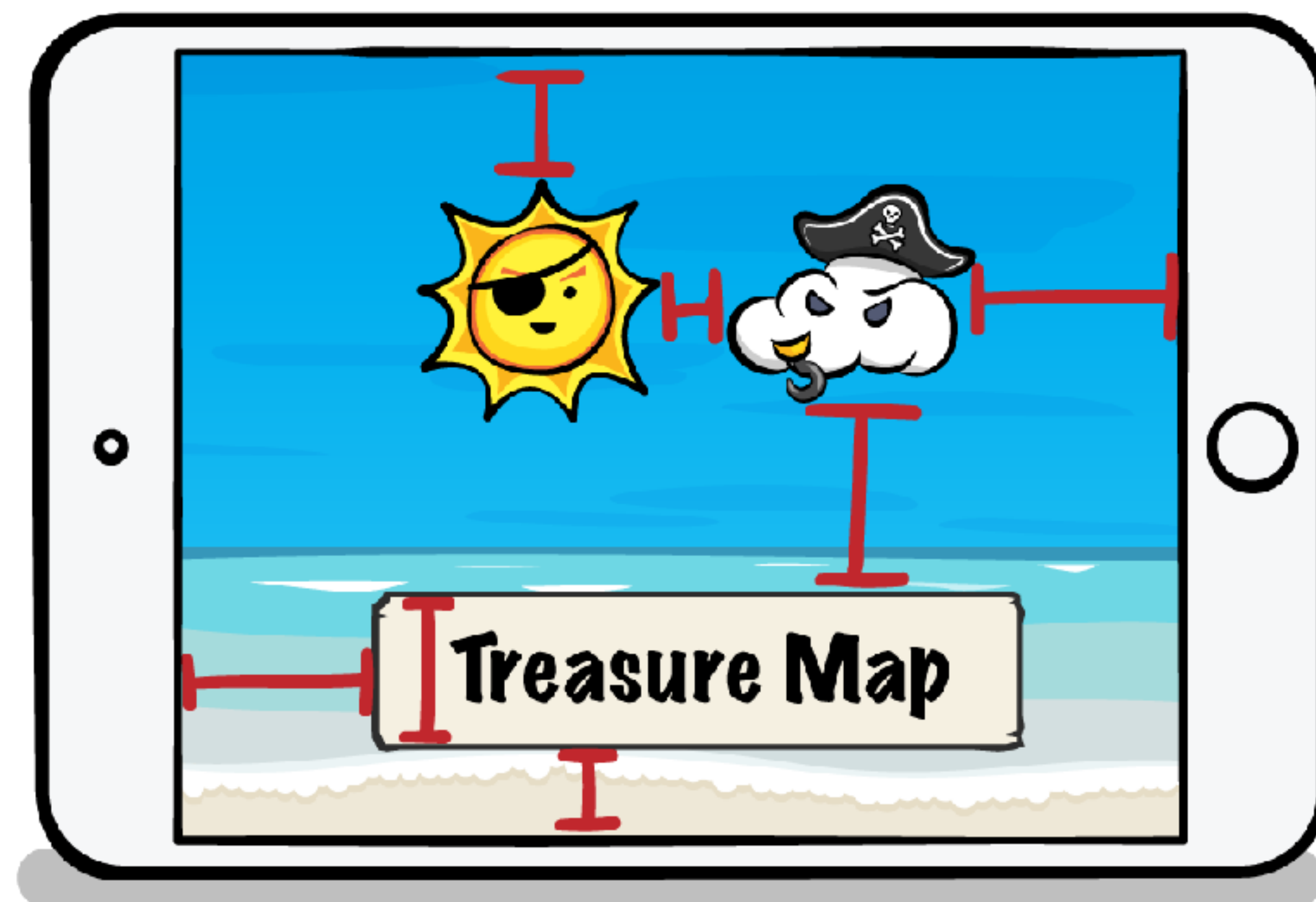


MASTERING

AUTO LAYOUT



PART 5: VISUAL FORMAT LANGUAGE

WHY?

```
leftButton.leadingAnchor.constraint(equalTo: margins.leadingAnchor) active = true  
let views = ["leftButton": leftButton, "rightButton": rightButton]  
let metrics = ["edgeGap": 20]  
NSLayoutConstraint.activate(NSLayoutConstraint.constraints(withVisualFormat:  
    "H: |[leftButton]-[rightButton(==leftButton)]-|",  
    options: .alignAllBottom, metrics: nil, views: views))  
NSLayoutConstraint.activate(NSLayoutConstraint.constraints(withVisualFormat:  
    "V: [rightButton]-(edgeGap)-|", options: [], metrics: metrics, views: views))
```

VISUAL FORMAT LANGUAGE

“ <orientation>: ? <superview><connection> ? [<view>]
(<connection><view>) * <connection><superview> ? ”

```
H: |-[find]-[findNext(100@500)]-[findField(>=20)]-|
```

H:,V: - horizontal, vertical

<=,>= - less than, greater than

| - superview

@ - priority

- - standard space

== - equal width

? - Not Required

***** - May appear 0 or more times

OTHER PARAMETERS

```
NSLayoutConstraint.constraints(withVisualFormat: "V: |-20-[label]-[textField]", options: [], metrics: metrics, views: views)
```

- | | | |
|--------------------|--------------------------|-------------------------------|
| ⚙️ alignAllLeft | ⚙️ alignAllTrailing | ⚙️ directionLeadingToTrailing |
| ⚙️ alignAllRight | ⚙️ alignAllCenterX | ⚙️ directionLeftToRight |
| ⚙️ alignAllTop | ⚙️ alignAllCenterY | ⚙️ directionRightToLeft |
| ⚙️ alignAllBottom | ⚙️ alignAllLastBaseline | |
| ⚙️ alignAllLeading | ⚙️ alignAllFirstBaseline | |



METRICS AND VIEWS

```
let metrics = ["topGap": 20, "edgeGap": 10]
let views = ["leftButton": leftButton, "rightButton": rightButton]
```

```
NSLayoutConstraint.constraints(withVisualFormat: "V: |-topGap-[rightButton]",
options: [], metrics: metrics, views: views)
```

```
NSLayoutConstraint.constraints(withVisualFormat: "H: |-edgeGap-[leftButton]",
options: [], metrics: metrics, views: views)
```



CHALLENGE TIME!

