

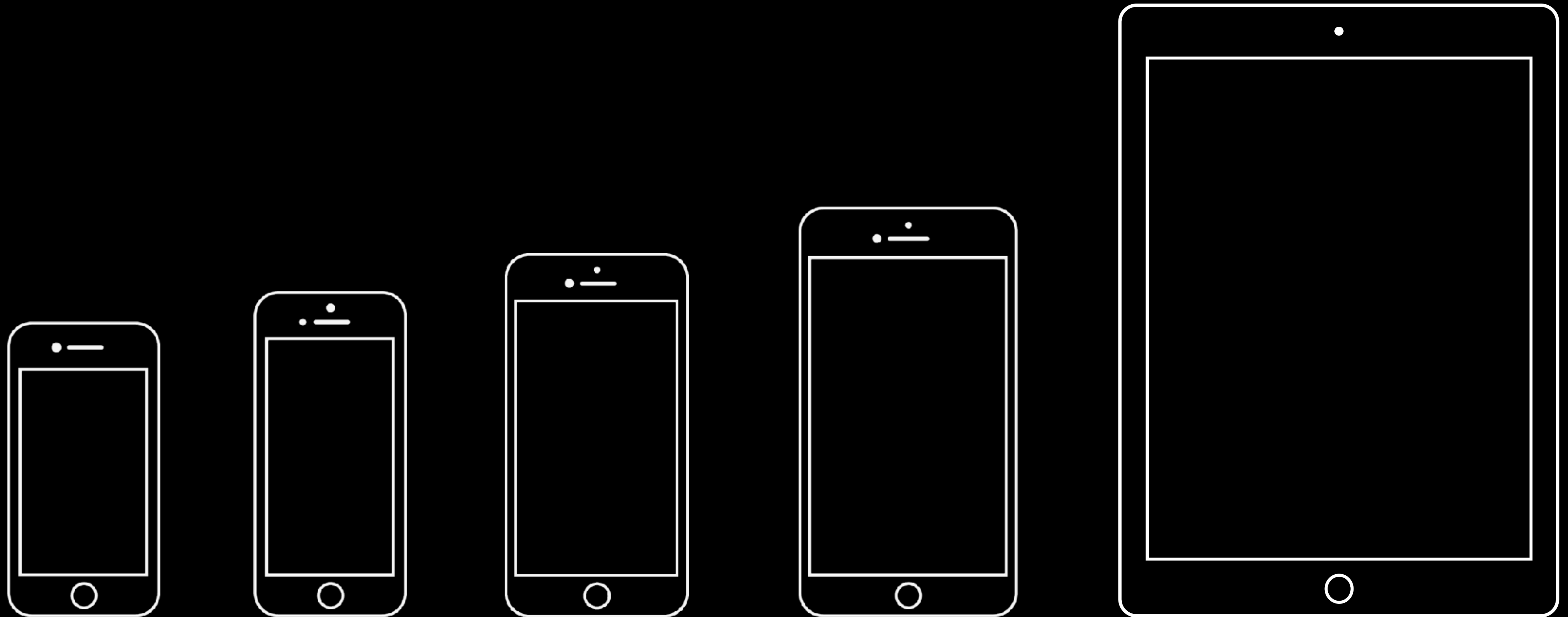
Lesson 2—10:

Auto Layout and Stack Views

Layout for multiple sizes

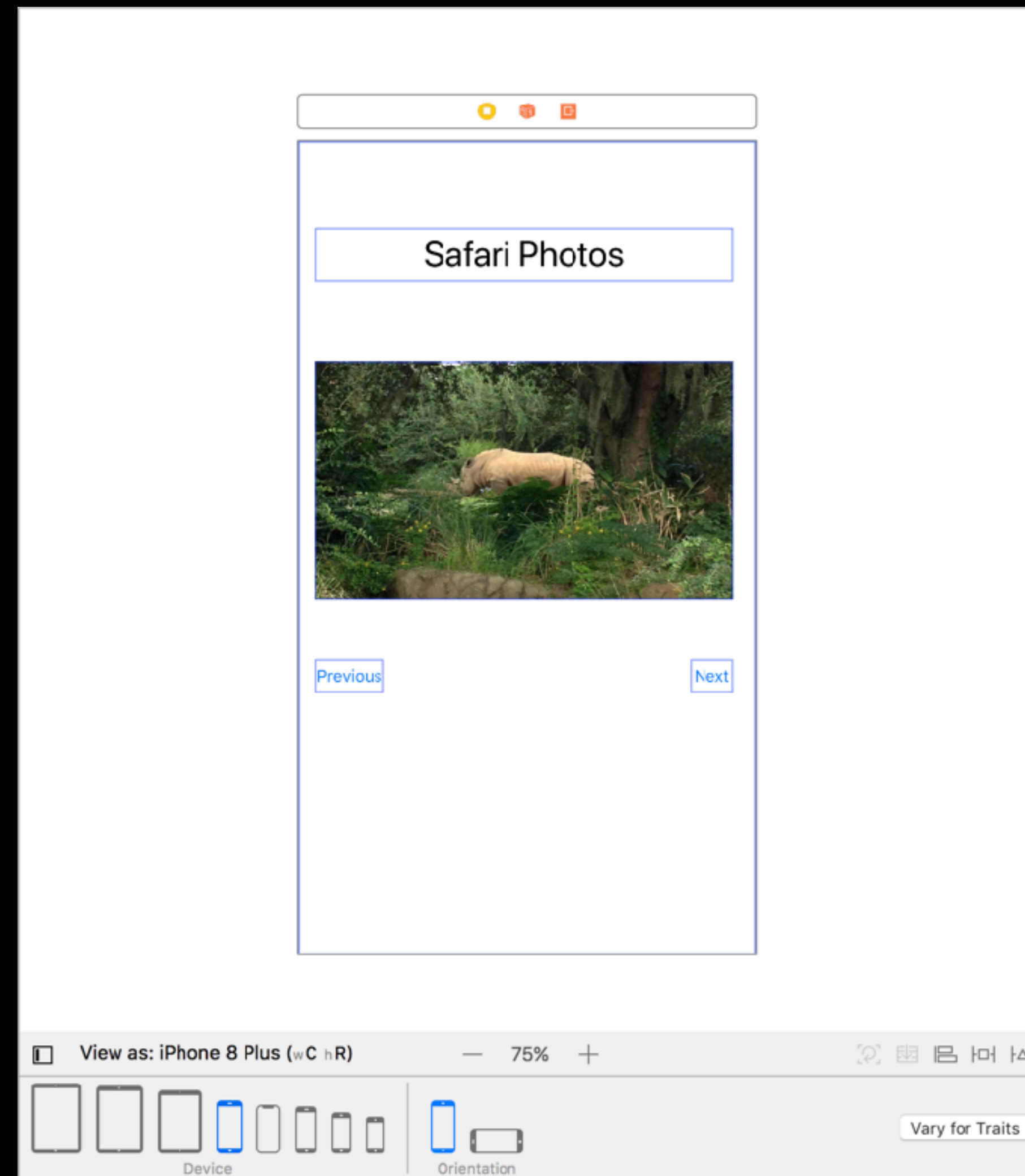


Layout for multiple sizes



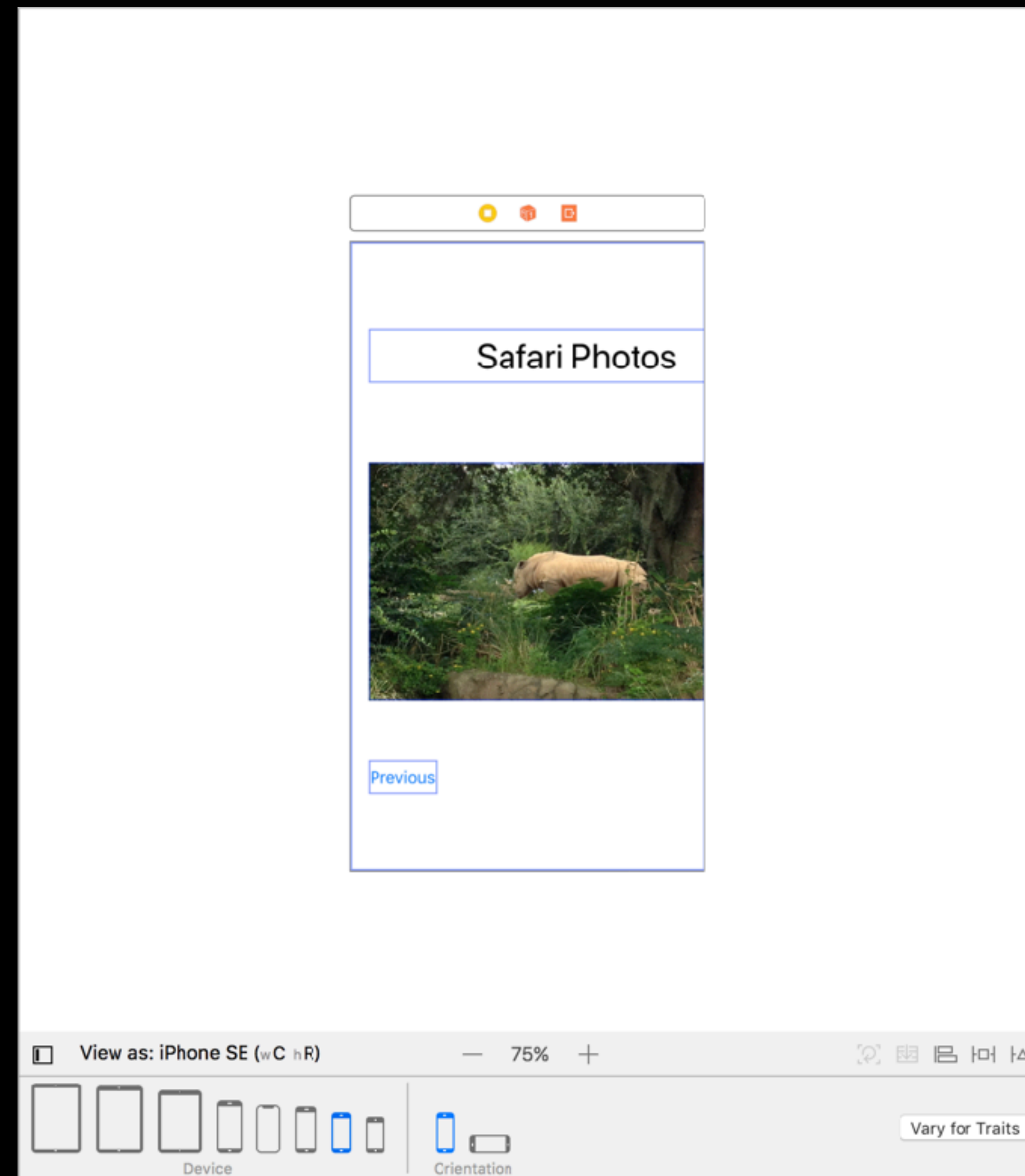
Interface Builder

View as:



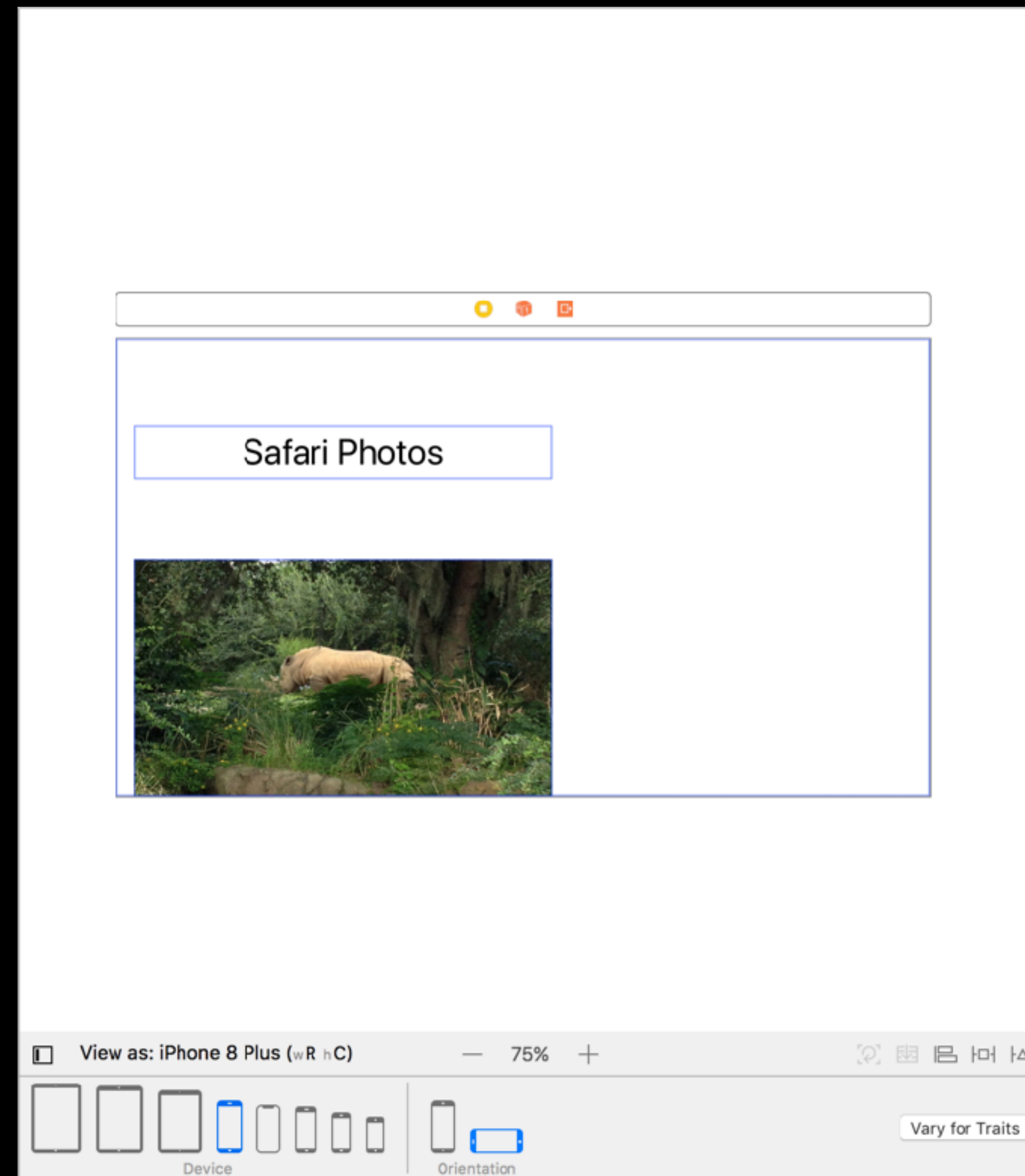
Interface Builder

View as:

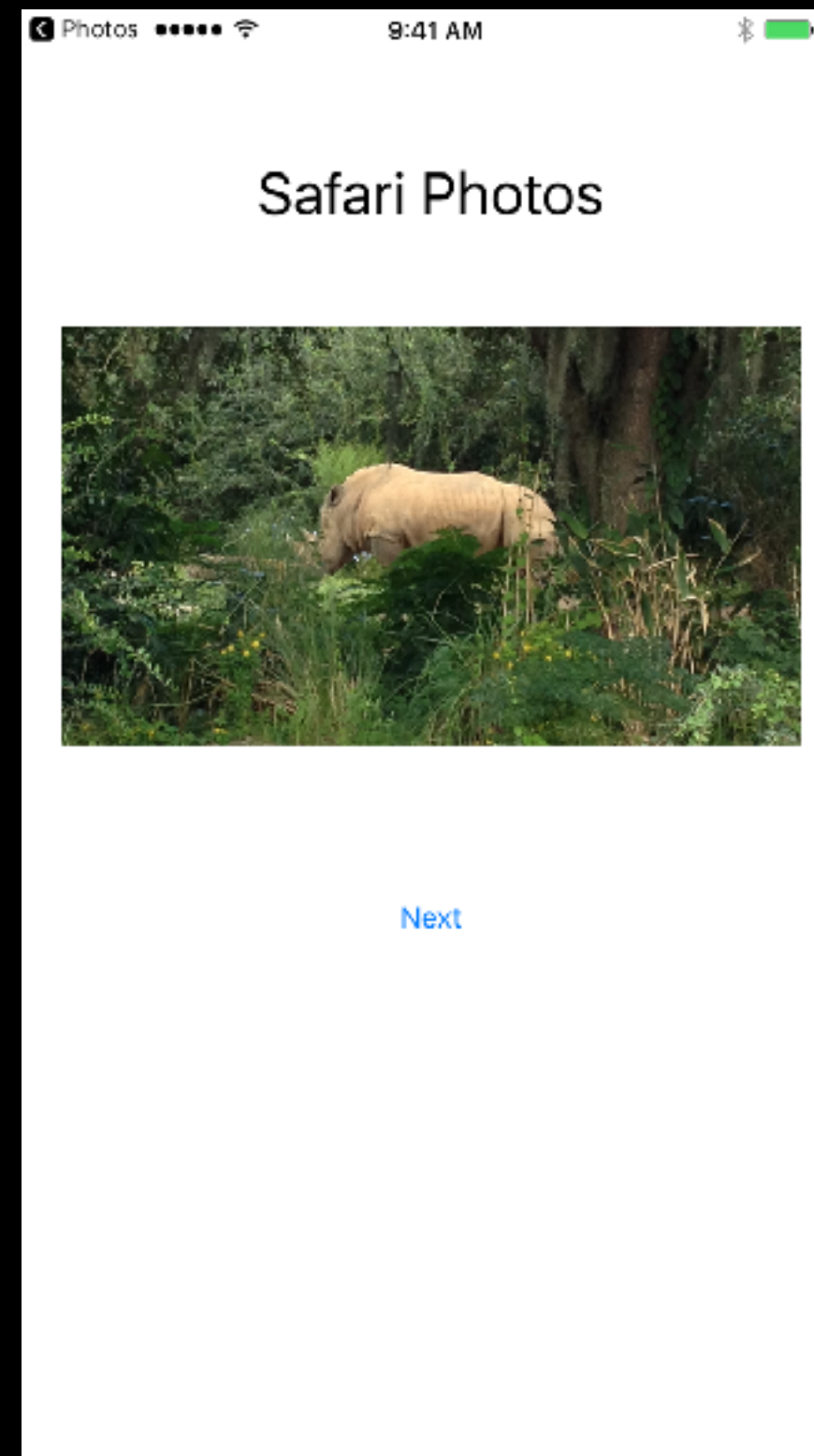


Interface Builder

View as:



Why Auto Layout?



Why Auto Layout?

Safari Photos





Create alignment constraints


Text





Add New Alignment Constraints


☐  Leading Edges


☐  Trailing Edges


☐  Top Edges


☐  Bottom Edges

☐  Horizontal Centers


☐  Vertical Centers


☐  Baselines


☒  Horizontally in Container


☒  Vertically in Container


Add 2 Constraints


▼  View

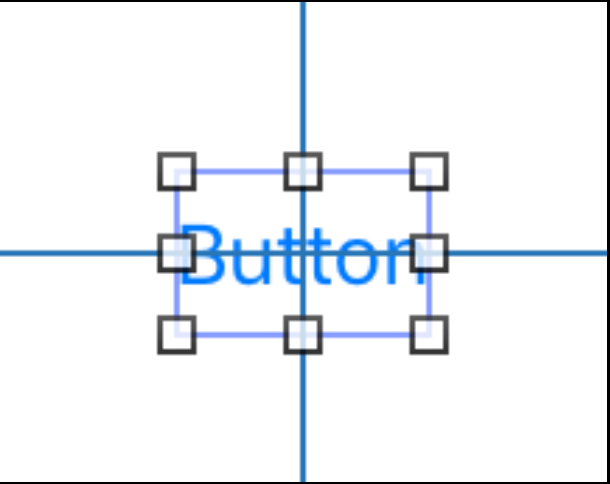
 Safe Area

 Button

▼  Constraints

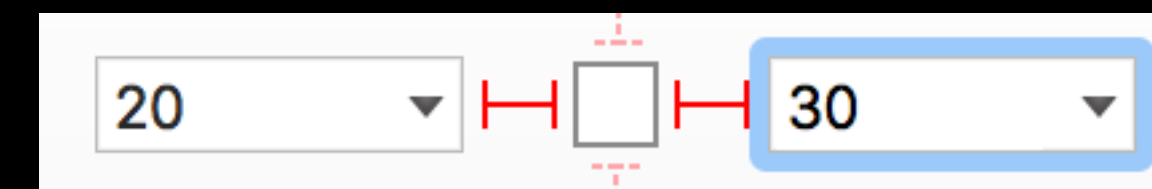
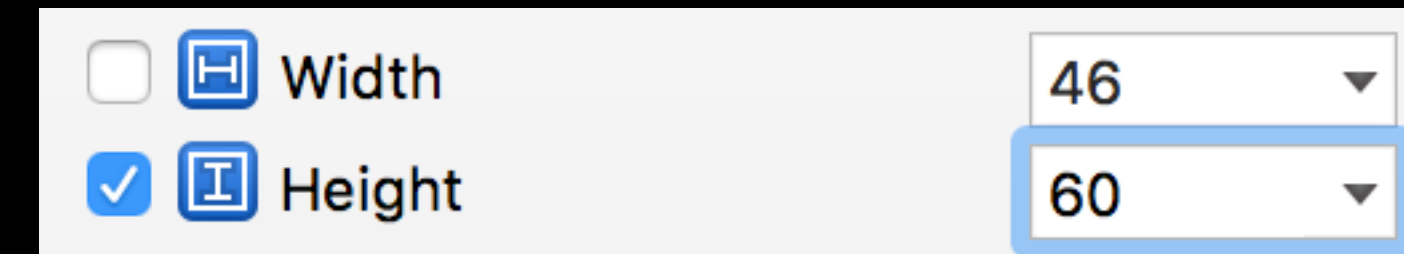
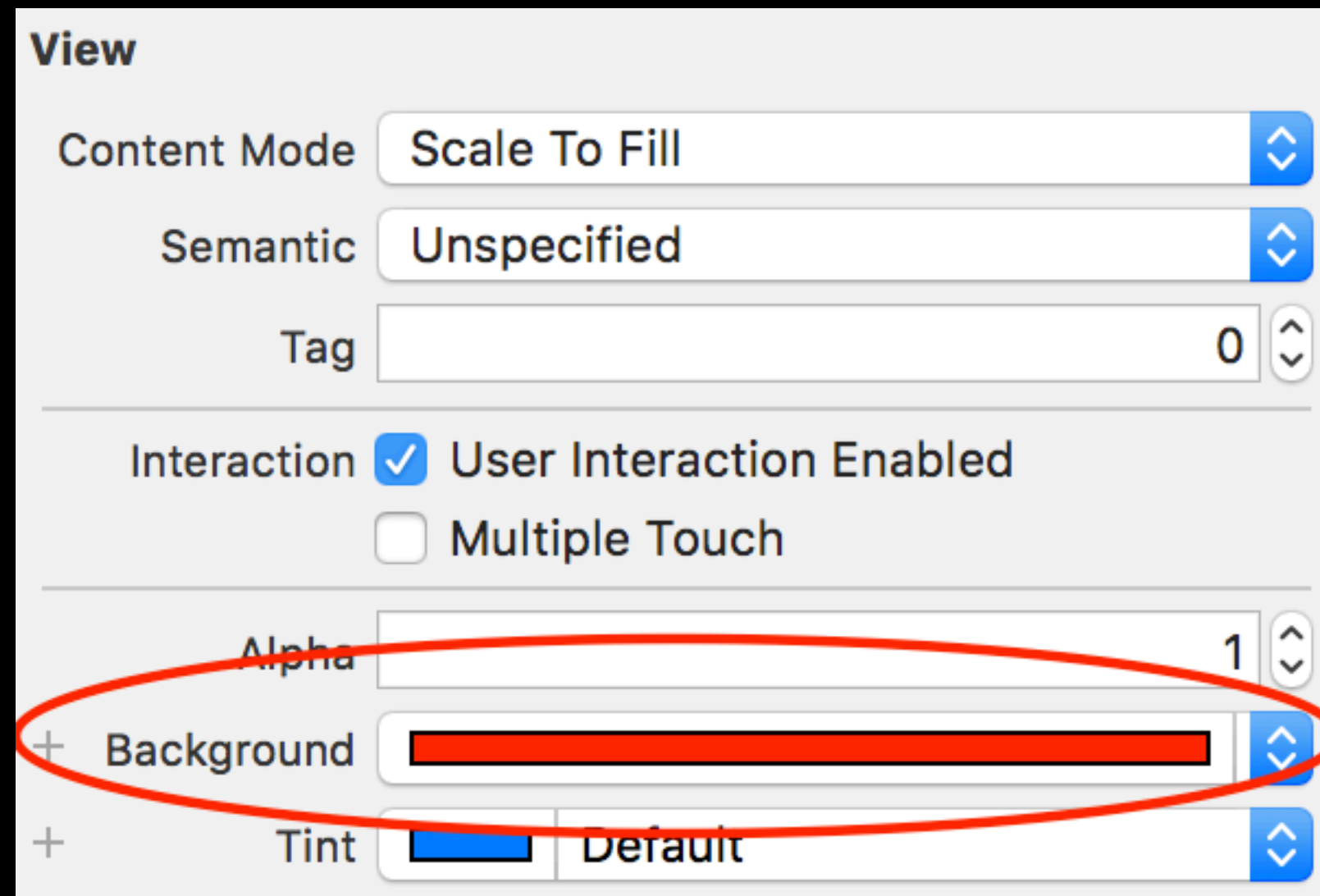
 Button.centerX = centerX

 Button.centerY = centerY



Create size constraints

Text





Resolve constraint issues


Text


[← Structure](#)[View Controller](#)

▼ **Conflicting Constraints**

 Button.centerX = centerX

 Button.leading = leadingMargin + 20

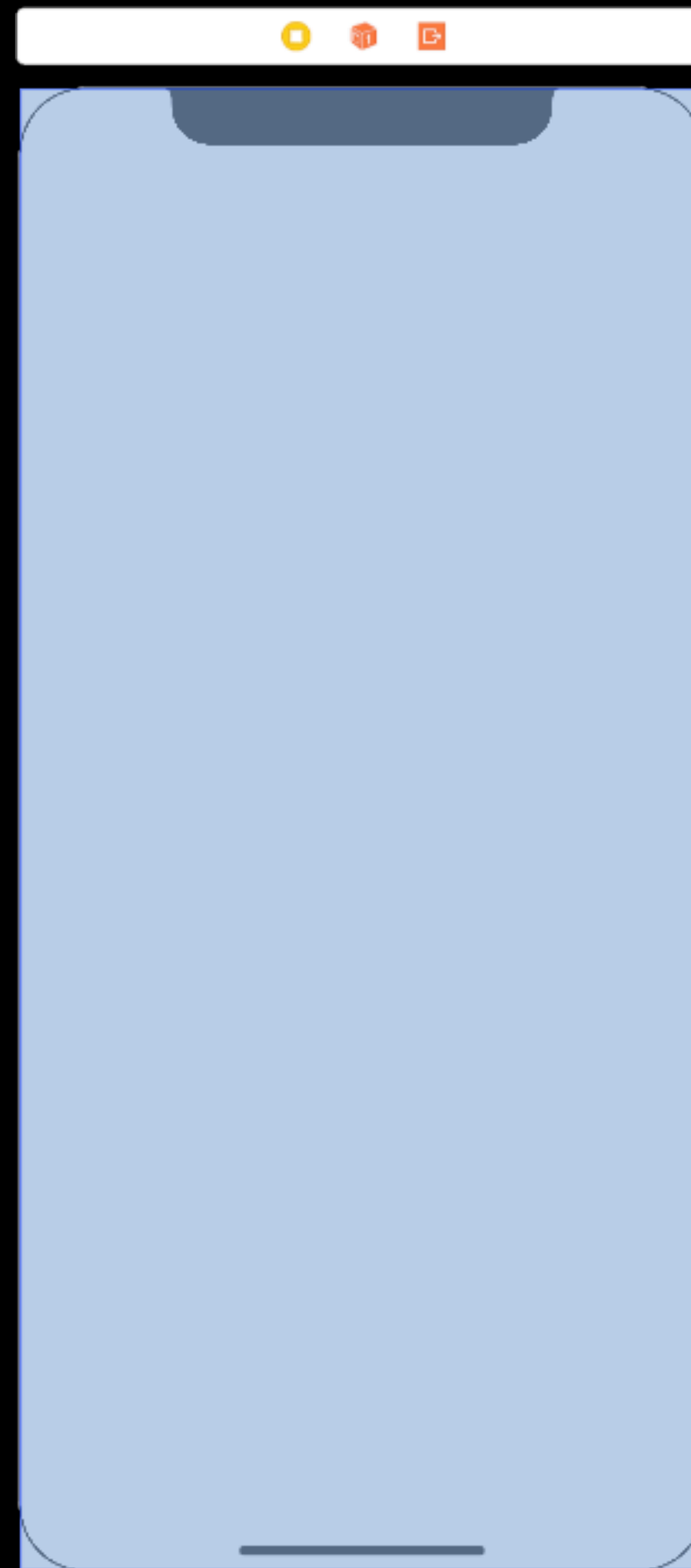
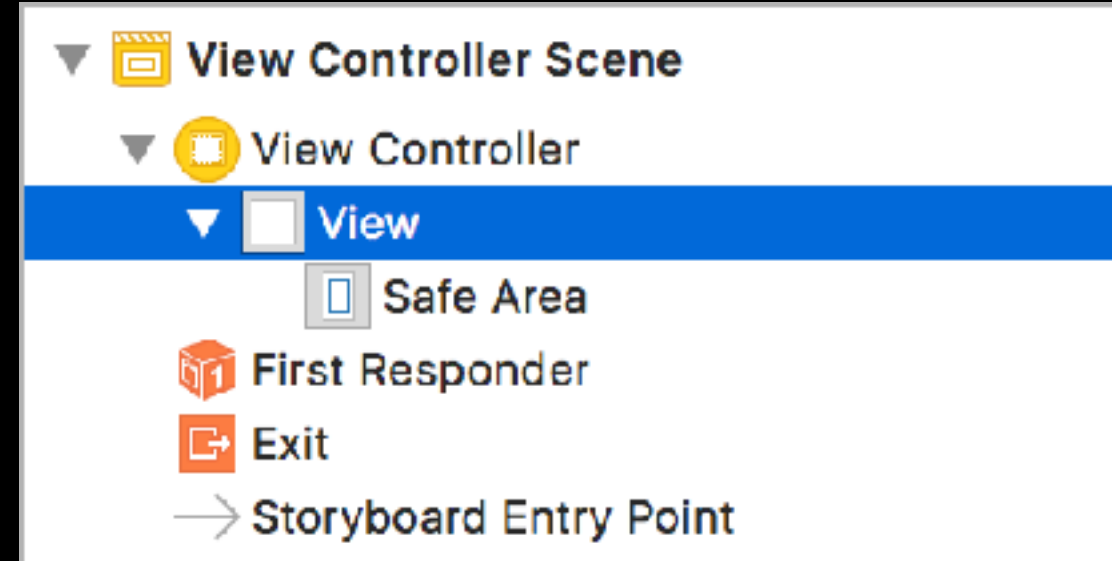
 trailingMargin = Button.trailing + 30



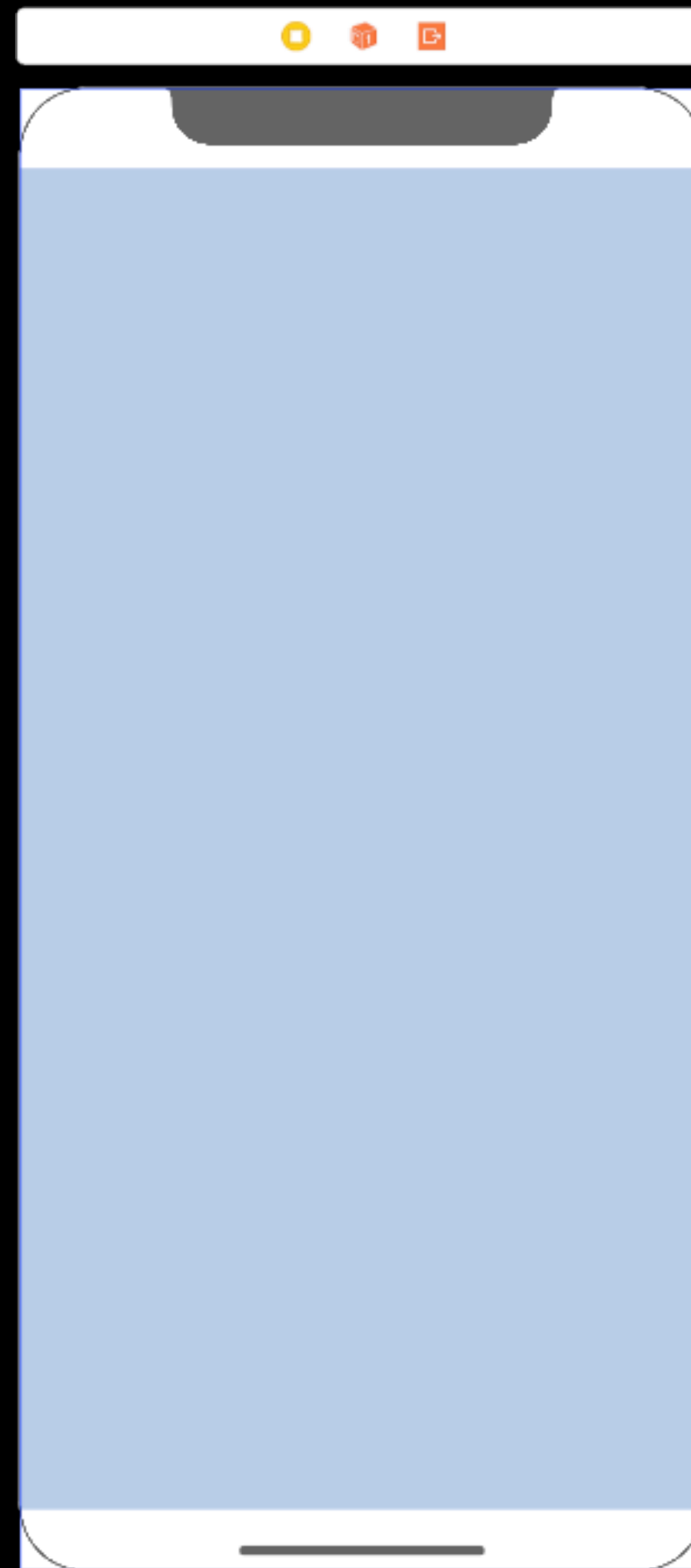
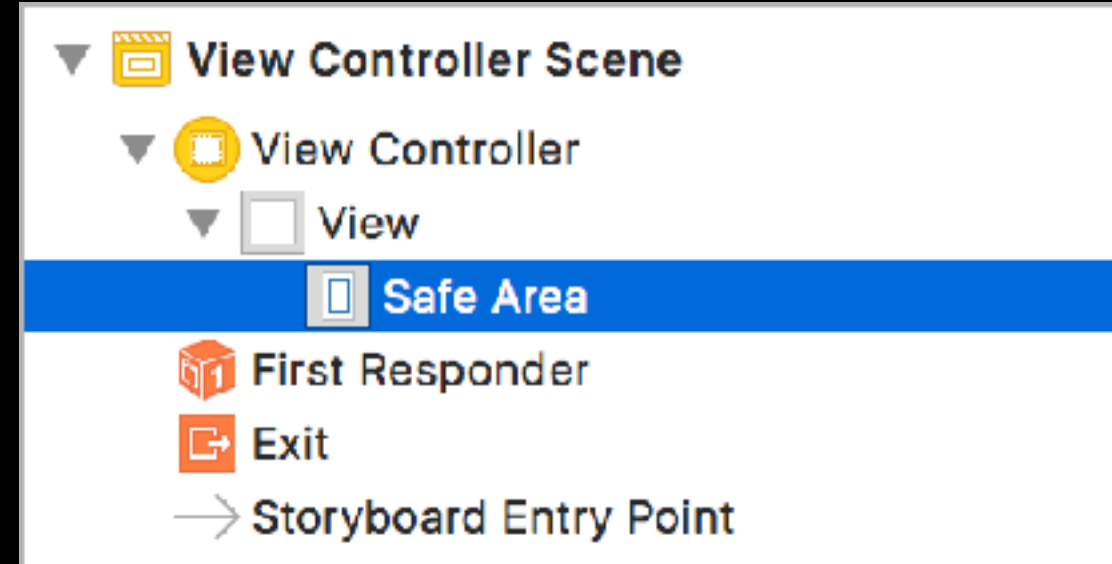
Align Center X to: [Superview](#)

[Edit](#)

Safe area layout guide

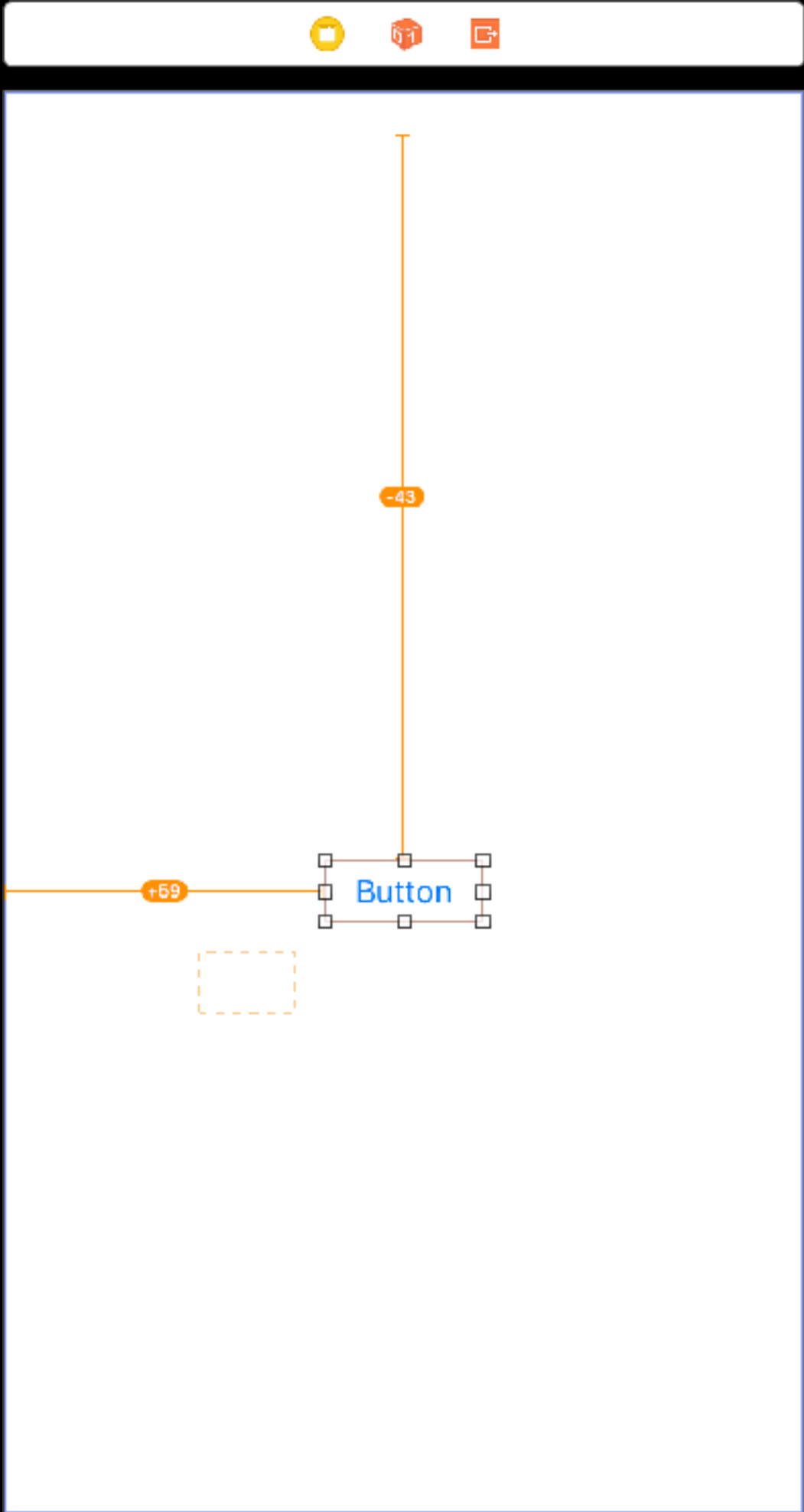


Safe area layout guide



Resolve constraint warnings

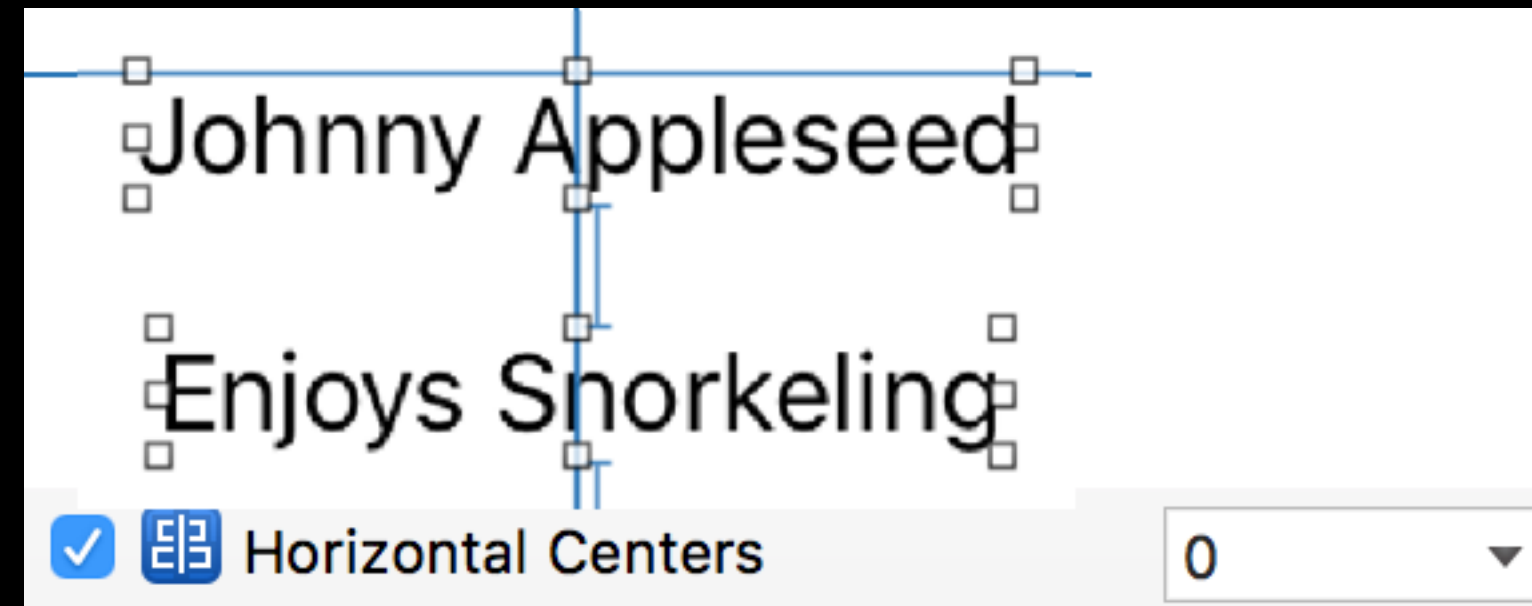
Text



▼ Misplaced Views

Button
Expected: x=91, y=403, width=46 ⚠
Actual: x=150, y=360, width=75

Constraints between siblings



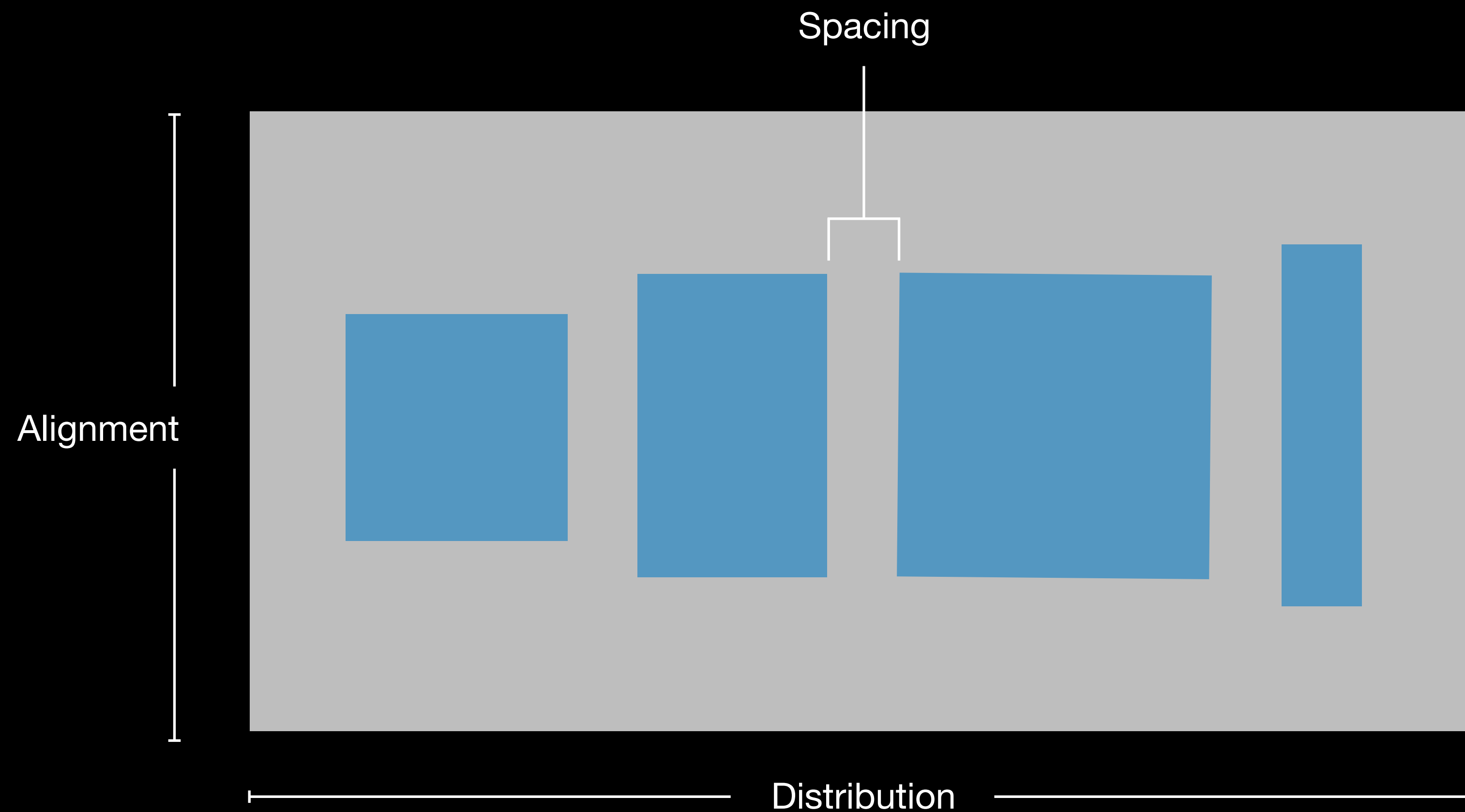
Stack views

Text



Stack views

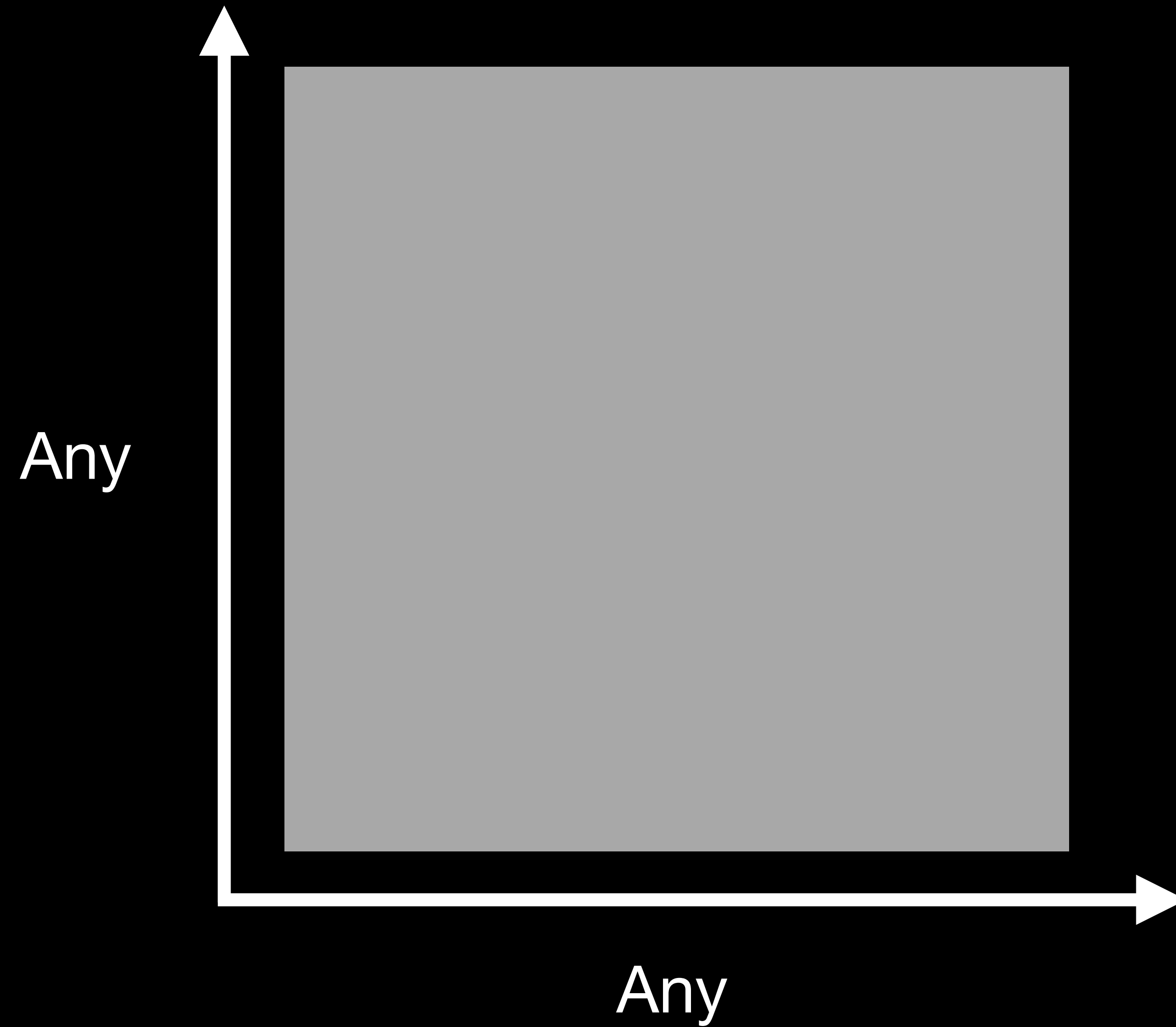
Stack view attributes



Size classes



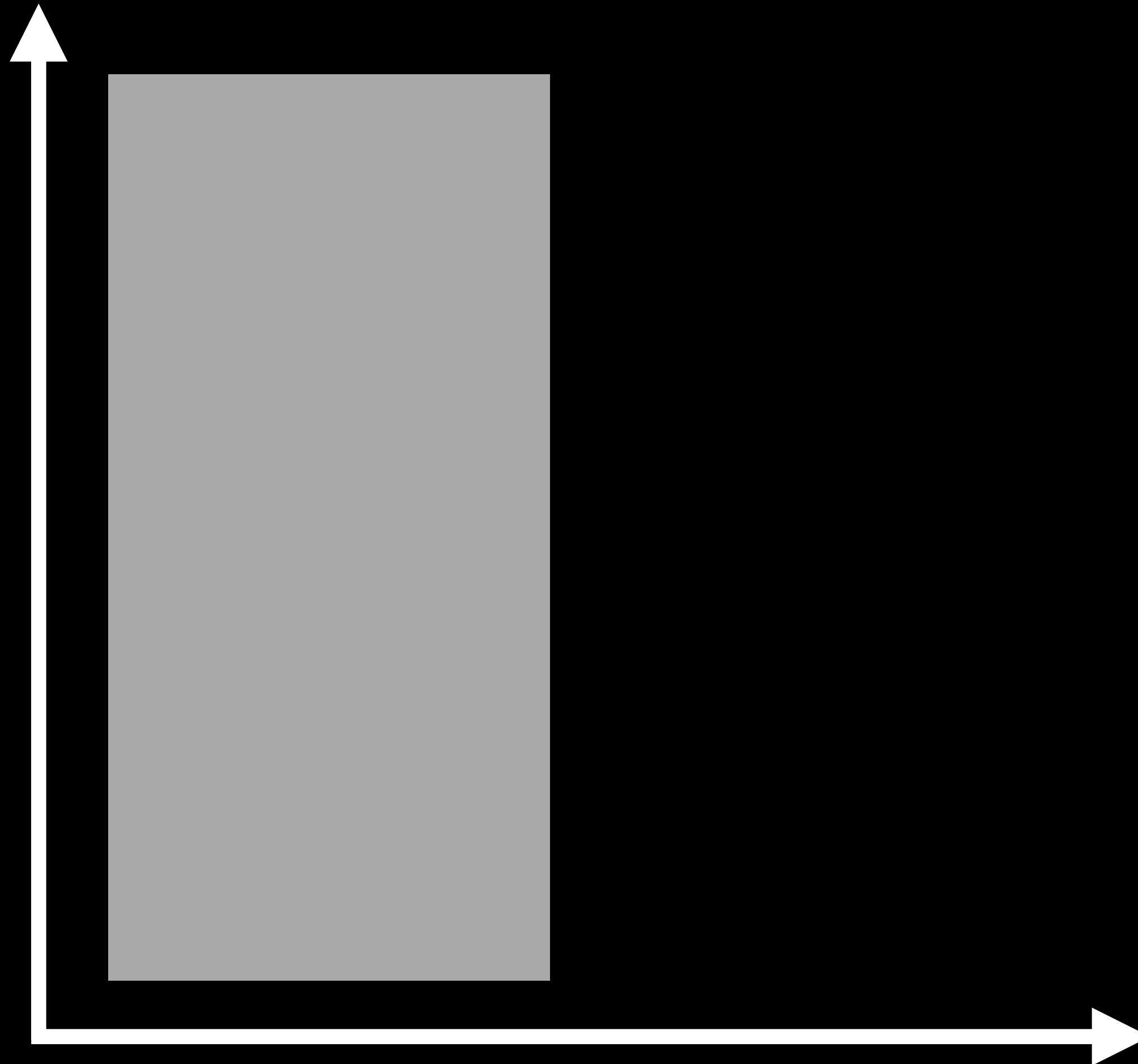
Size classes



Size classes

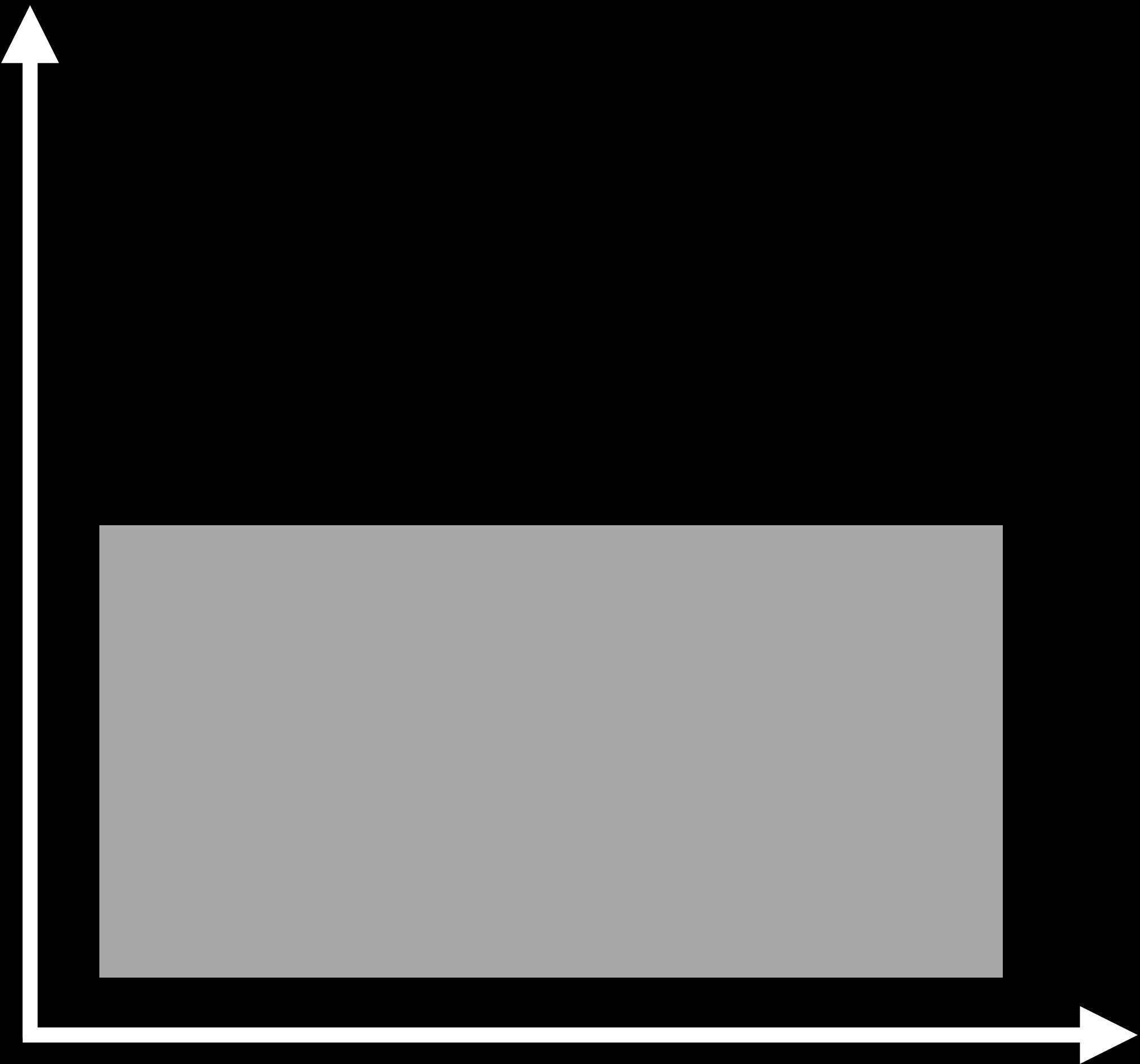
Regular

Compact



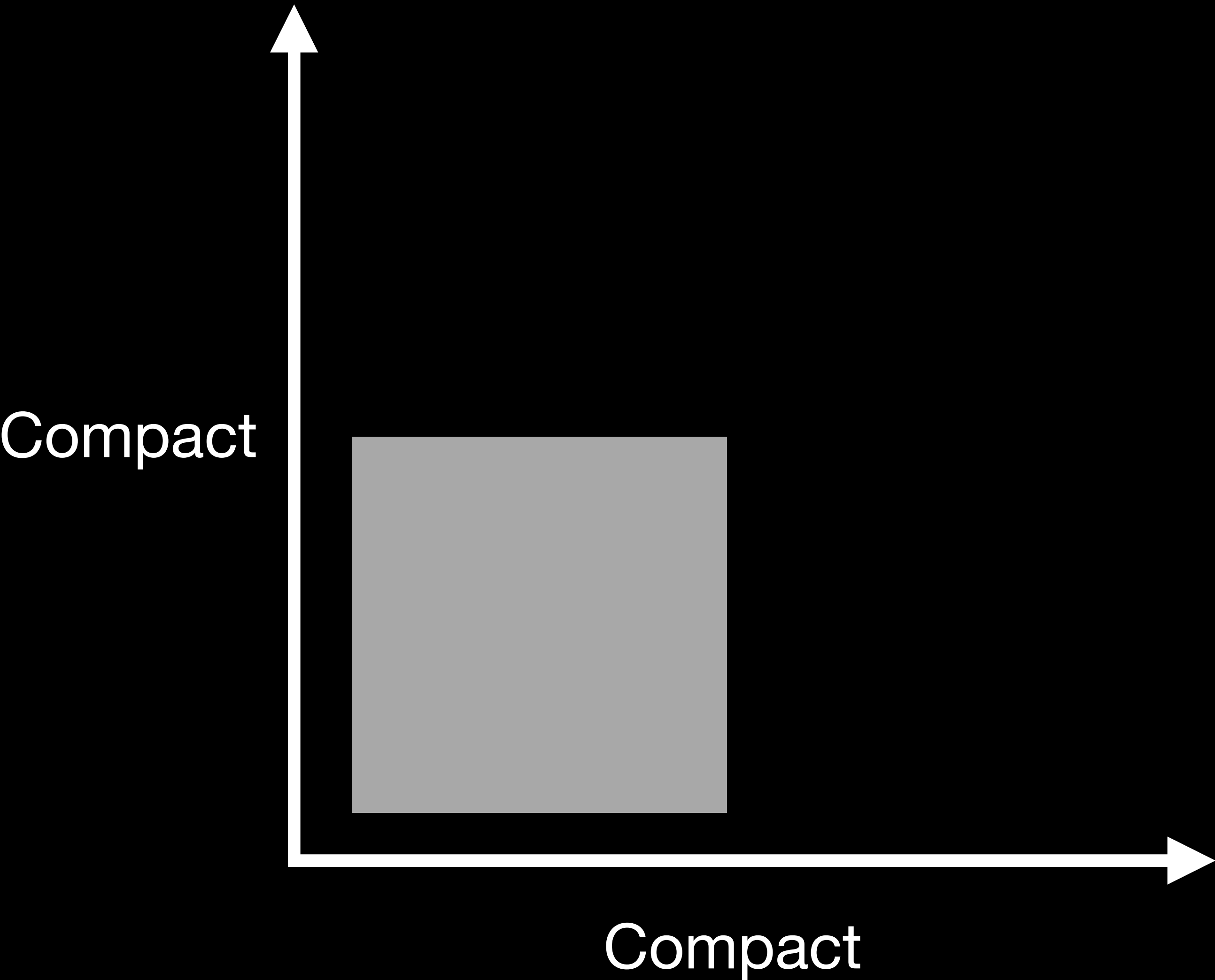
Size classes

Compact



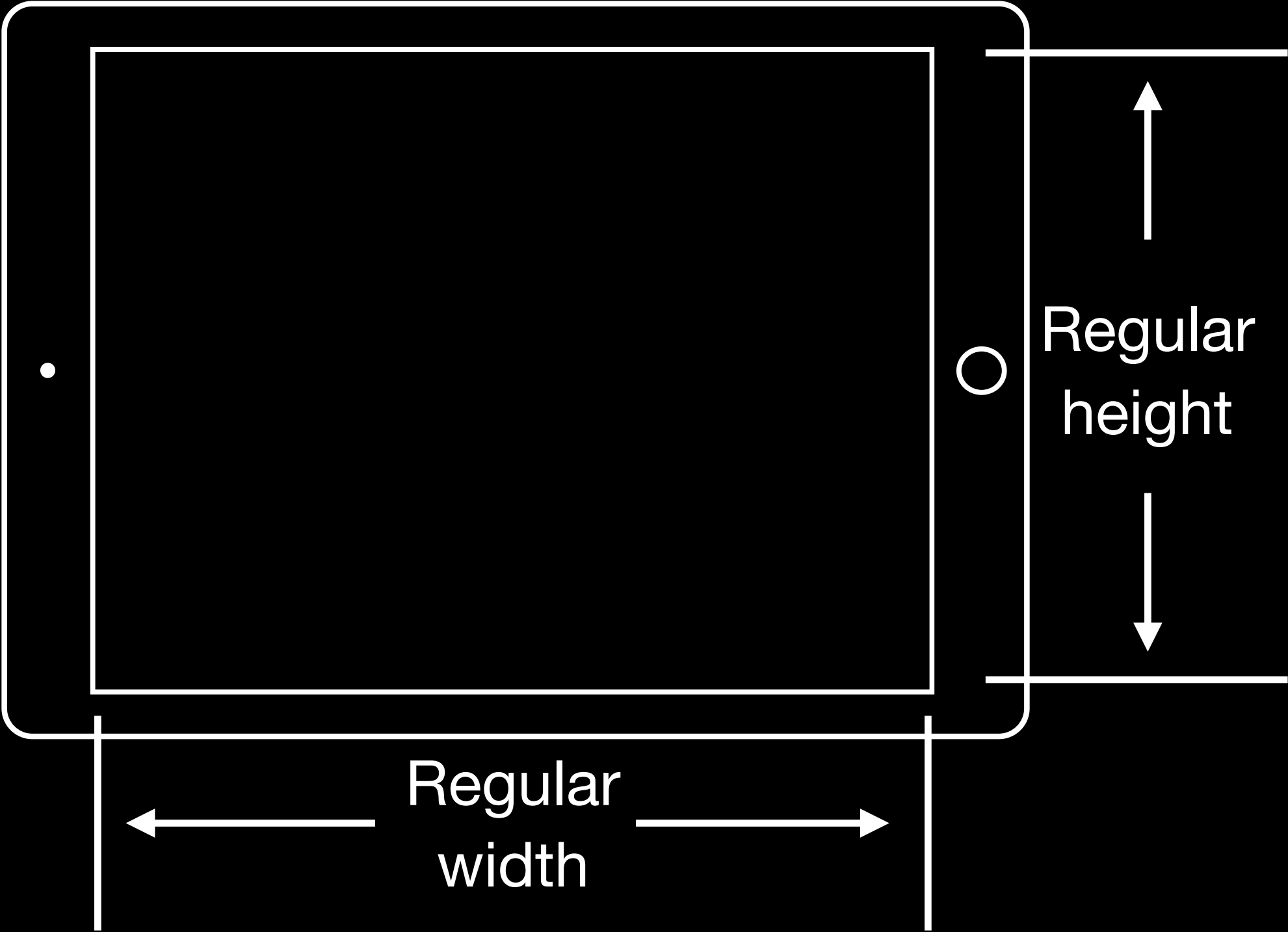
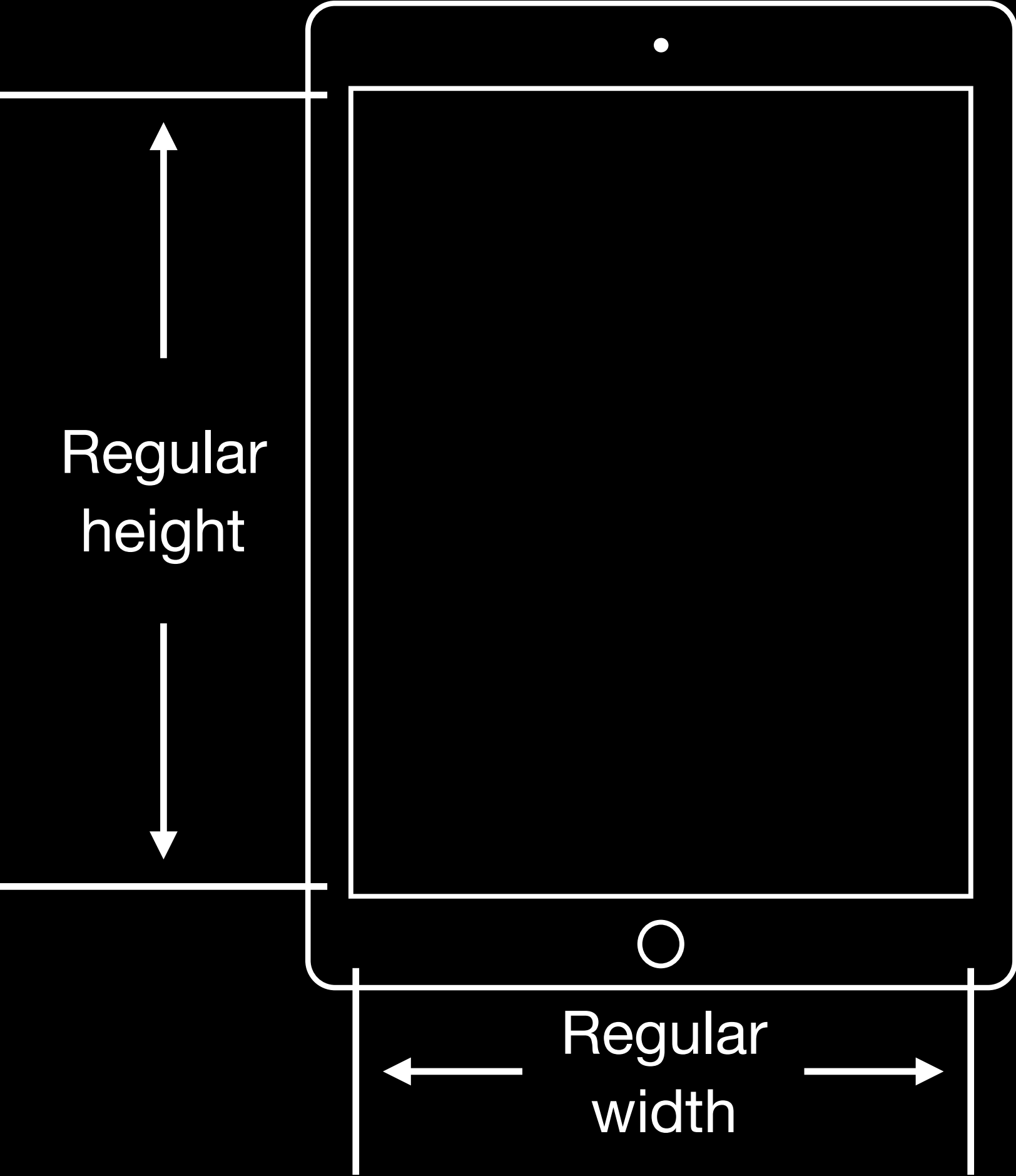
Regular

Size classes



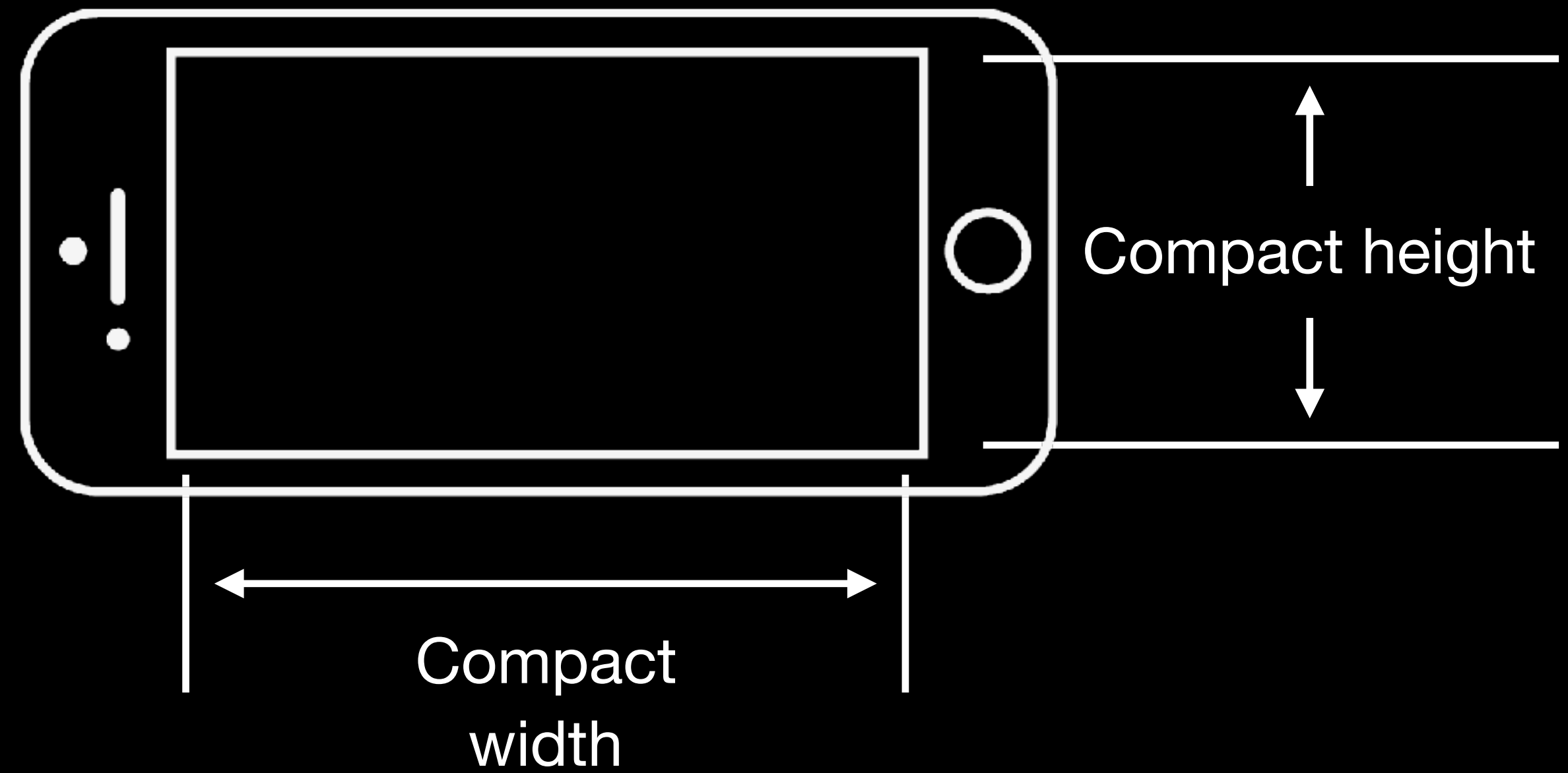
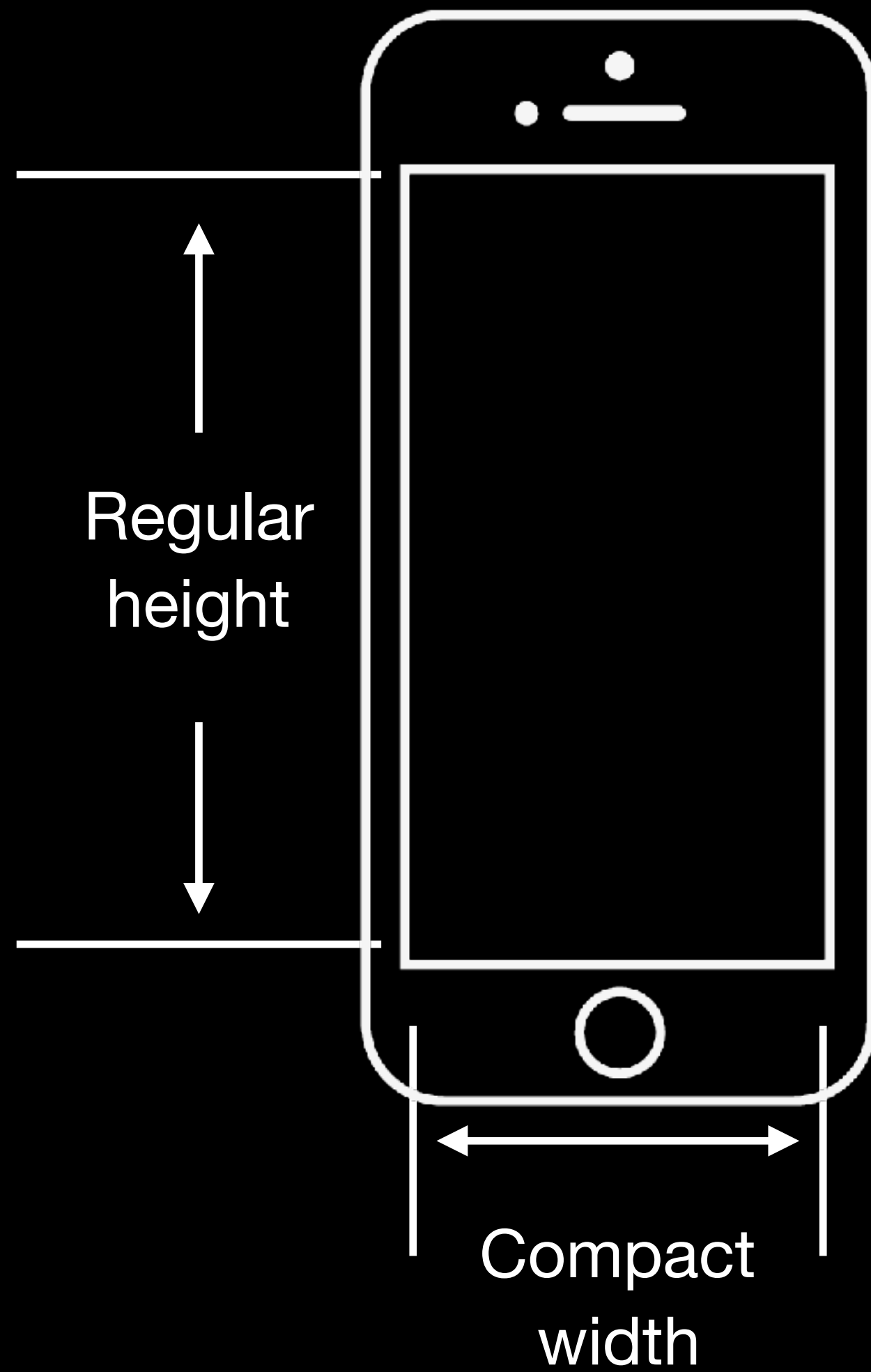
Size classes

iPad



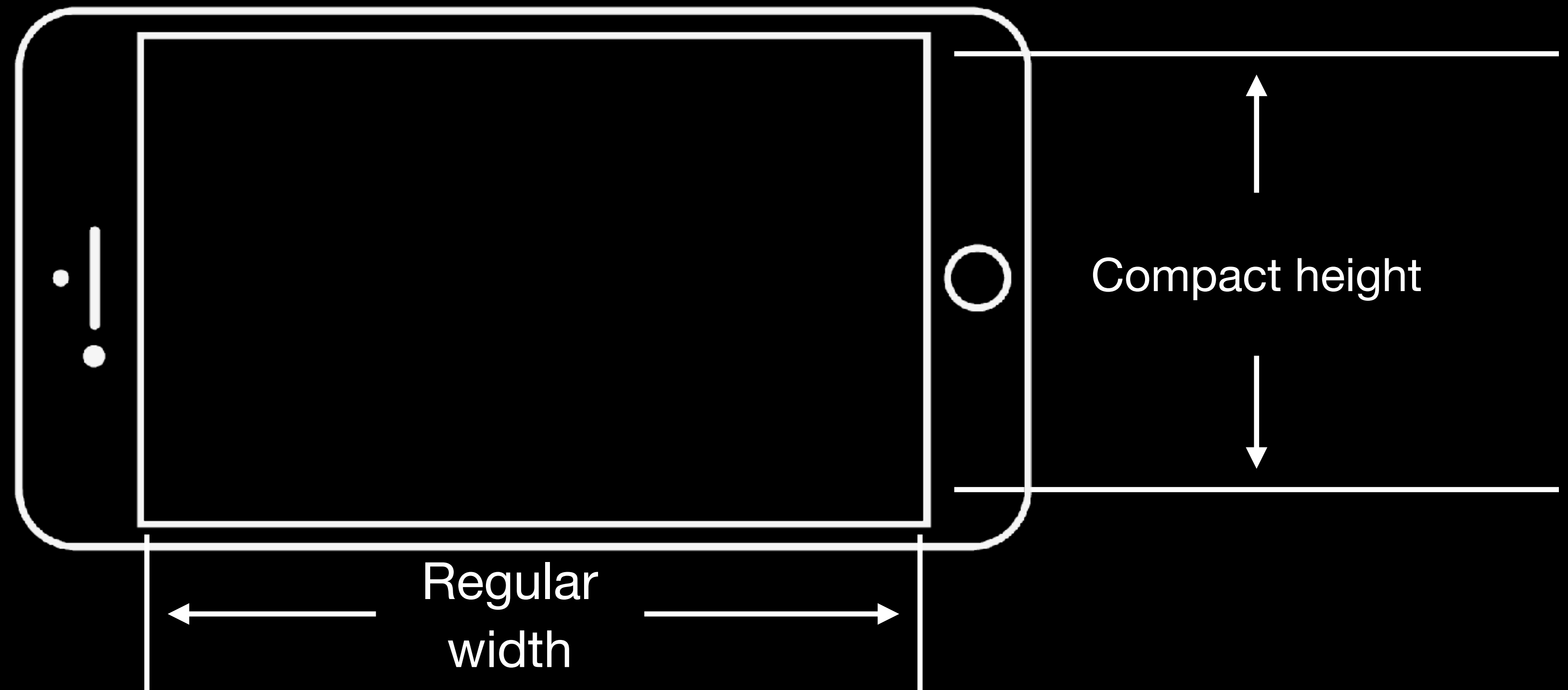
Size classes

iPhone



Size classes

iPhone 6 Plus, iPhone 7 Plus, and iPhone 8 Plus



Unit 2—Lesson 10

Auto Layout and Stack Views



Learn the fundamentals of Auto Layout for building precisely designed user interfaces.

Unit 2—Lesson 10

Lab: Calculator



Use view objects, constraints, and stack views to create a simple calculator that maintains its layout on all device sizes.



