

AUTO LAYOUT

PART II

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Lead iOS Instructor, General Assembly



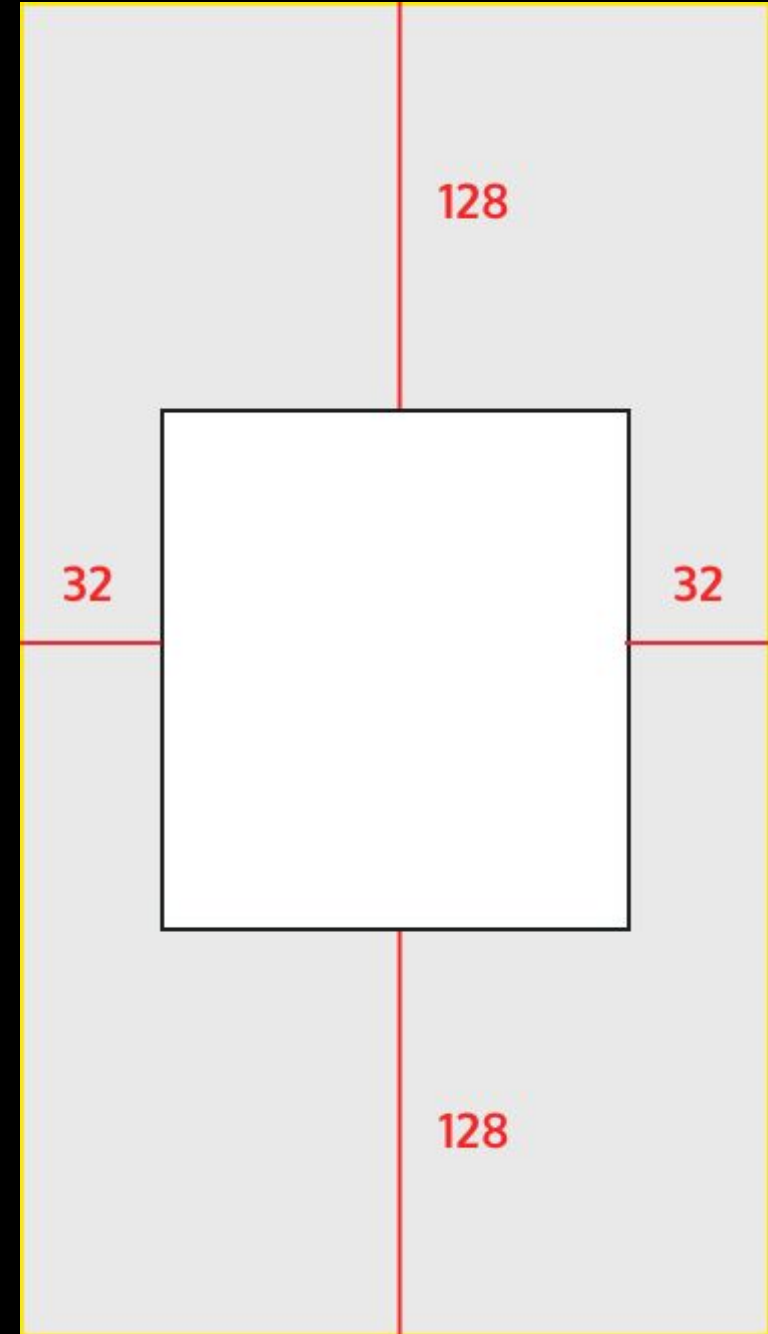
LESSON

LEARNING OBJECTIVES

- + **Apply** aspect-ratio constraints
- + **Apply** Leading, Trailing, Bottom, and Top Spacing constraints
- + **Apply** Horizontal Center, Vertical Center constraints
- + **Align** constraints with relative to each other

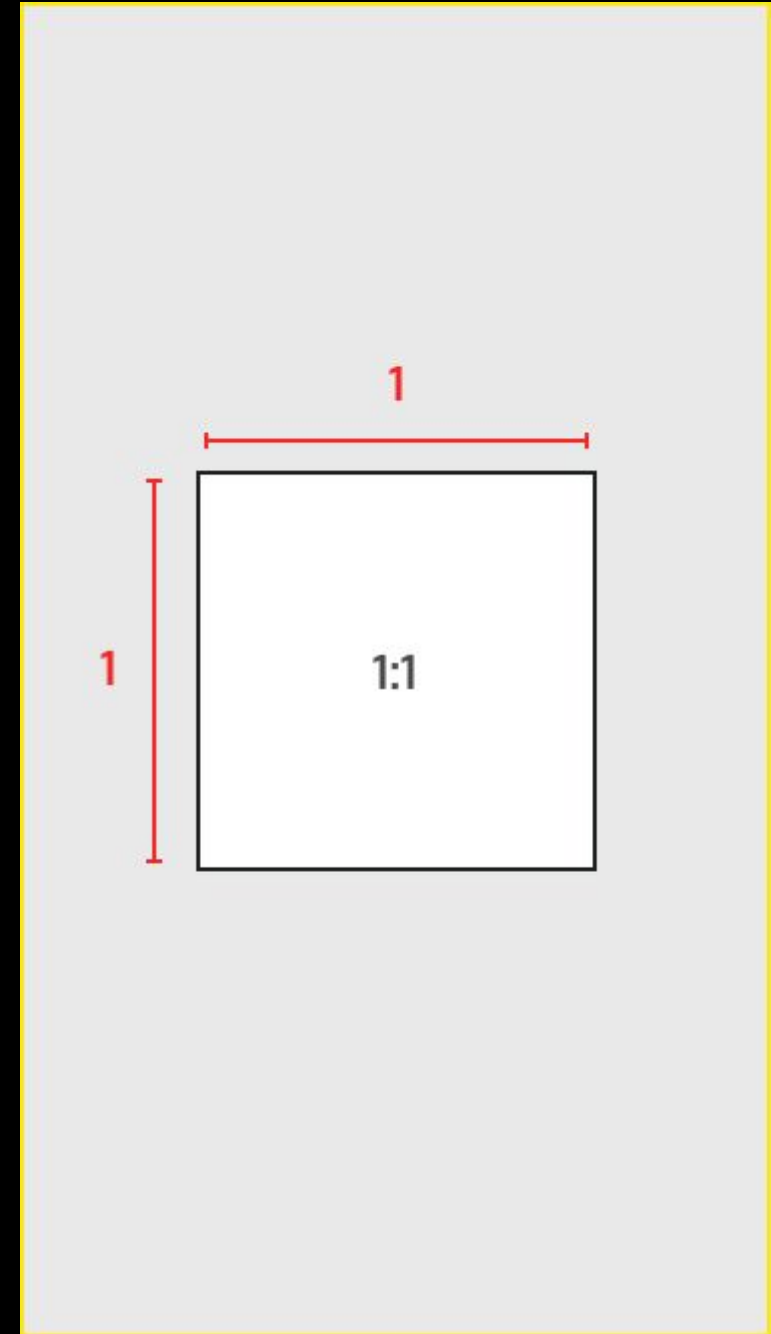
CONSTRAINTS

A CONSTRAINT
REPRESENTS A
RELATIONSHIP BETWEEN
ONE VIEW AND ANOTHER,
OR TO ITSELF.



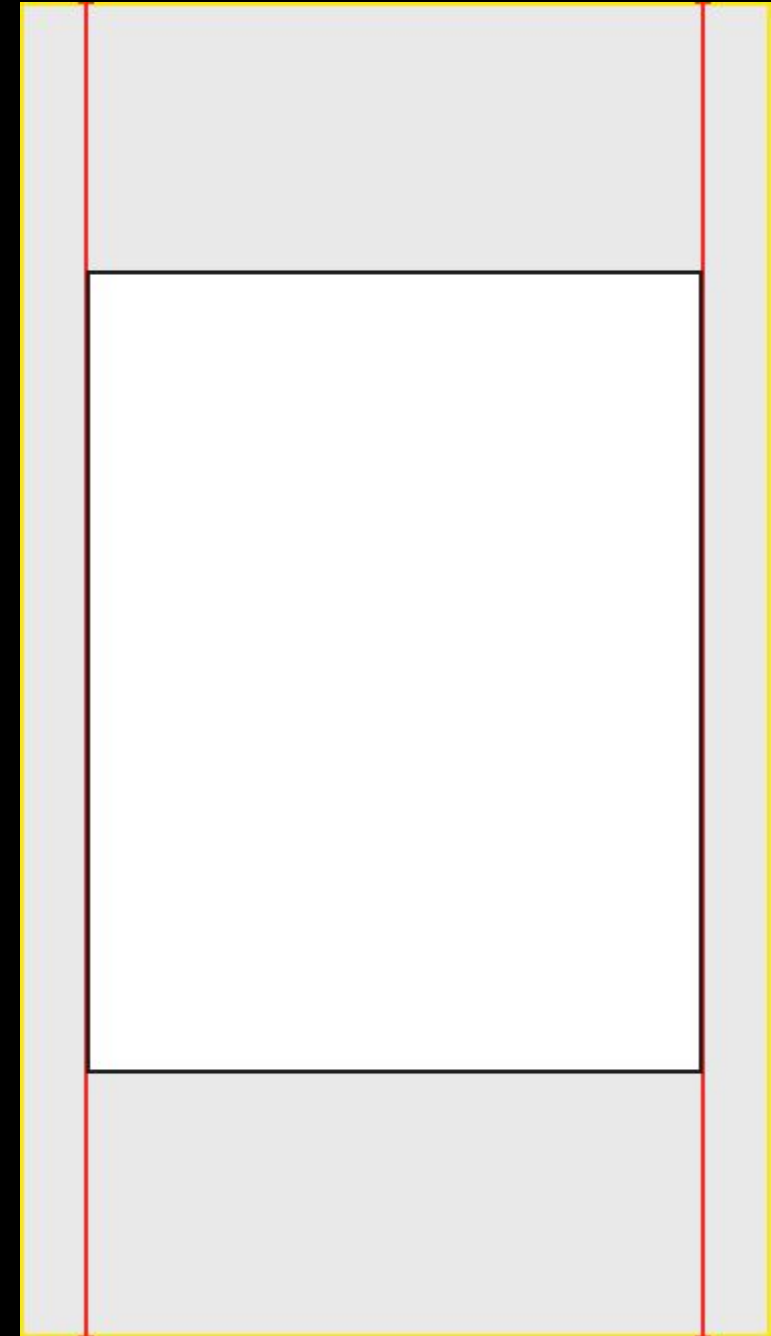
ASPECT-RATIO

ASPECT-RATIO REFERS TO THE **PROPORTION** OF A VIEW'S **WIDTH** TO ITS **HEIGHT**.



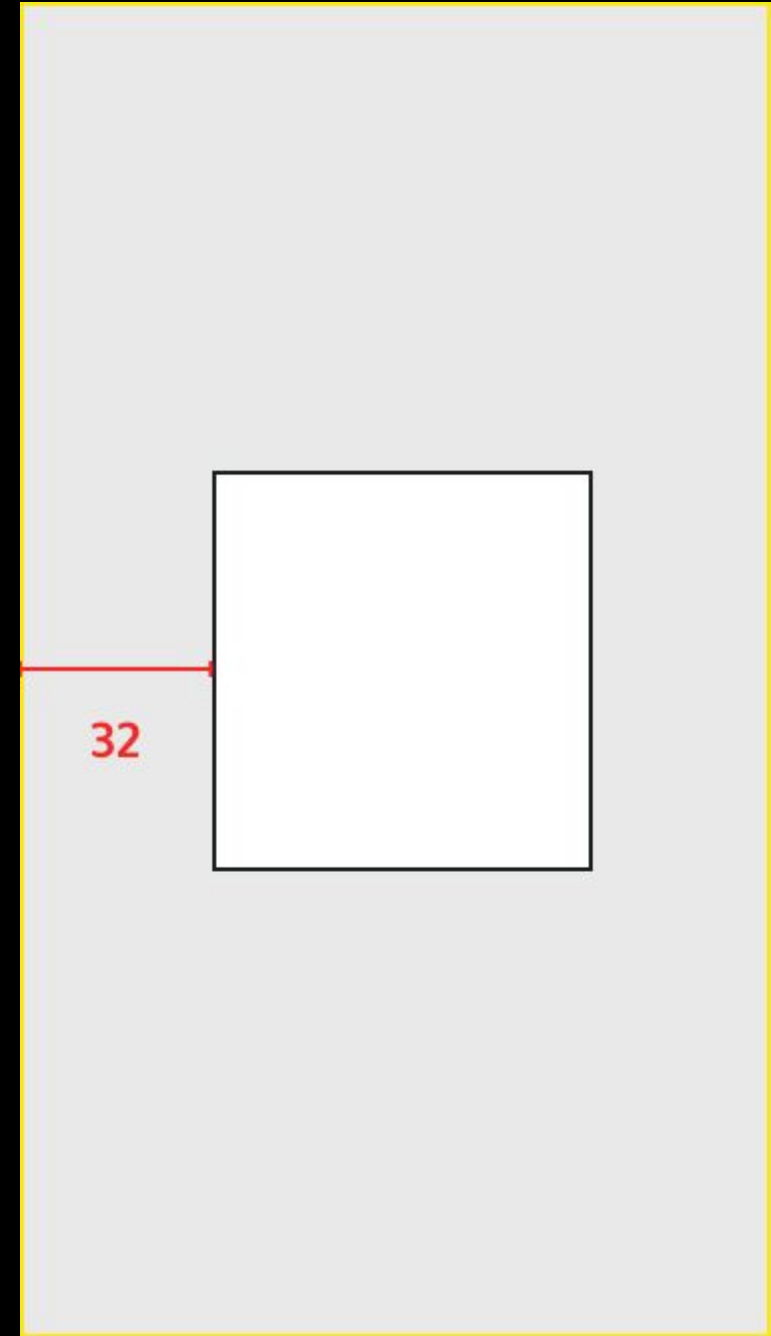
MARGIN

AUTO LAYOUT DEFINES MARGINS FOR EACH VIEW THAT DESCRIBE THE PREFERRED SPACING BETWEEN THE EDGE OF A VIEW AND ITS SUBVIEWS.



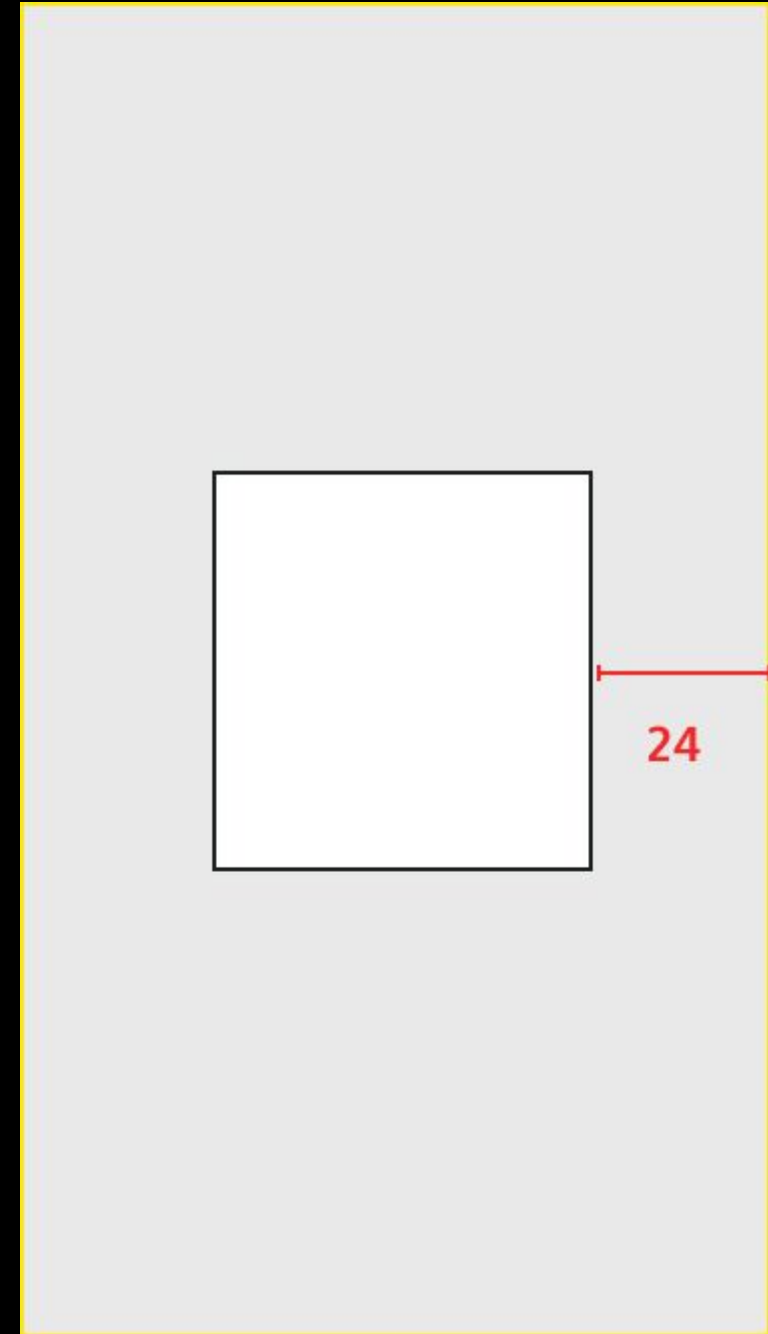
LEADING

LEADING IS SPACING TO
THE **LEFT SIDE OF A VIEW.**



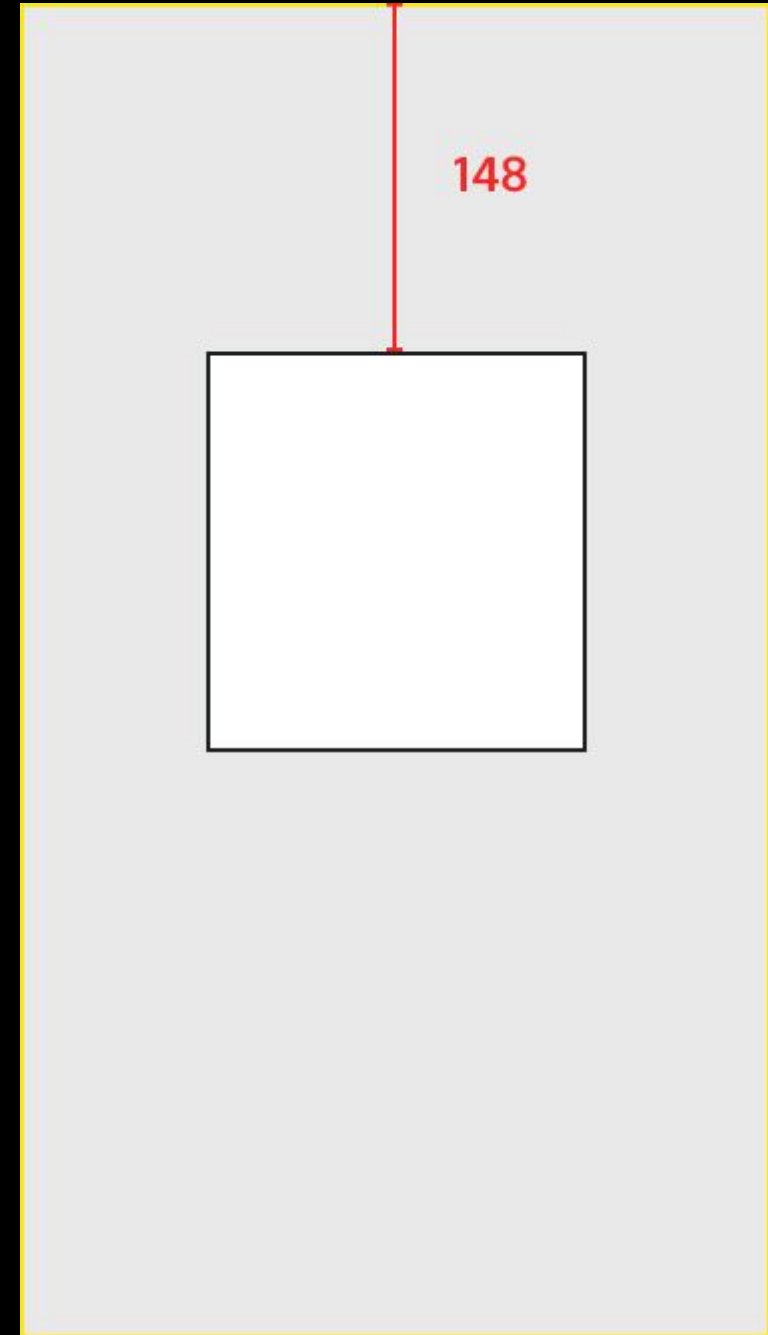
TRAILING

TRAILING IS SPACING TO
THE RIGHT SIDE OF A
VIEW.



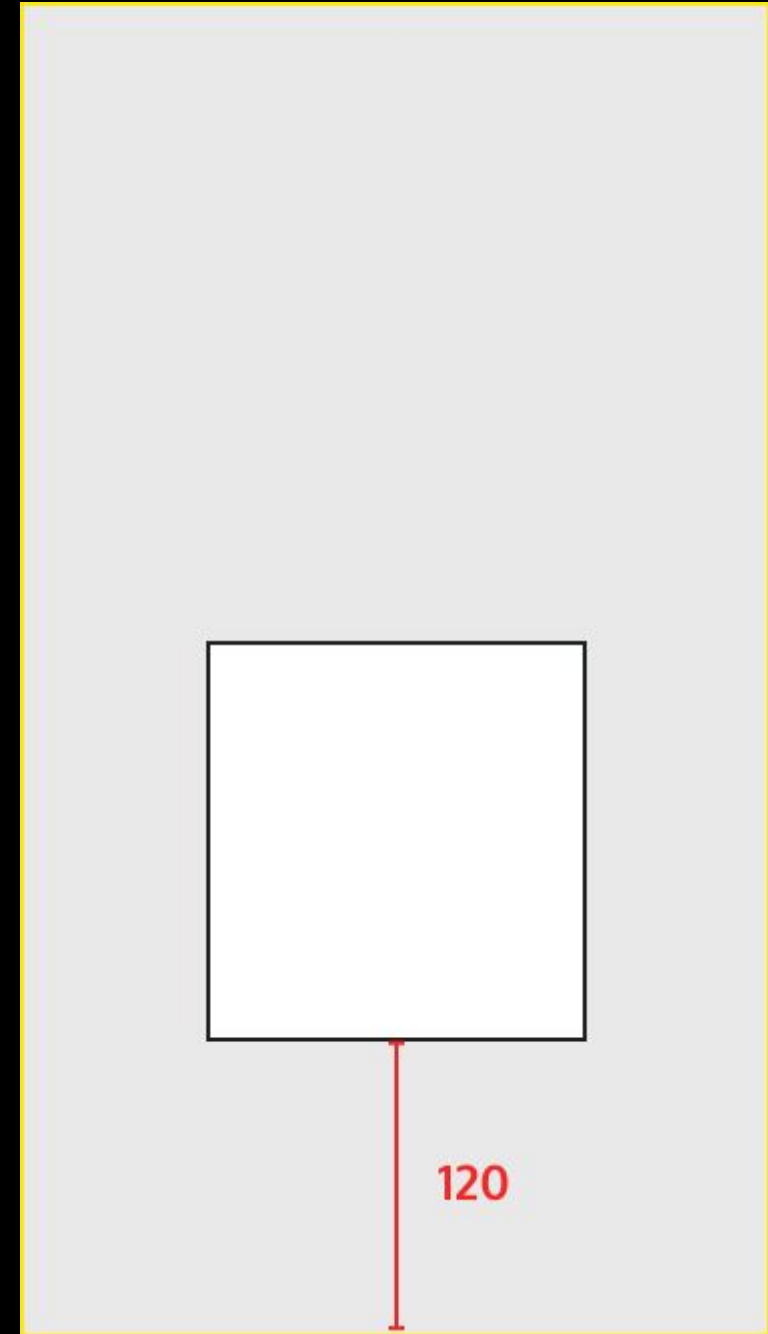
TOP

TOP IS SPACING TO THE
TOP SIDE OF A VIEW.



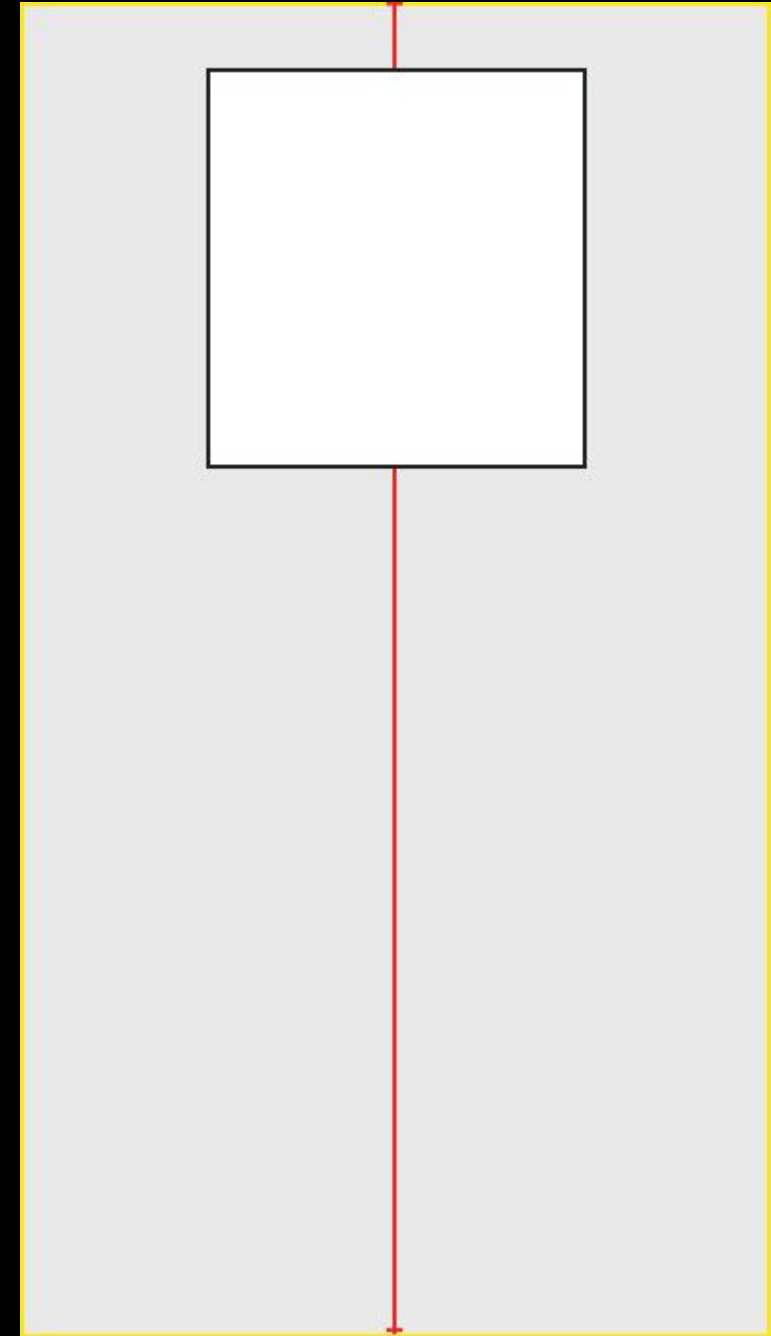
BOTTOM

BOTTOM IS SPACING TO
THE **BOTTOM SIDE OF A
VIEW.**



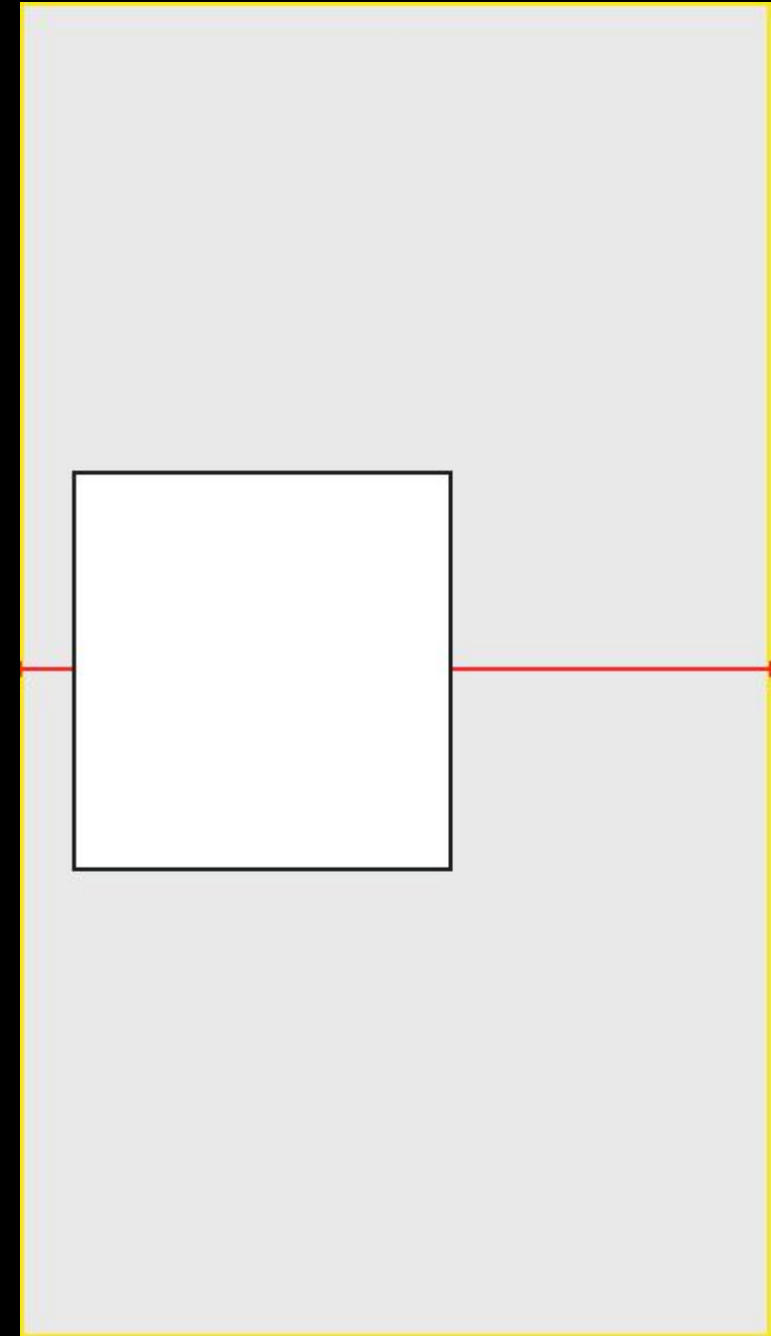
CENTER HORIZONTAL

CENTERS A VIEW ON ITS
X-AXIS.



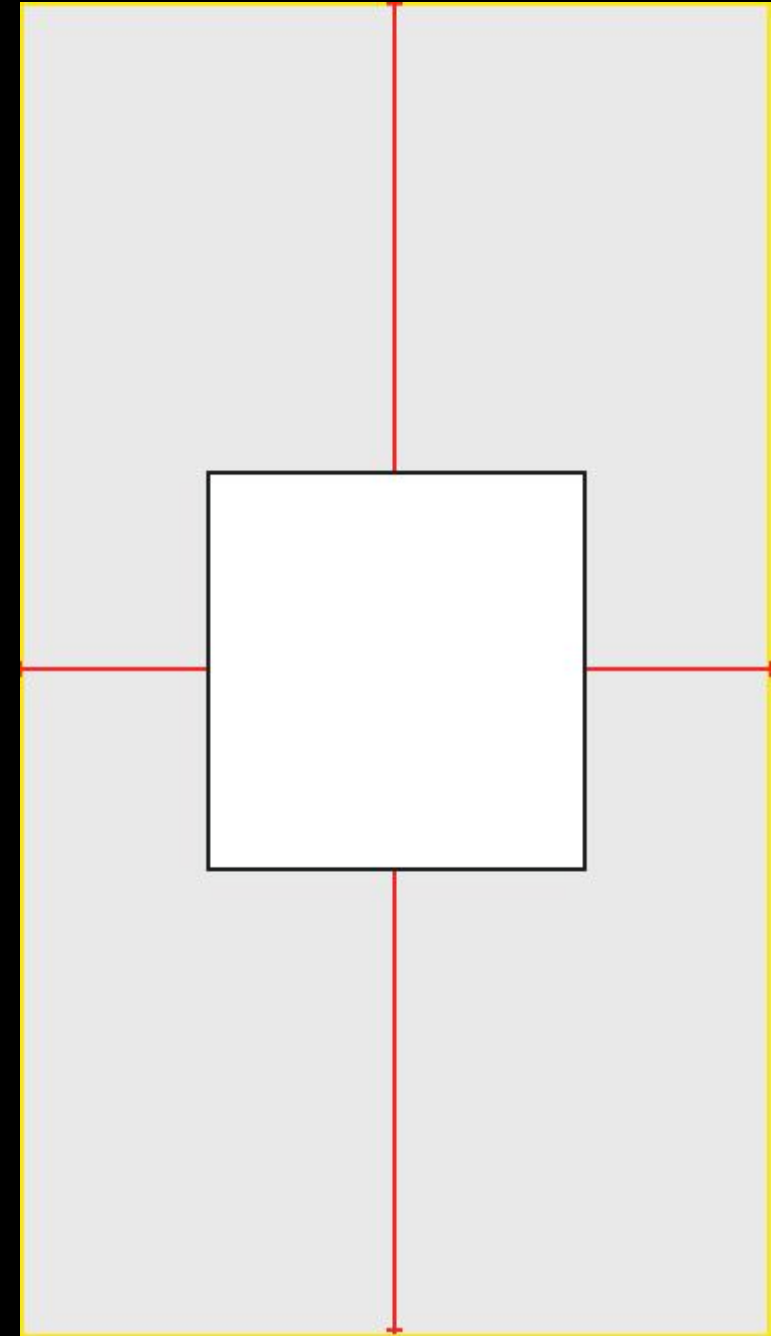
CENTER VERTICAL

**CENTERS A VIEW ON ITS
Y-AXIS.**



CENTER BOTH

**CENTERS A VIEW ON ITS
BOTH AXES.**






ACTIVITY: BREAK IT DOWN



2 mins

DIRECTIONS

On paper, describe what you see using Auto Layout Vocabulary

	Margaret
	Jana
	Maya

DEMO

FOLLOW-ALONG

- + Add a full-screen image
- + Make it take up the top half of the screen
- + Run it on a device in Portrait and Landscape

PRACTICE: RECREATE THIS



10 mins

DIRECTIONS

Using the same project,

- + Add a second image that takes up the bottom half of the screen
- + Add a Label that is horizontally centered, 24 pts from the bottom

DEMO

FOLLOW-ALONG

- + Create a new screen and add an Image
- + Center the image Vertically and Horizontally
- + Add a another view, centering it vertically and horizontally to the image
- + Move the first View and update-frames, to demonstrate the effect of Autolayout
- + Add another view that hangs from the bottom of the original view, horizontally centered to the original view

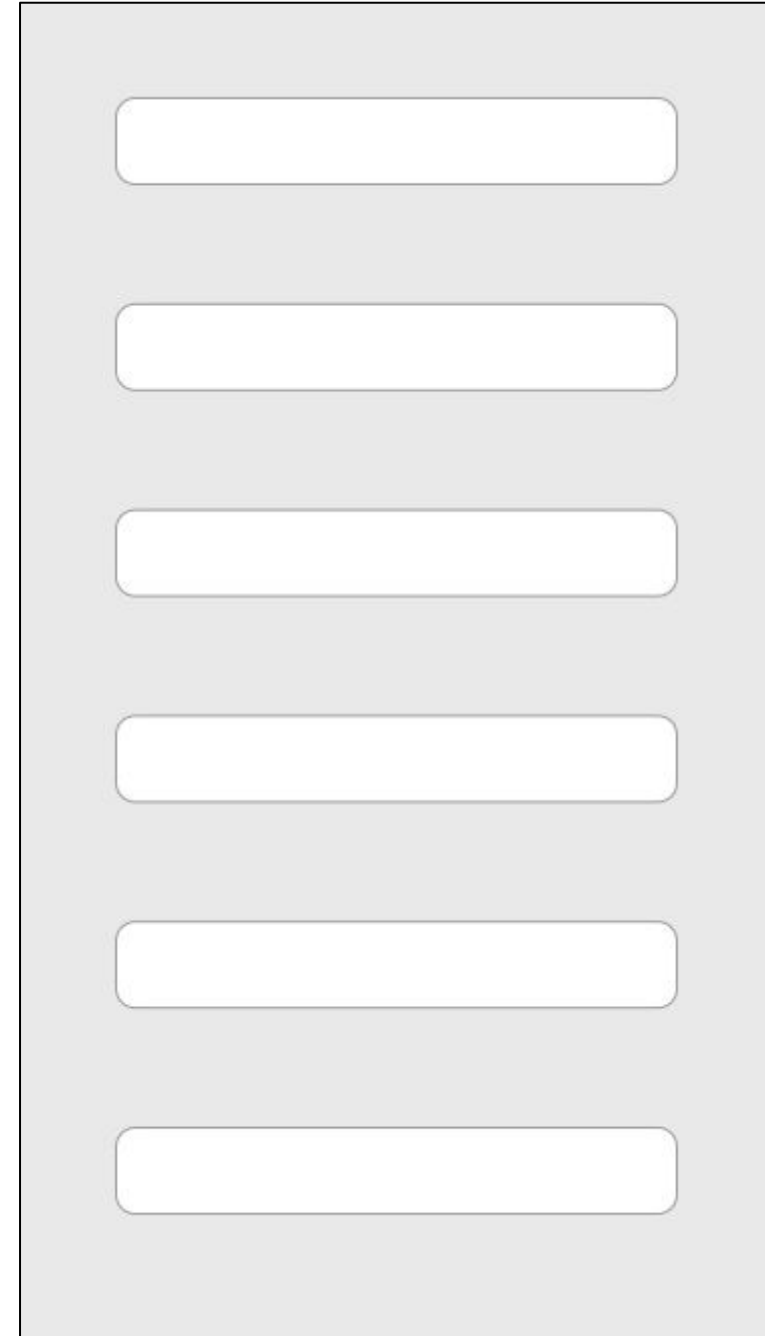
PRACTICE: RECREATE THIS

CODE

5 mins

DIRECTIONS

Use Auto Layout to create this interface of Text Fields.

A vertical stack of six empty text input fields, each with rounded corners and a thin gray border, set against a light gray background. The fields are arranged in a single column, one above the other, with consistent spacing between them.

PRACTICE: RECREATE THIS

CODE

5 mins

DIRECTIONS

Use Auto Layout to create this interface



Sara Sims



Emily Chavez



Teresa Watson

CONCLUSION

AUTO LAYOUT IS A LANGUAGE USED TO COMMUNICATE YOUR APP'S LAYOUT TO THE SYSTEM.

BEST PRACTICES

ALWAYS USE AUTO LAYOUTS

BEST PRACTICES

AVOID HARD-CODING

THANKS!

WELLINGTON MORENO

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- + Email: **wellington.moreno@ga.co**

FOR INSTRUCTOR PURPOSES ONLY

MATERIALS

- + [Lab](#)
- + [Lesson Plan](#)
- + Lesson Starter Code