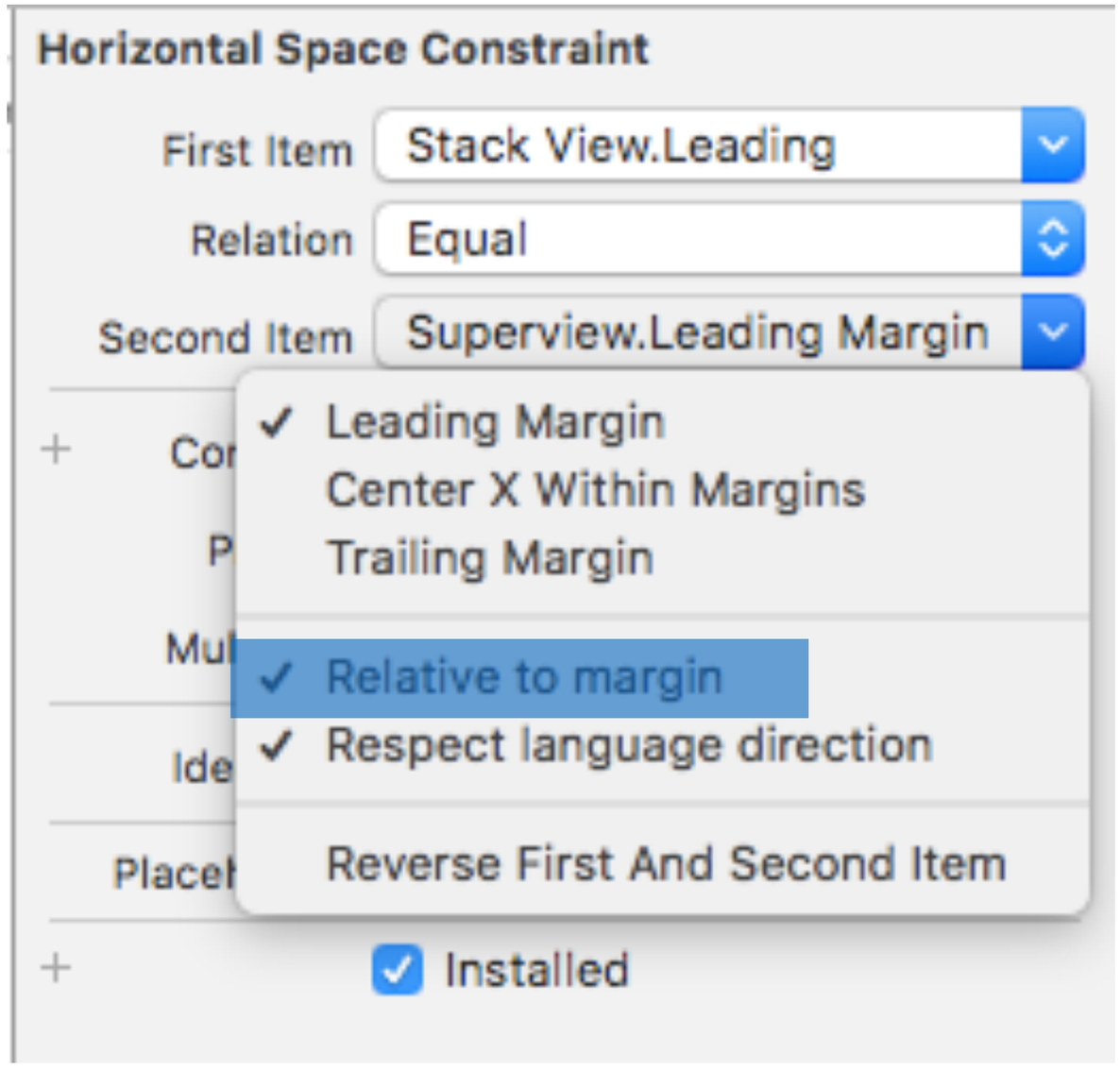


Show Layout Margin



Layout Margin 제거





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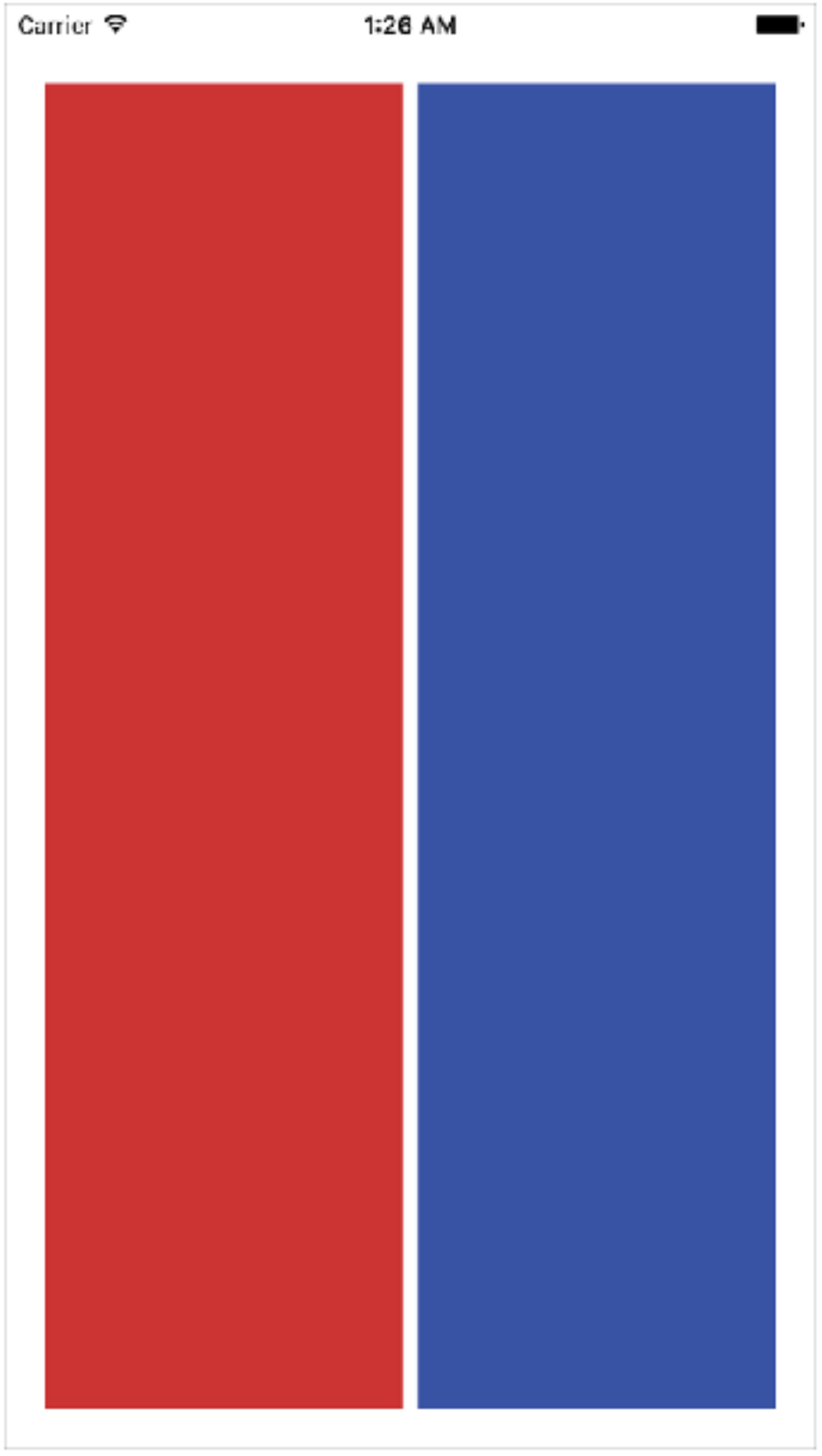
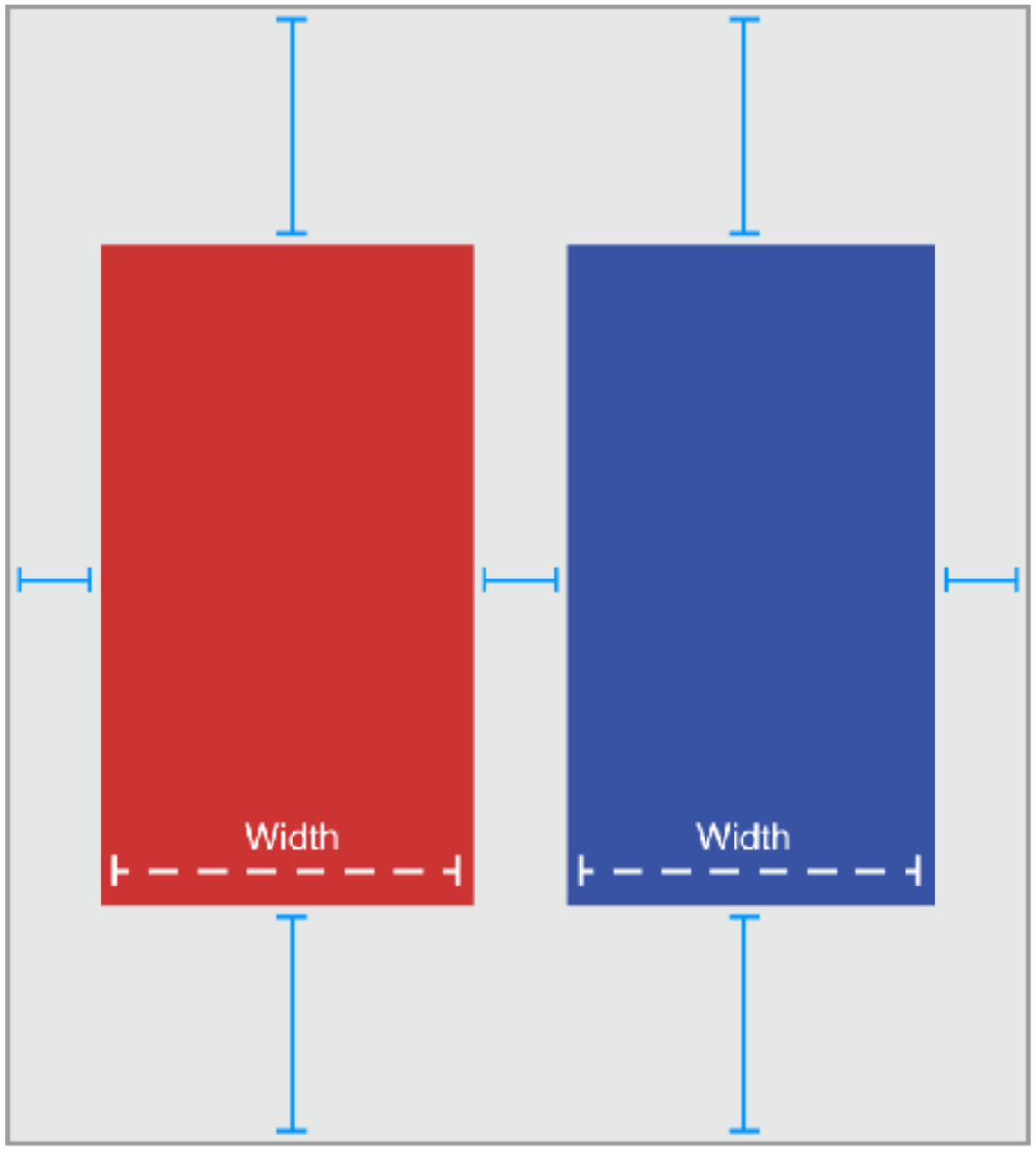
예제

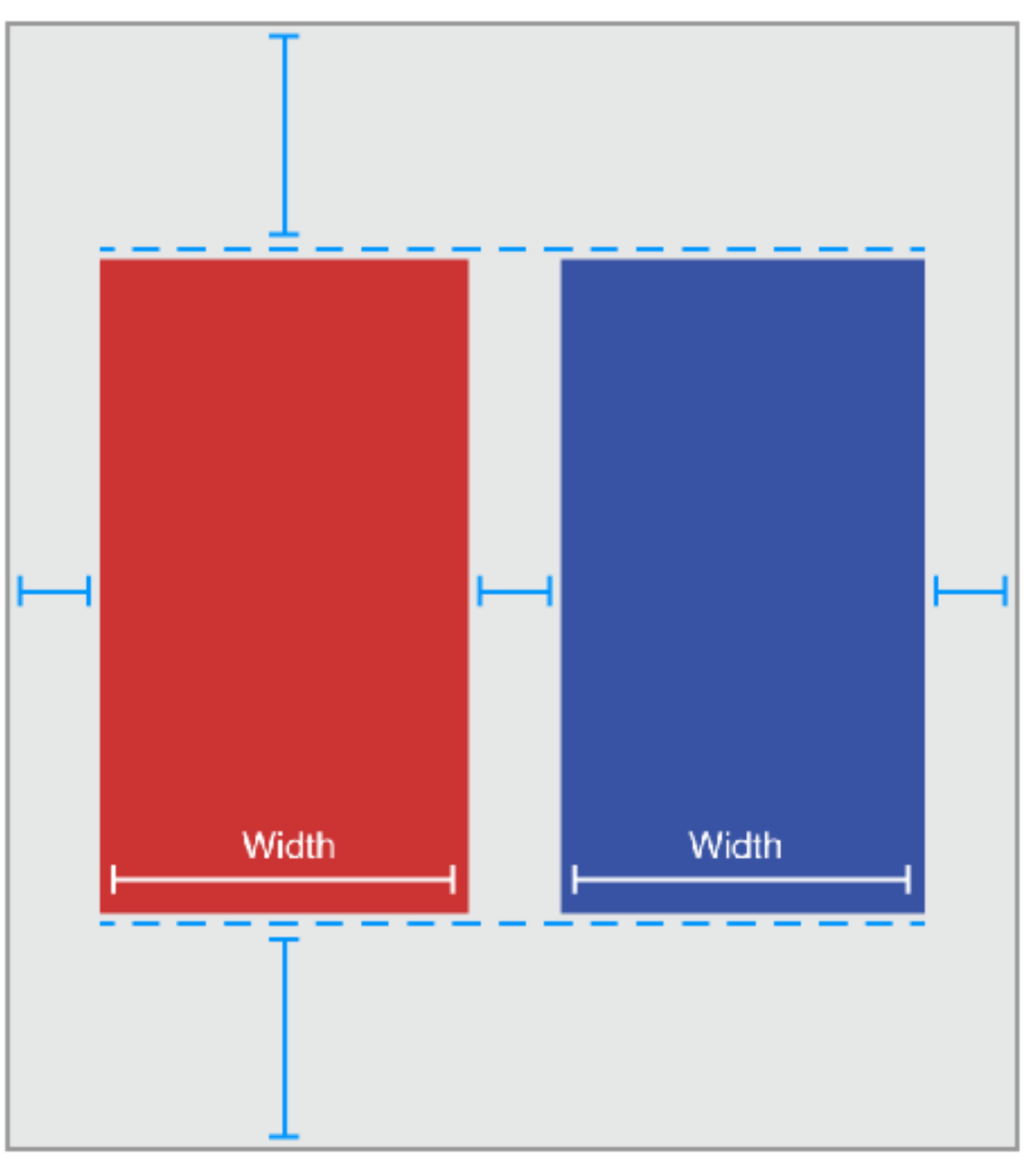


- 상, 하, 좌, 우가
  Constrain margin
- 사이간격 5pt
- 뷰의 넓이가 같음

예제 - 해결책



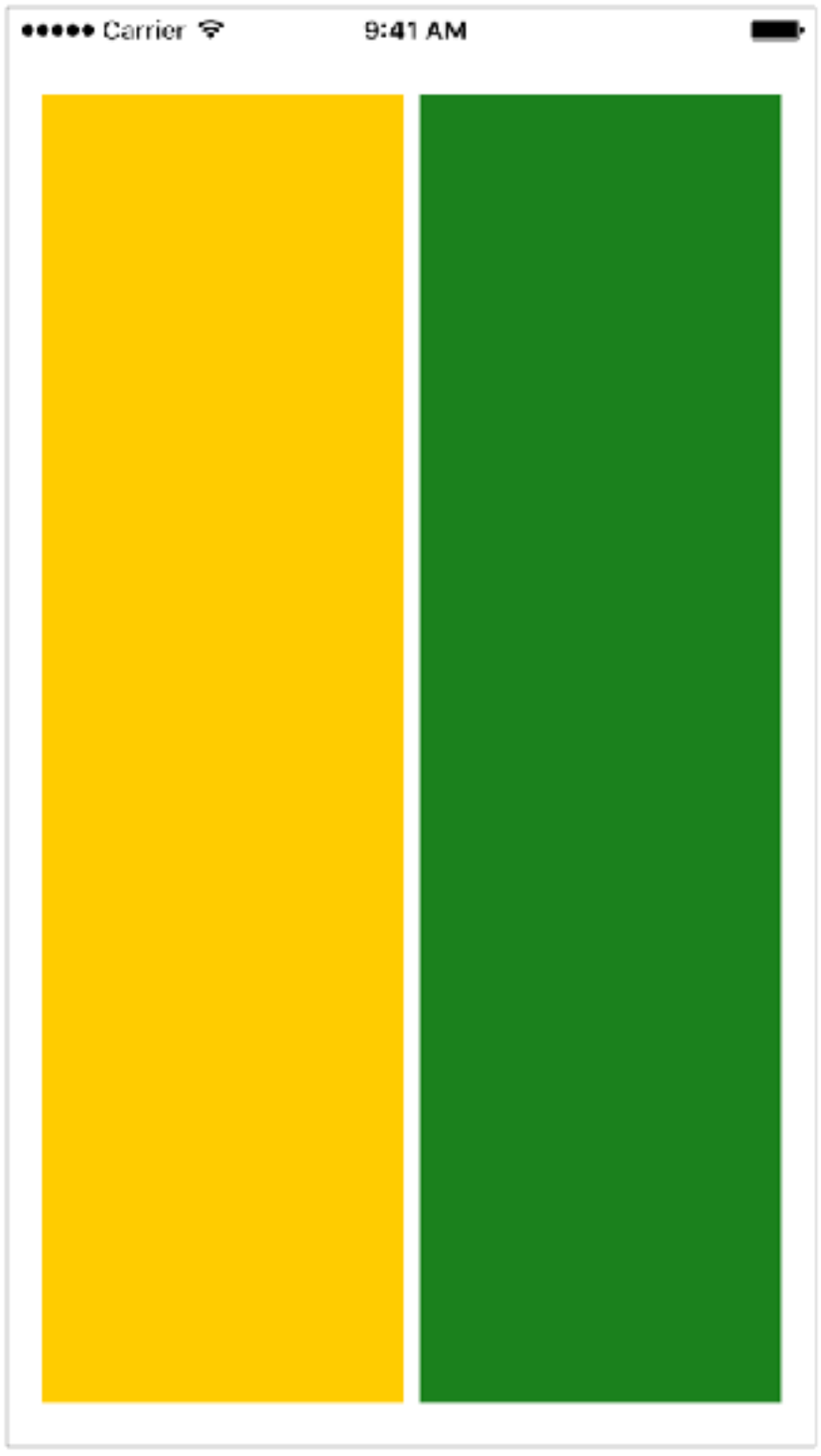
예제 -다른 해결책



Tip

- 화면 배치의 기준이 되는 뷰를 잡고 시작하는 것이 좋아요!!

실습



- 상, 하, 좌, 우가
  Constrain margin

- 사이간격 5pt

- 뷰의 넓이가 같음

실습

- 어떻게 만들어야 할까요?

제약 설정

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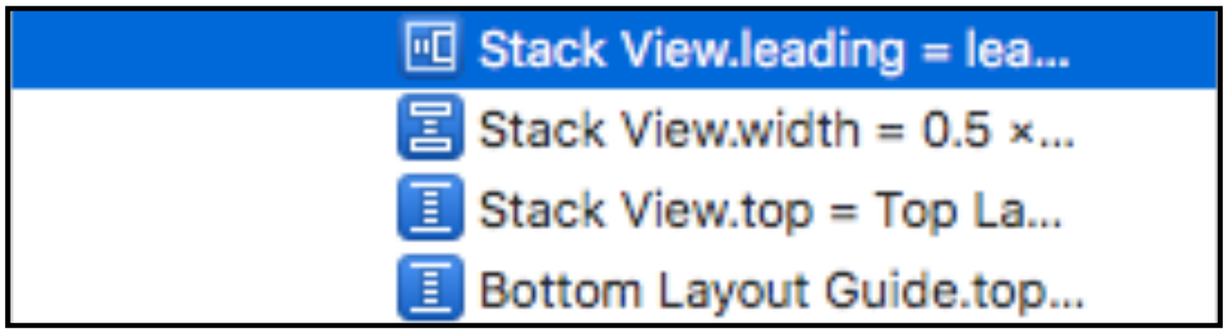
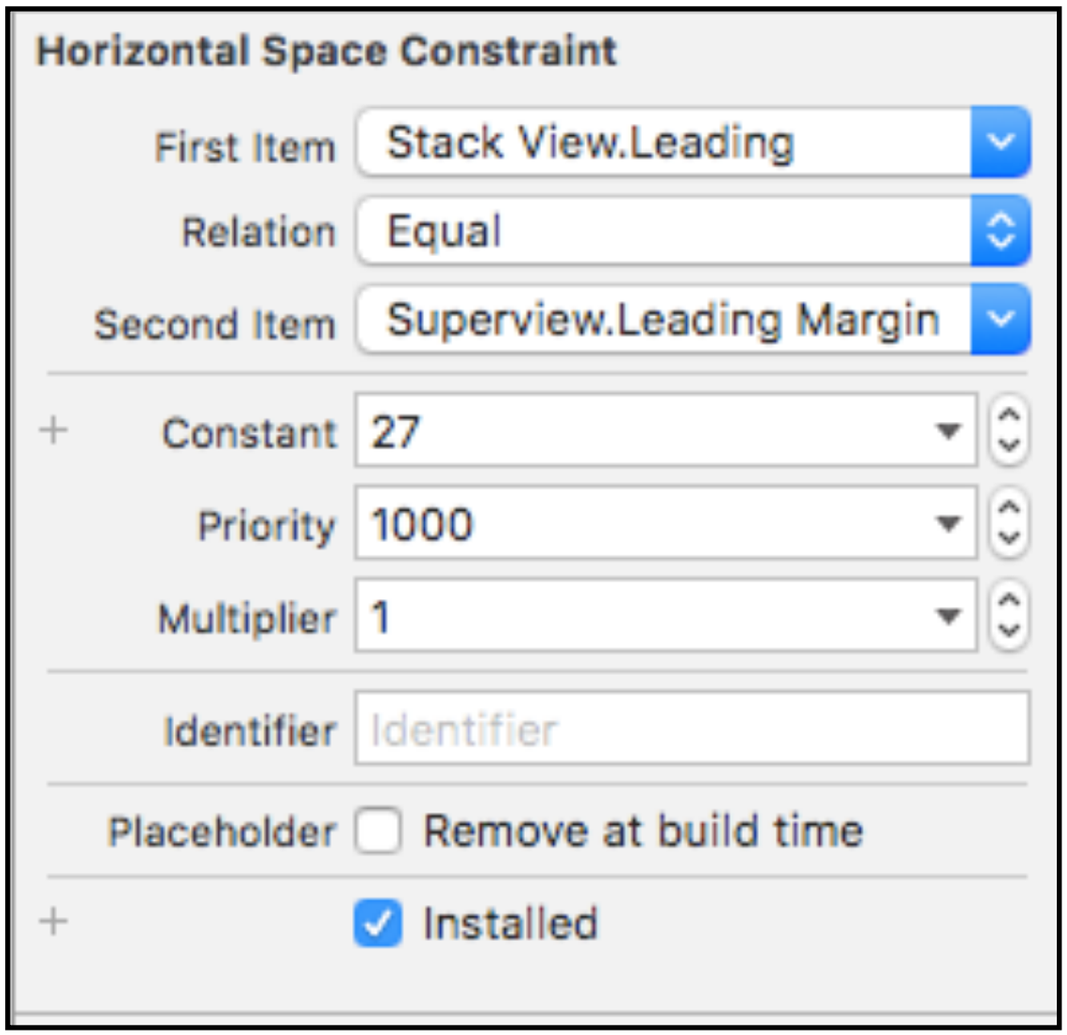
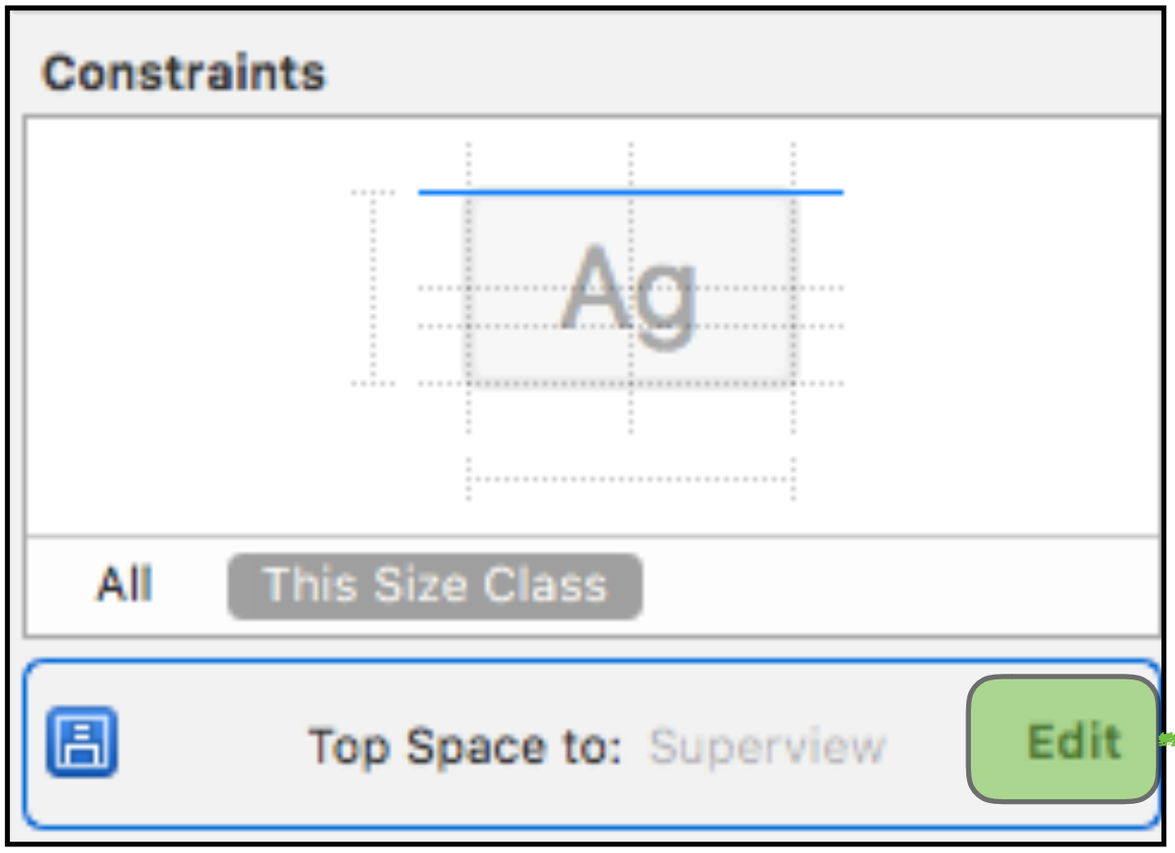
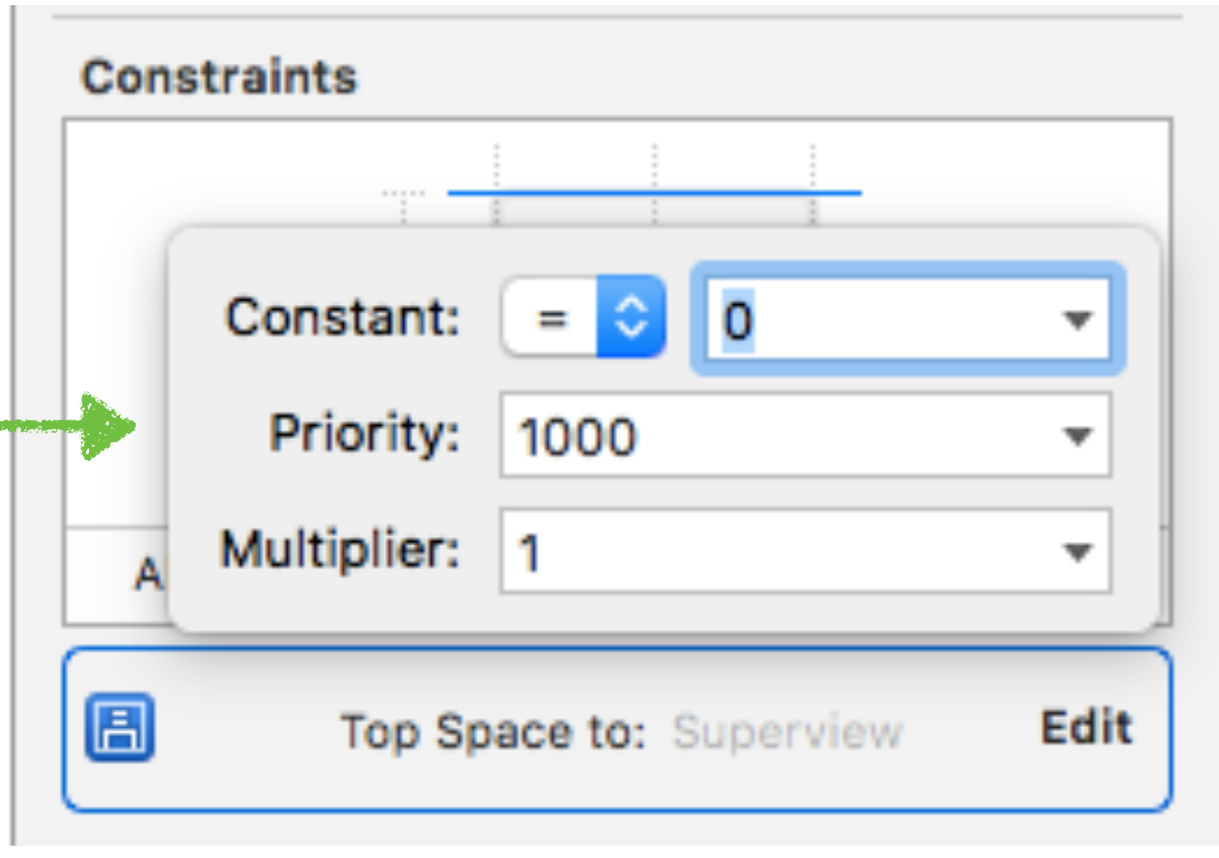
constraint 선택 설정



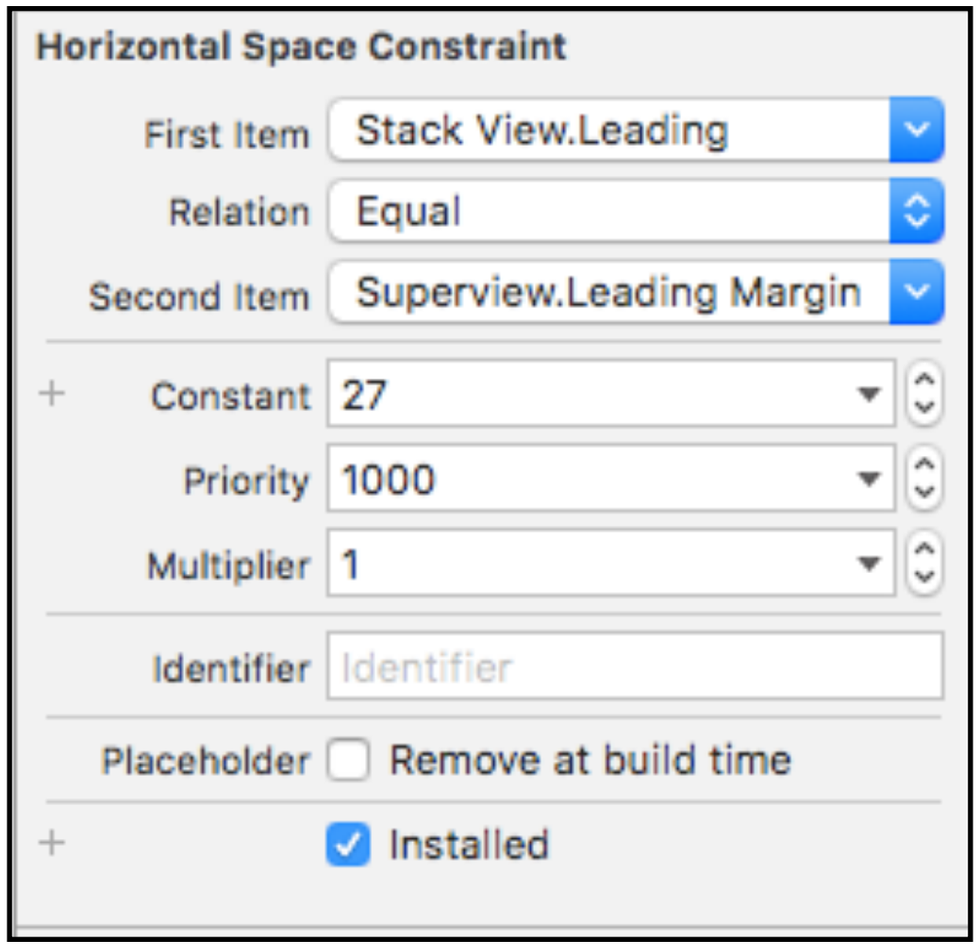


constraint Edit 버튼 설정





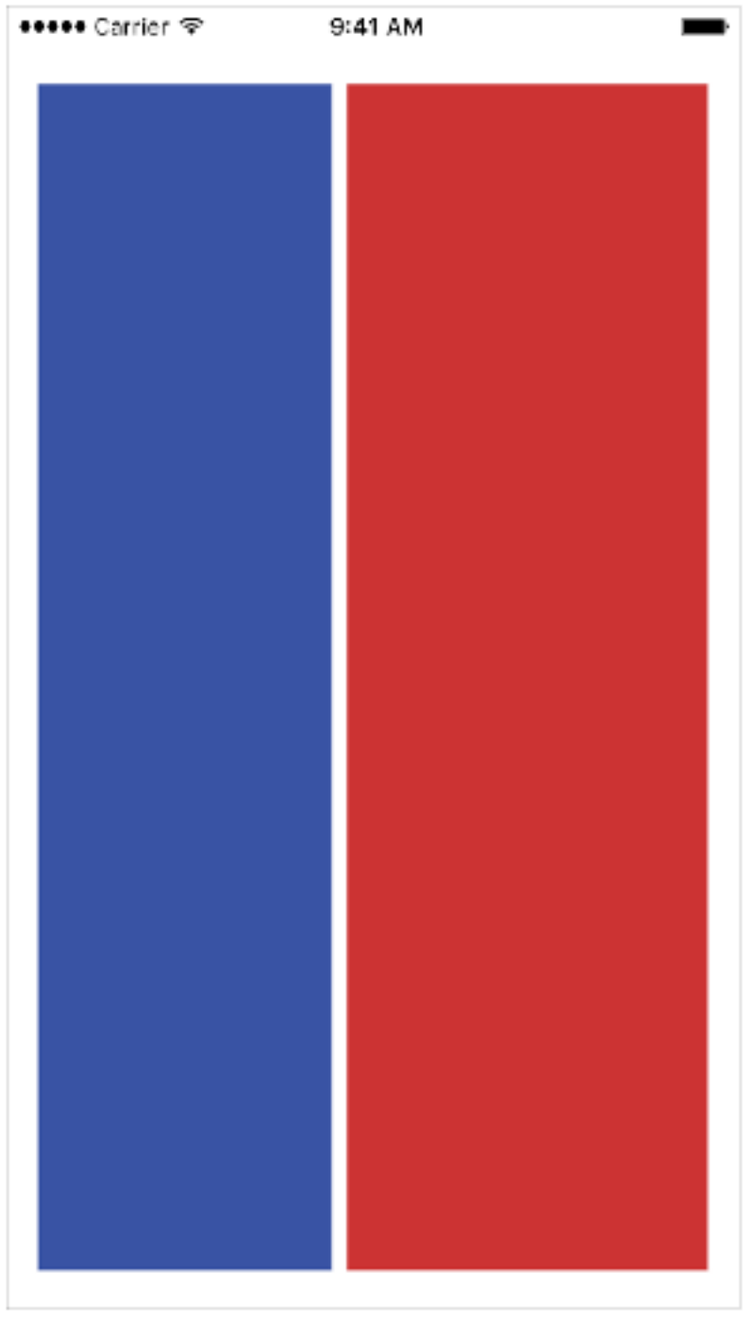
설정 방법




```
Item1.Attribute = Multiplier X Item2.Attribute + Constrant
```

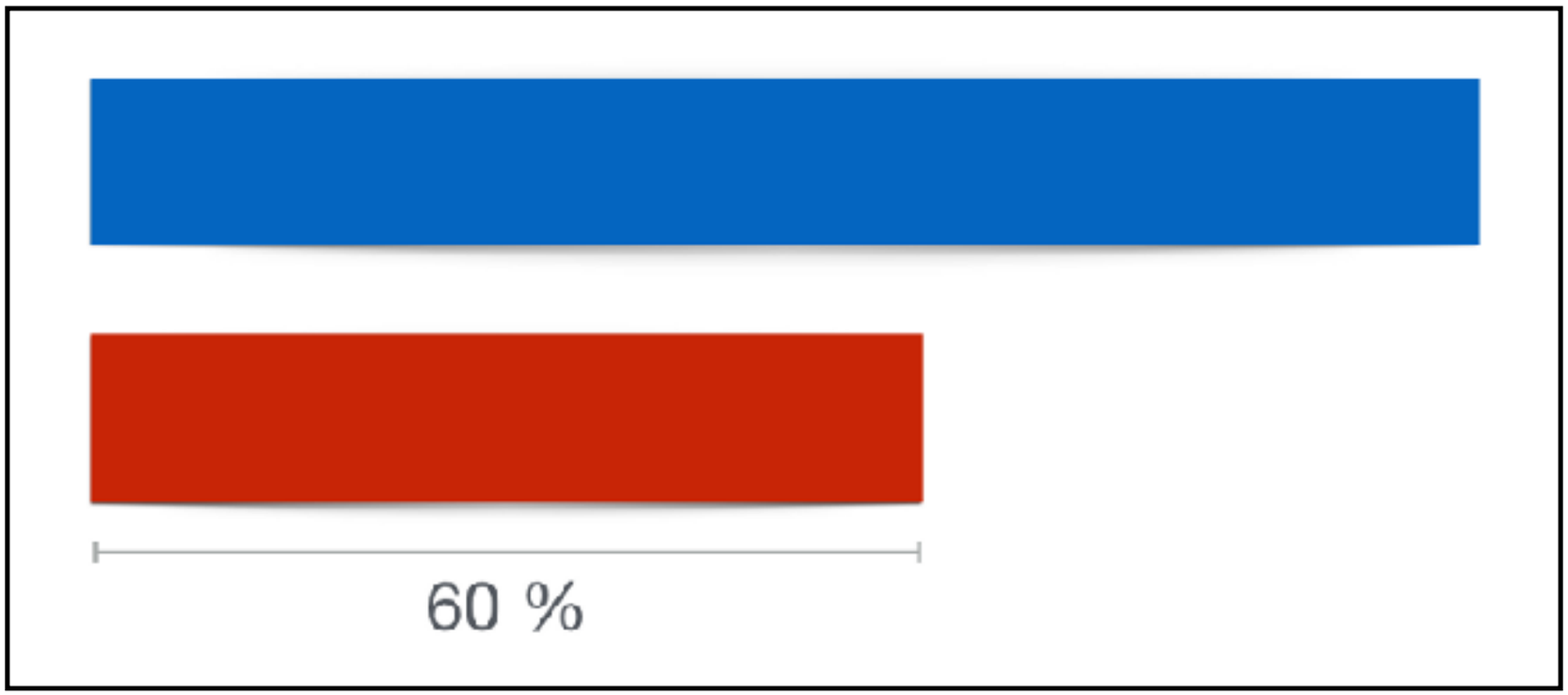
* 같은 Priority에서 같은 제약이 존재 할수 없다.

실습

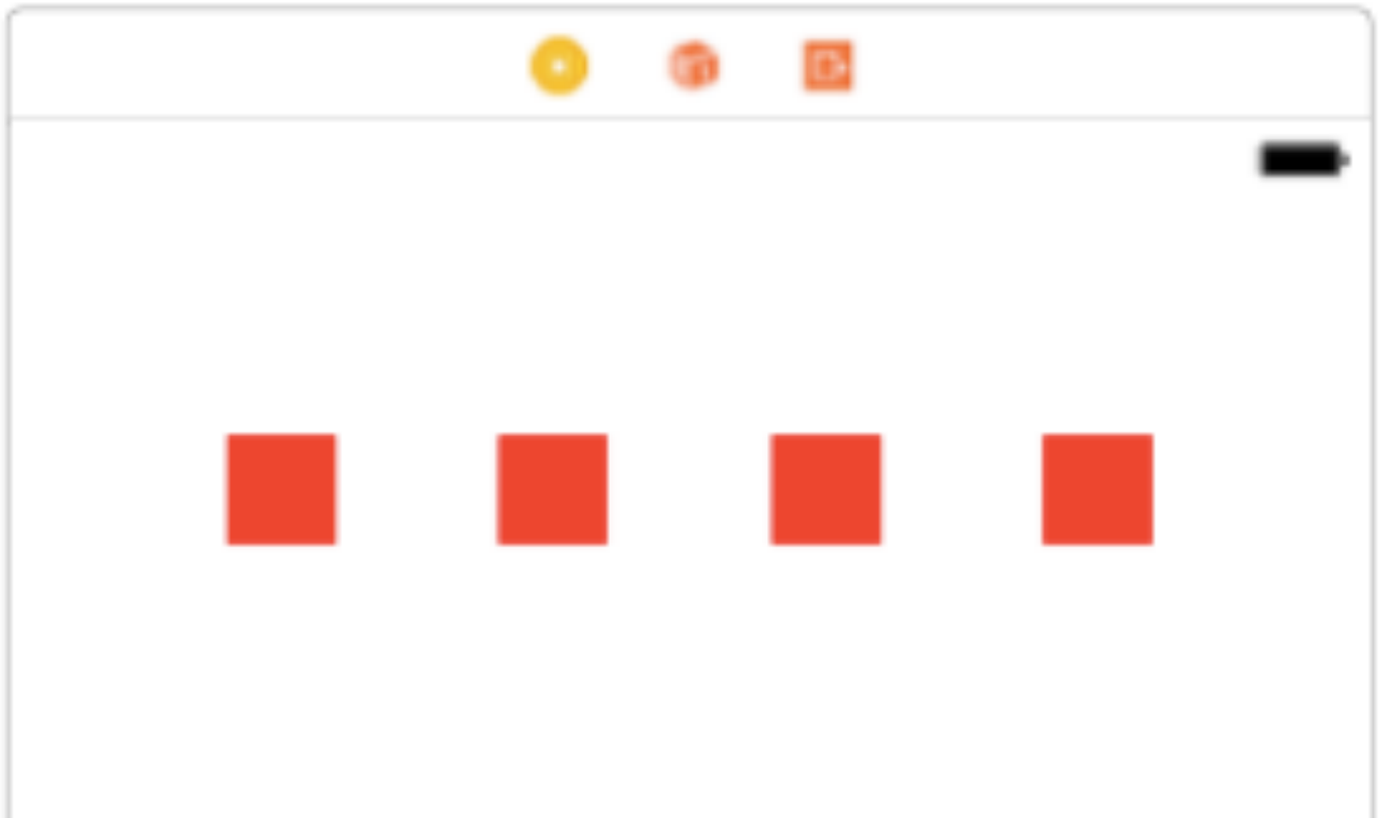


- 오른쪽 뷰의 넓이가 왼쪽 뷰의 넓이의 두 배인 화면

실습



실습 : 동일한 간격 View



*StackView 사용 안하기

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