



ASSESSMENT 04

AUTO LAYOUT

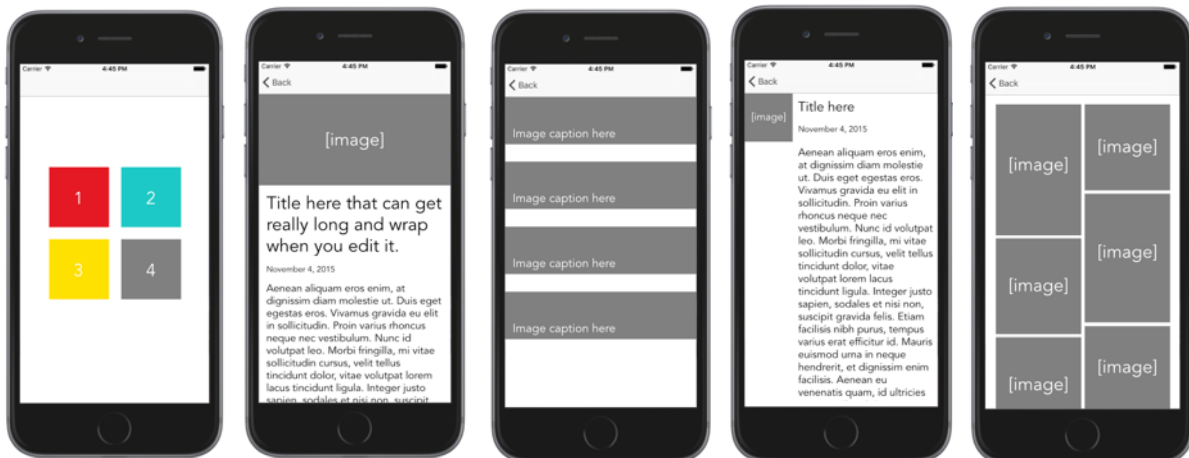
Complete all exercises listed below in a single app. Start with the layout for the home scene, then connect additional scenes with segues. These exercises will familiarize you with various layout methods, rotation, scrolling and give you more hands-on experience with table views.

GOALS OF ASSESSMENT

- › Gain familiarity with the iOS Auto Layout method.
- › Make a View Controller support both portrait and landscape orientations.
- › Use Interface Builder to construct Auto-Layout-driven interfaces.
- › Create content in scrollable views.

REQUIREMENTS

- › Your app must:
- › Use a Navigation Controller to enable you to use push segues.
- › The initial View Controller must have four square buttons. Place them in the middle of the screen in a 2 x 2 grid.
- › When a button is tapped, it should segue to one of four additional View Controllers:
- › The home screen followed by the four View Controllers (numbered 1 to 4, respectively) look like this:





- Home Scene
 - In landscape, it should maintain its square arrangement in the middle of the screen.
- View Controller 1
 - Should contain an image view, two text views, and a single label.
 - Should be scrollable.
 - In landscape orientation, the image should move to take up the left half of the screen, and the other views should take up the right 50% of the screen.
- View Controller 2
 - Should use a Stack view to lay out several images.
 - Each image should have a caption label overlaid on top of it.
- View Controller 3
 - Should also have an image, two text views, and a label as shown.
 - In landscape, the image should enlarge and the other column with the text views and label should stay the same width.
- View Controller 4
 - In portrait, there should be several images in two columns, much like a Pinterest board.
 - In landscape, the same images should be laid out in 3 columns.

DELIVERABLES

- Assignment (code, resources, project file, etc.) zipped and posted to Dropbox.

WAYS TO GET STARTED

- First, review Springs and Struts and the autosizing layout model. Where do you expect there would be difficulties with this type of layout method?
- Describe an Auto Layout constraint; read through the API documentation; and draw some sample layouts and possible constraints from existing popular apps.
- Start simply: What constraints would you use to make a centered view that is 200 pts x 200 pts?

RESOURCES

- Apple's official Auto Layout guide.
<https://developer.apple.com/library/mac/documentation/UserExperience/Conceptual/AutolayoutPG/index.html>
- Big Nerd Ranch, iOS Auto Layout: Fun Facts and Tips
<https://www.bignerdranch.com/blog/ios-autolayout-fun-facts-and-tips/>
- Ray Wenderlich, Auto Layout Tutorial in iOS 9
<http://www.raywenderlich.com/115440/auto-layout-tutorial-in-ios-9-part-1-getting-started-2>