

# Updating Your App For iOS 11

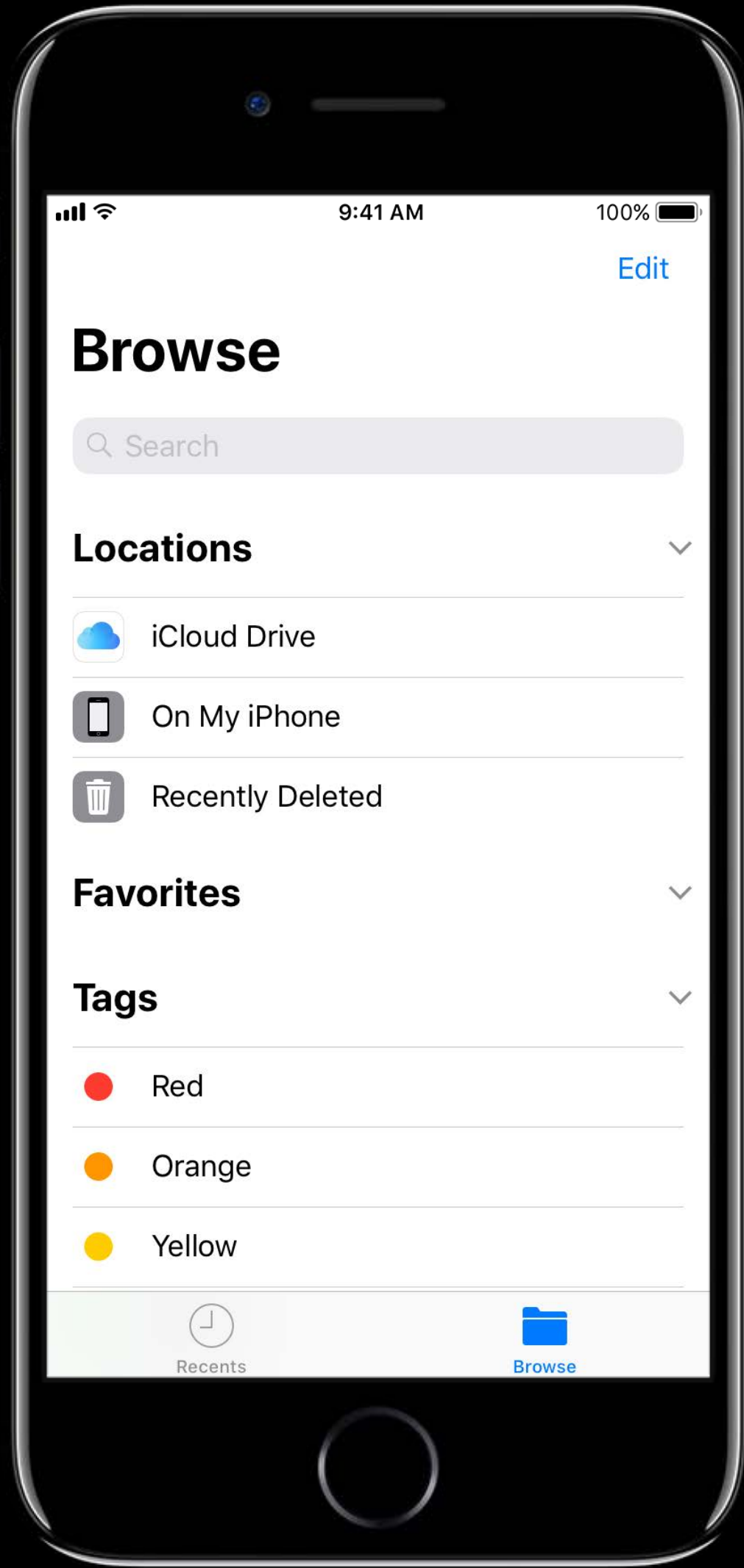
Session 204

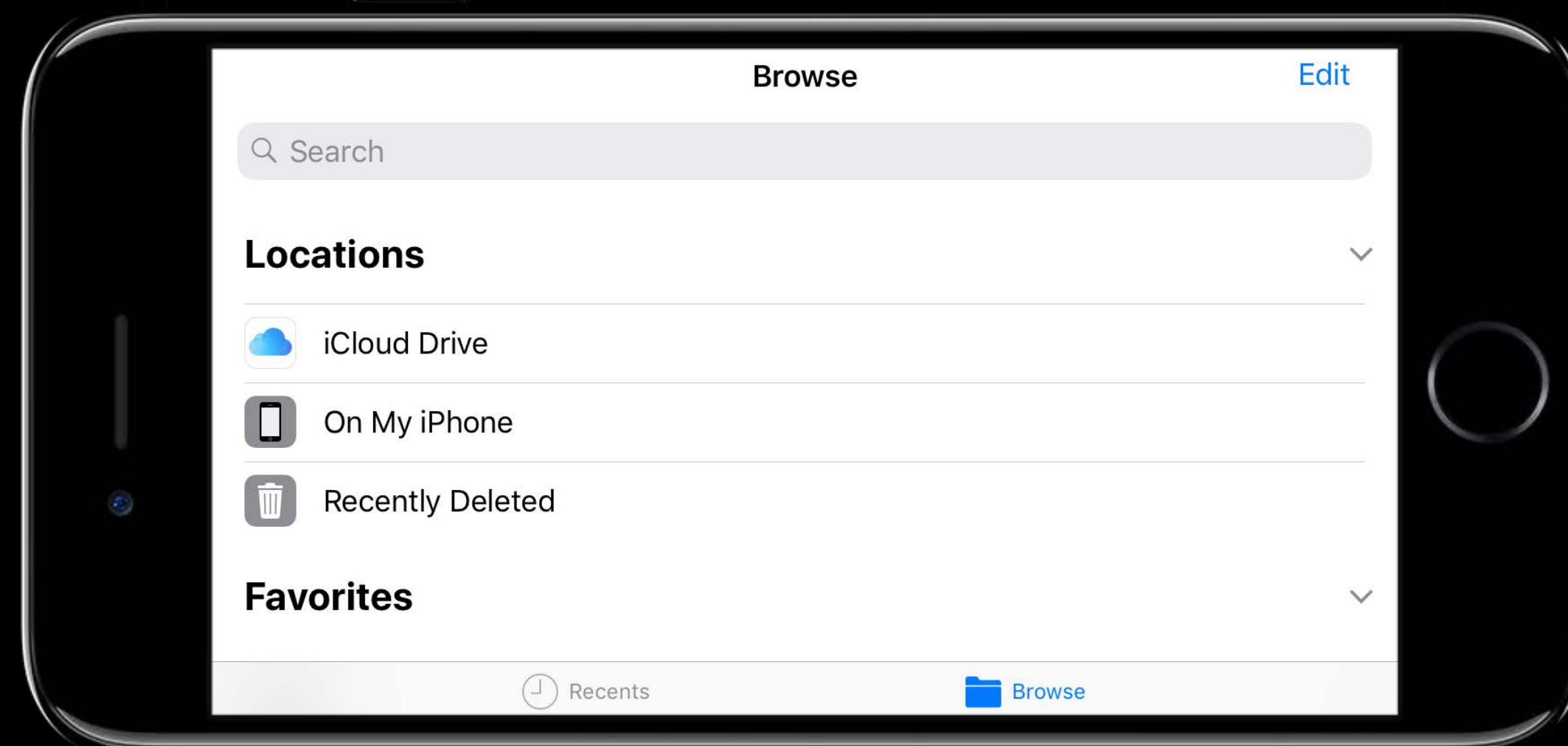
David Duncan, iOS System Experience  
Raj Ramamurthy, iOS System Experience  
Kyle Sluder, iOS System Experience

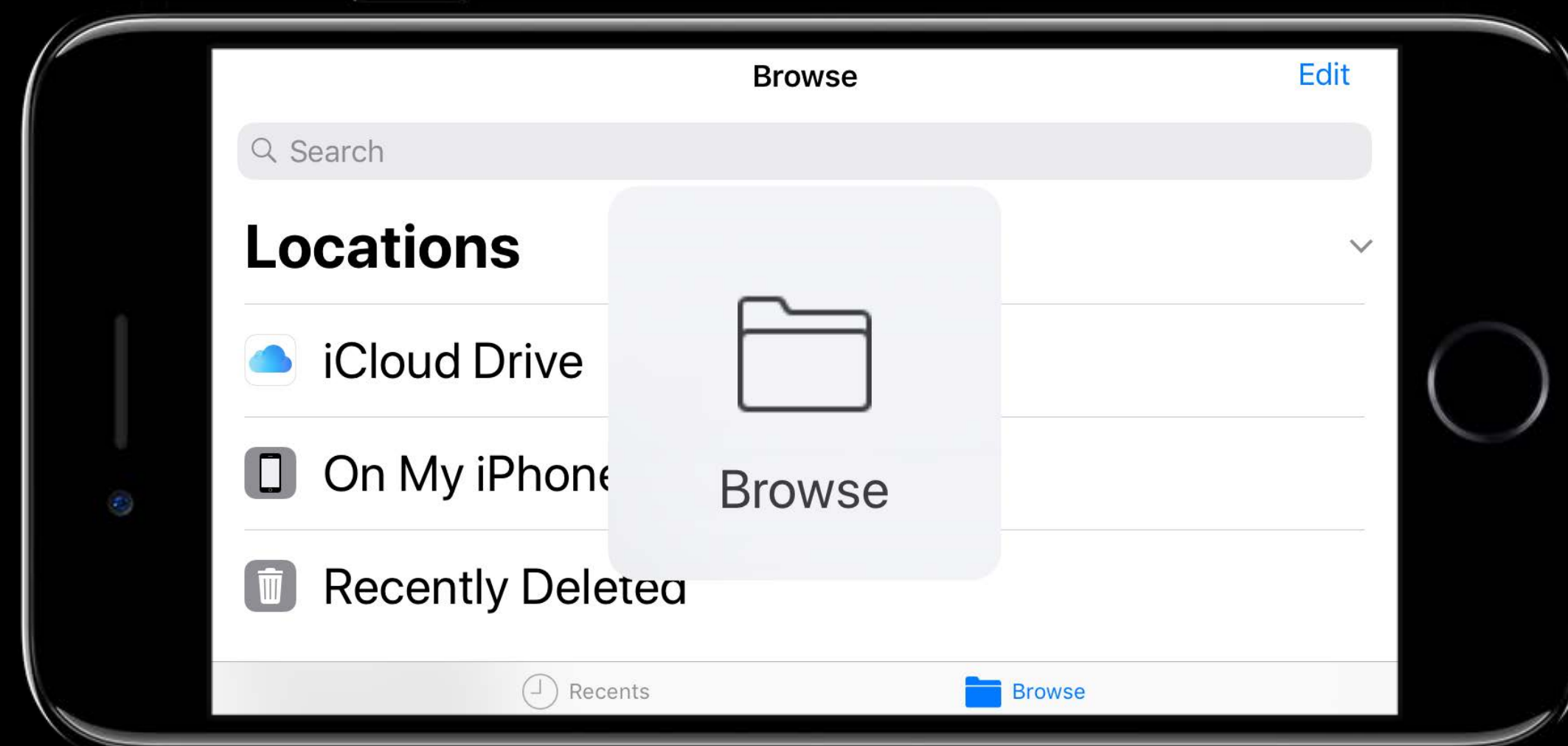
Adopting new functionality in UIKit's Bars

Managing margins and insets

New features of UIScrollView and UITableView







UIBarItem

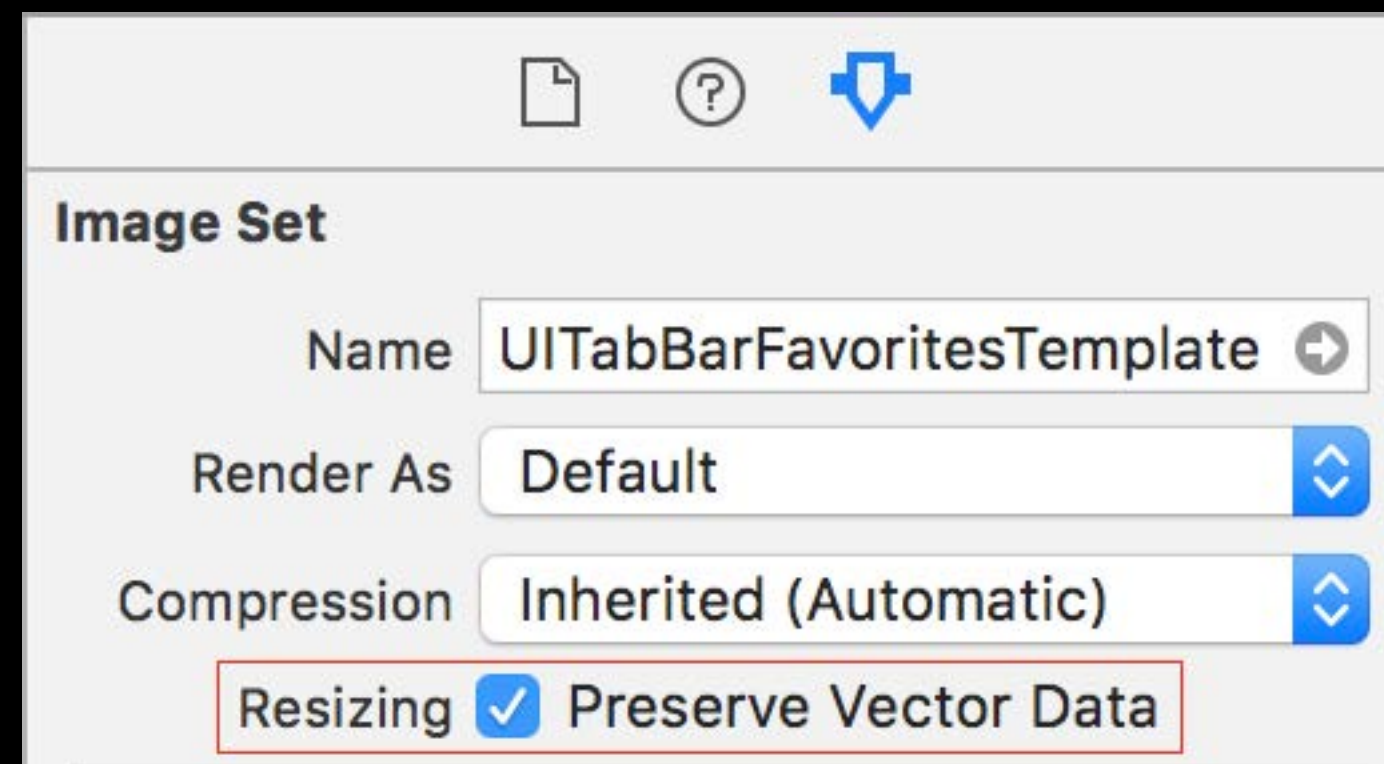
# UIBarButtonItem

```
UIBarButtonItem.landscapeImagePhone
```

# UIBarButtonItem

`UIBarButtonItem.landscapeImagePhone`

`UIBarButtonItem.largeContentSizeImage`

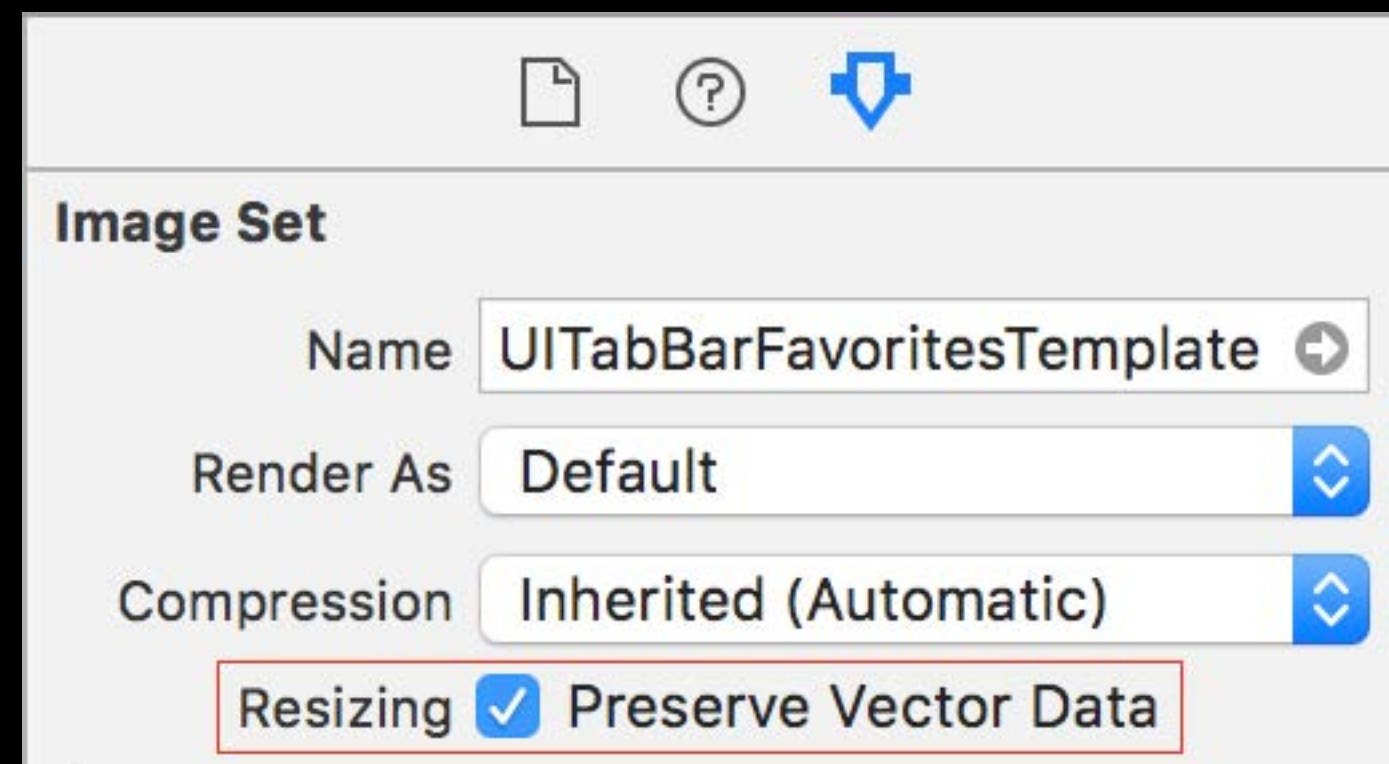




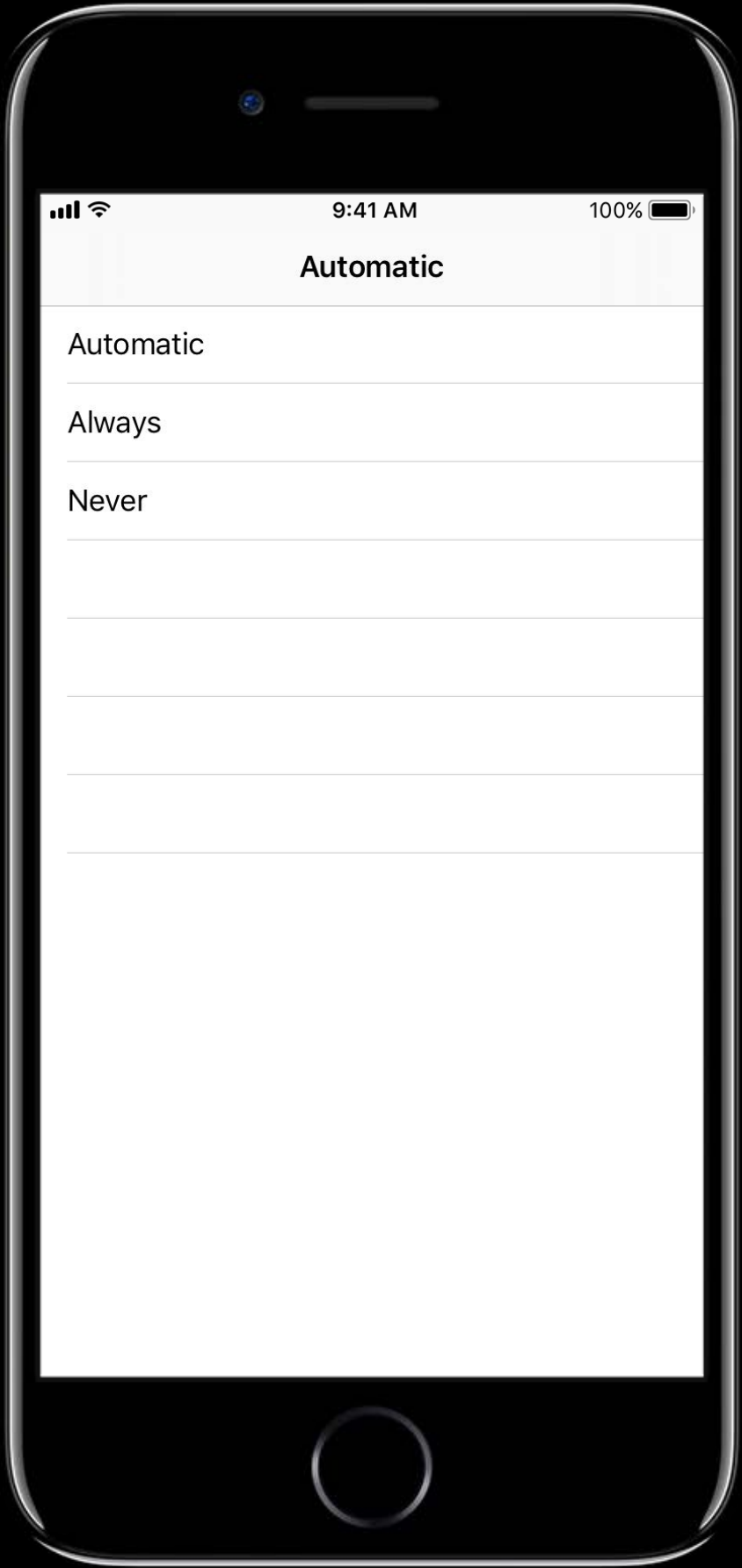
# UIBarButtonItem

`UIBarButtonItem.landscapeImagePhone`

`UIBarButtonItem.largeContentSizeImage`

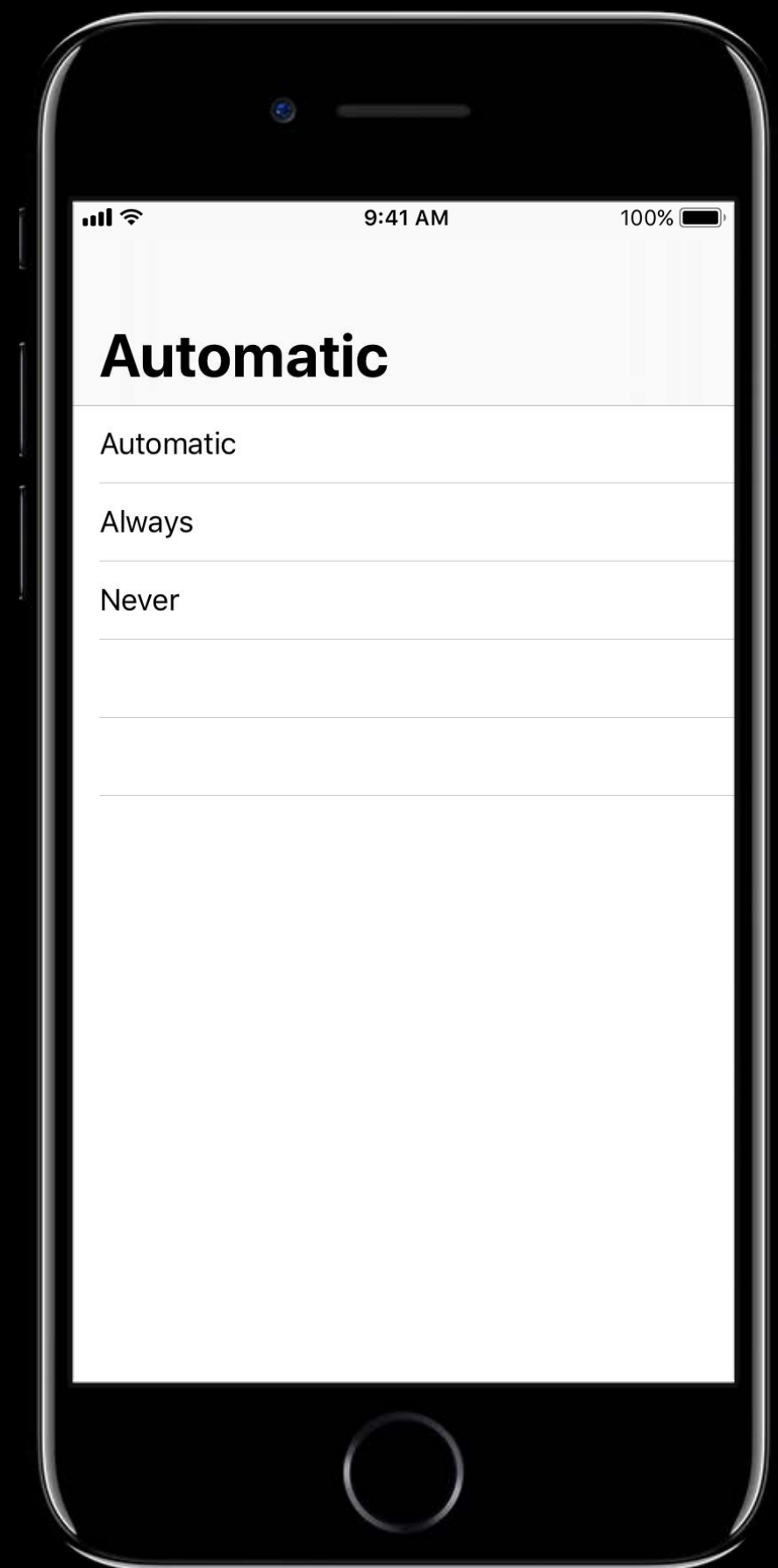


# Controlling When Large Titles Display



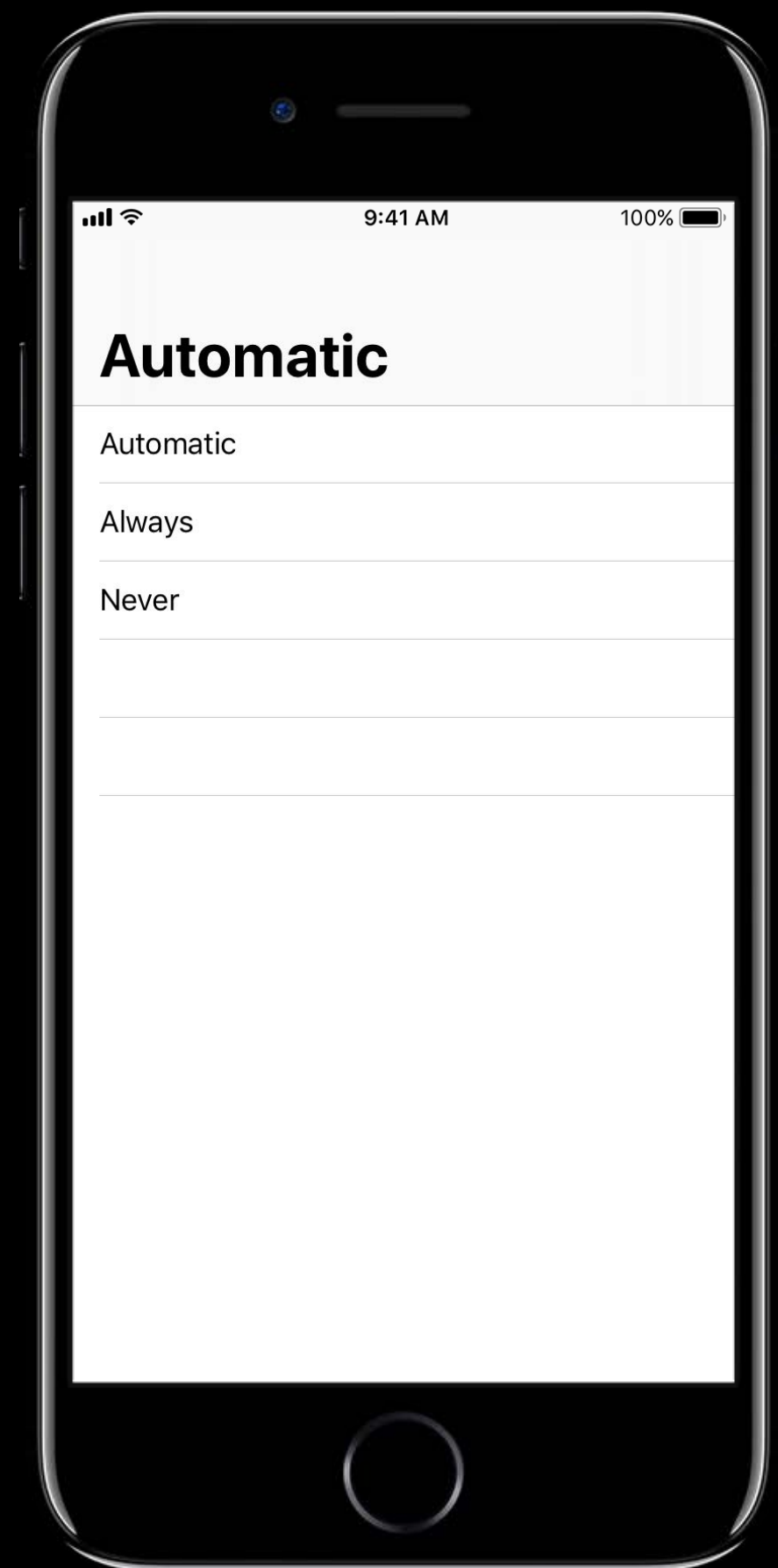
# Controlling When Large Titles Display

```
navigationBar.prefersLargeTitles = true
```



# Controlling When Large Titles Display

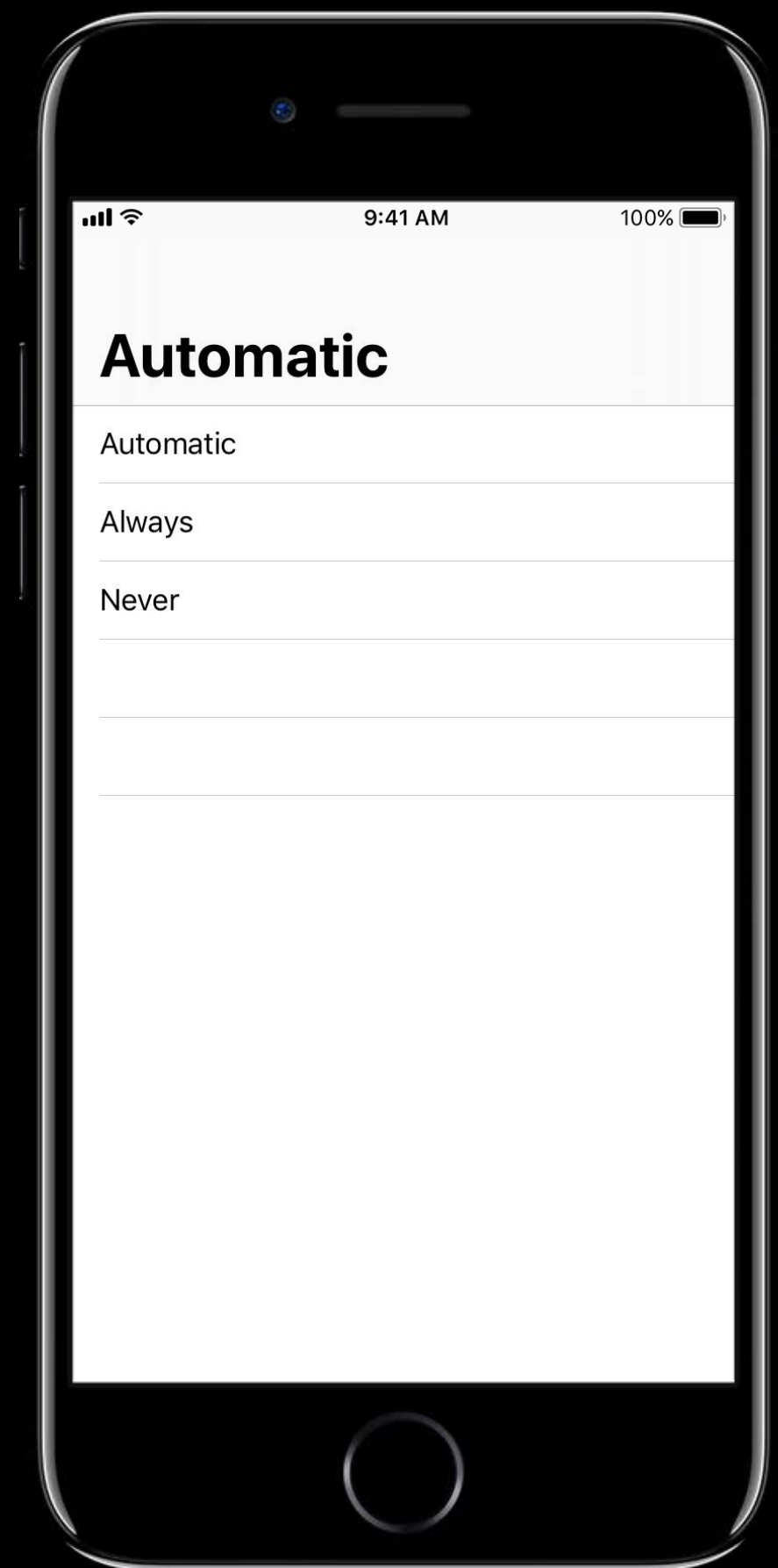
```
navigationItem.largeTitleDisplayMode
```



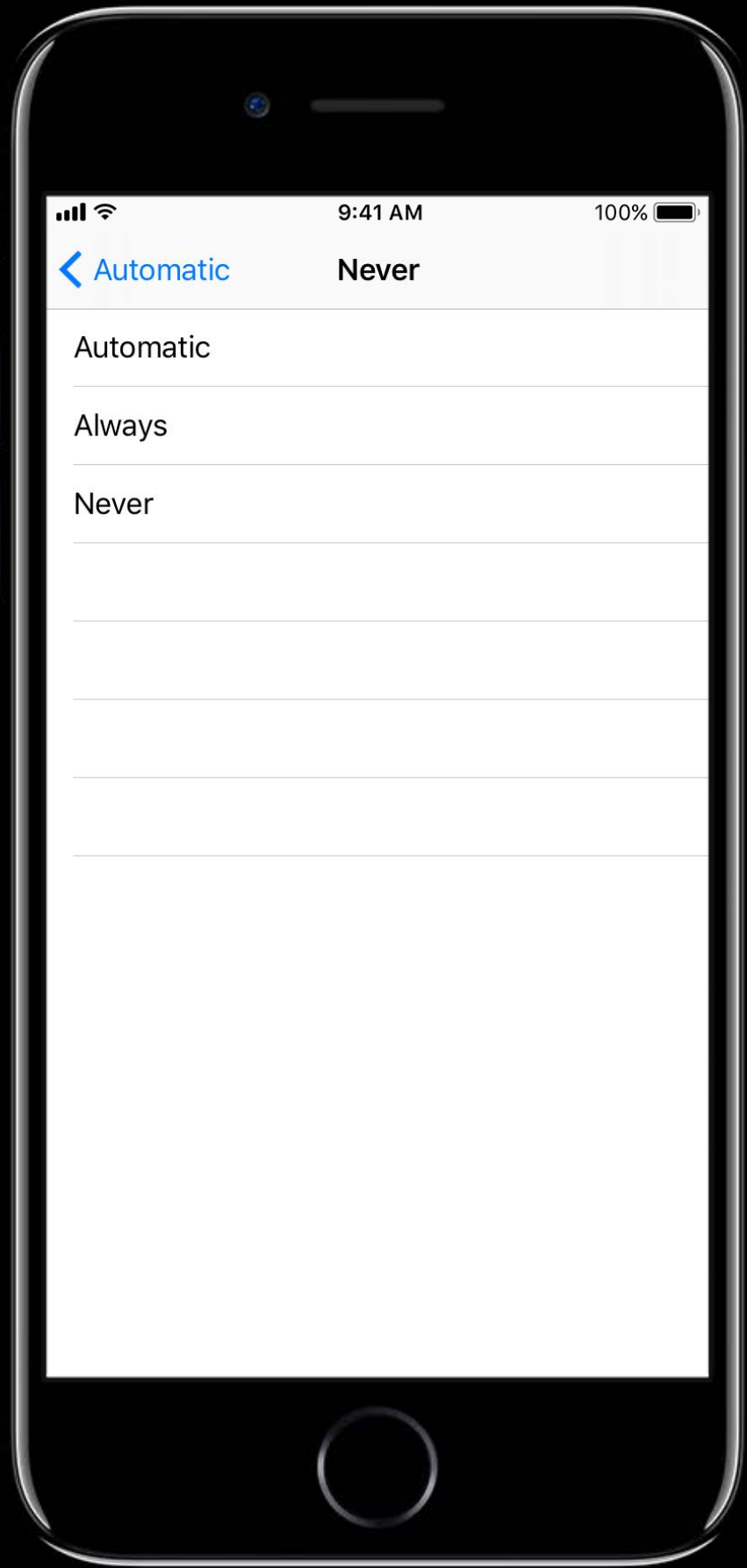
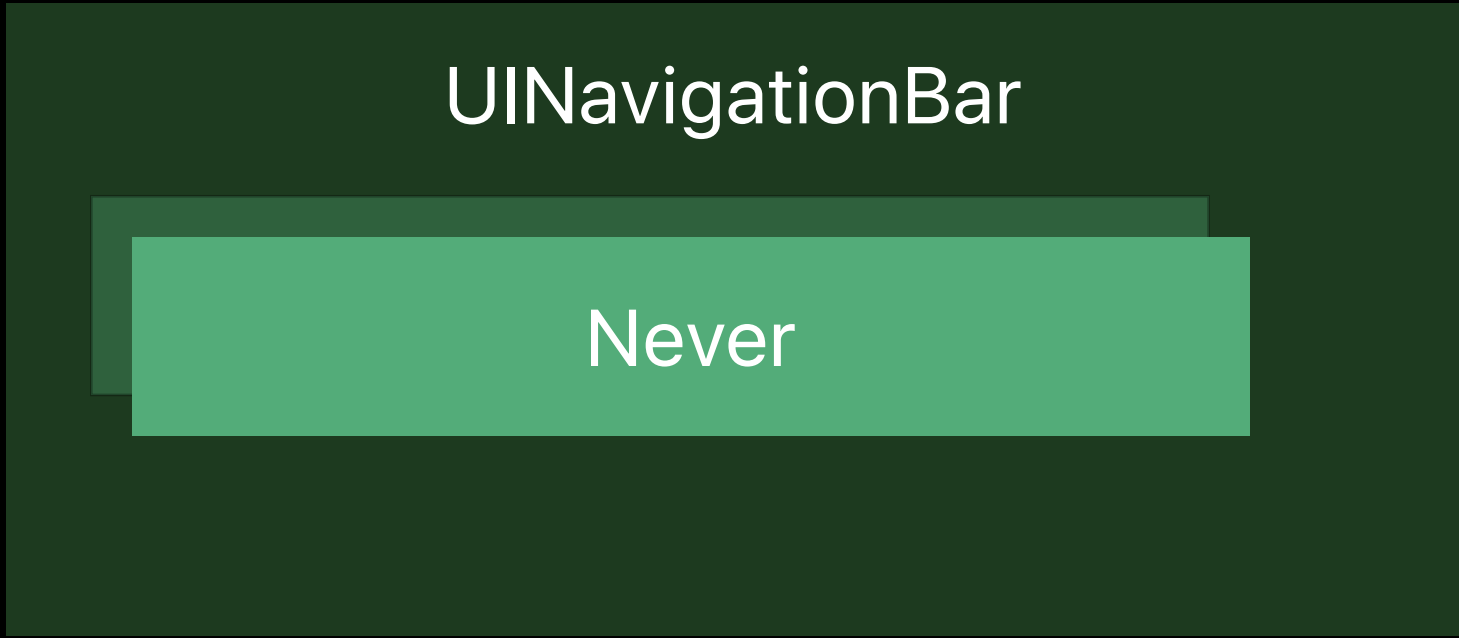
# Controlling When Large Titles Display

UINavigationController

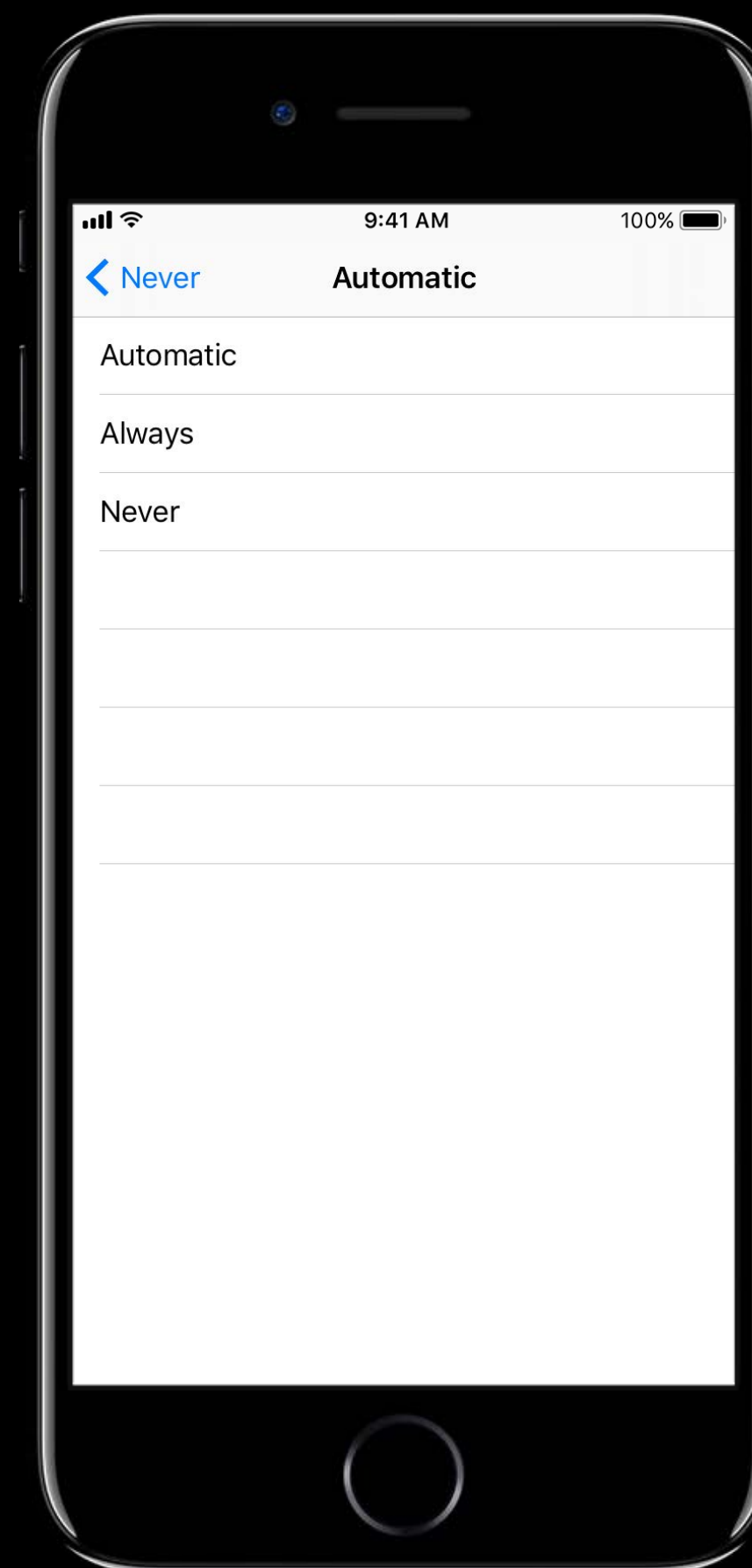
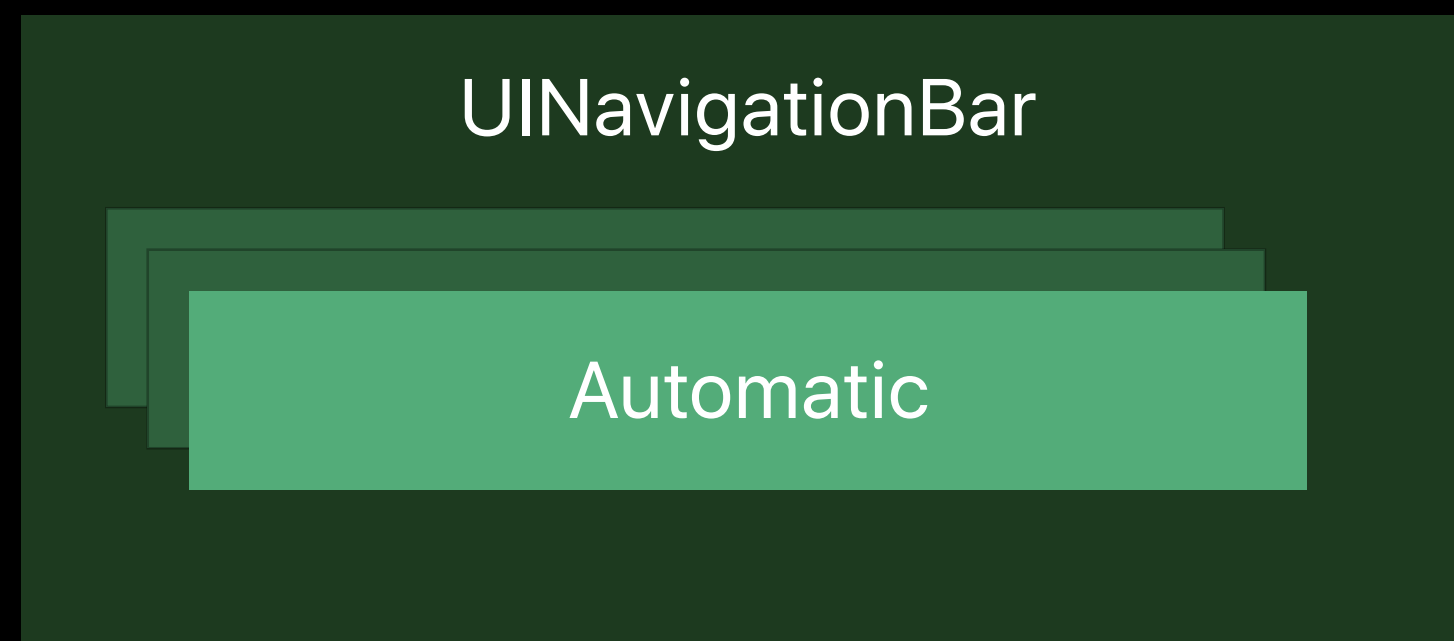
Automatic



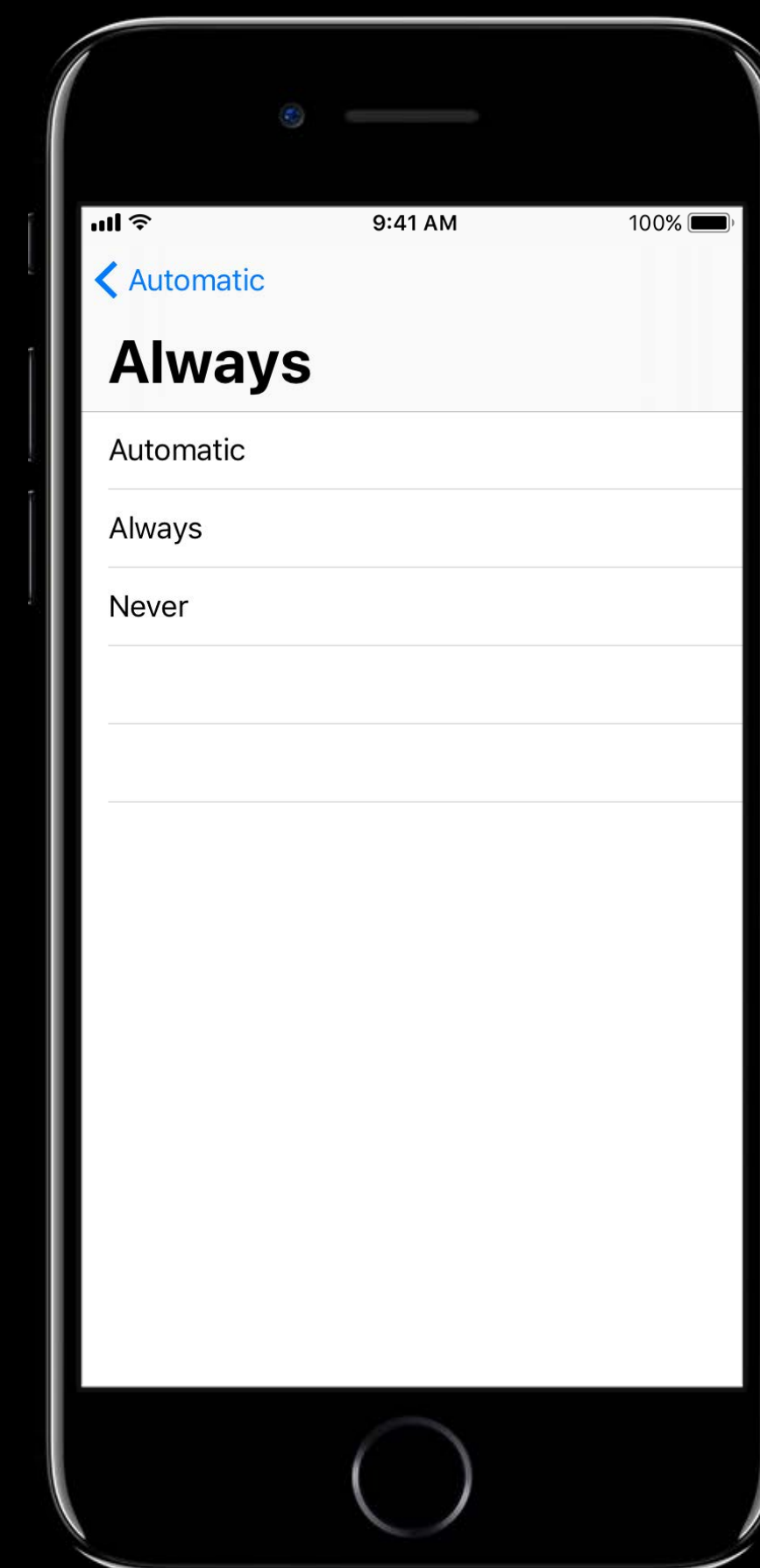
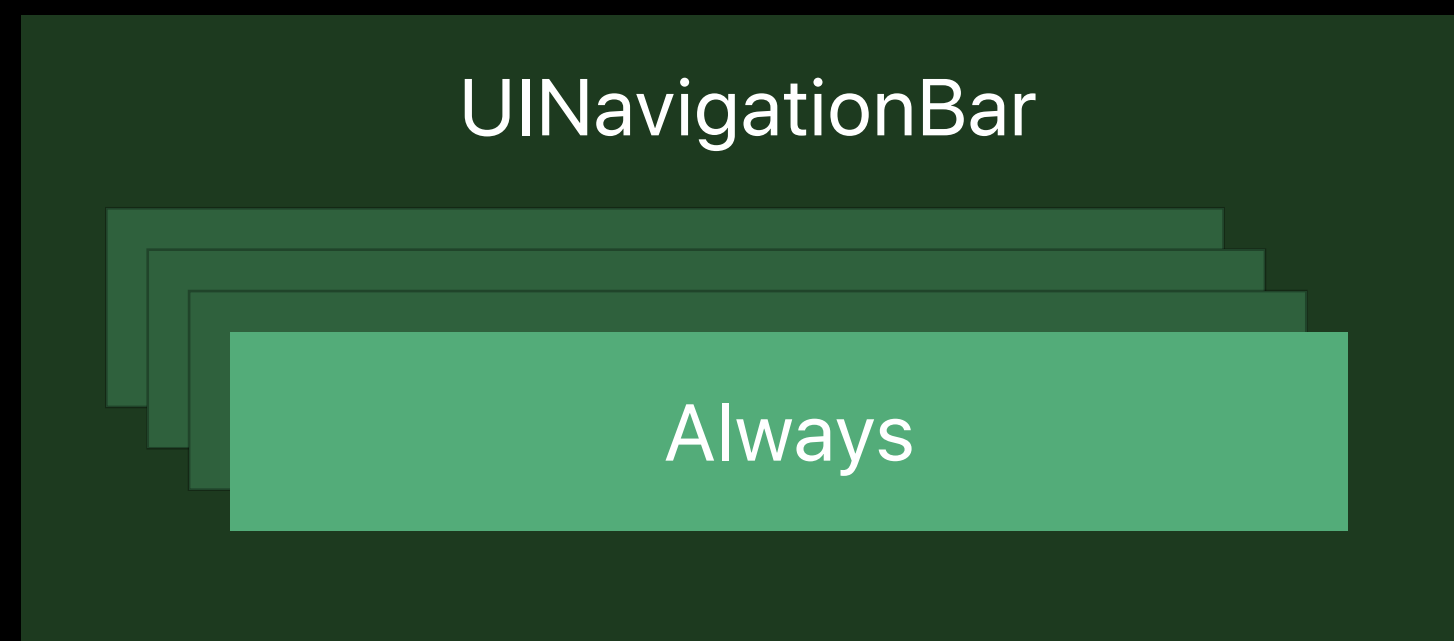
# Controlling When Large Titles Display



# Controlling When Large Titles Display

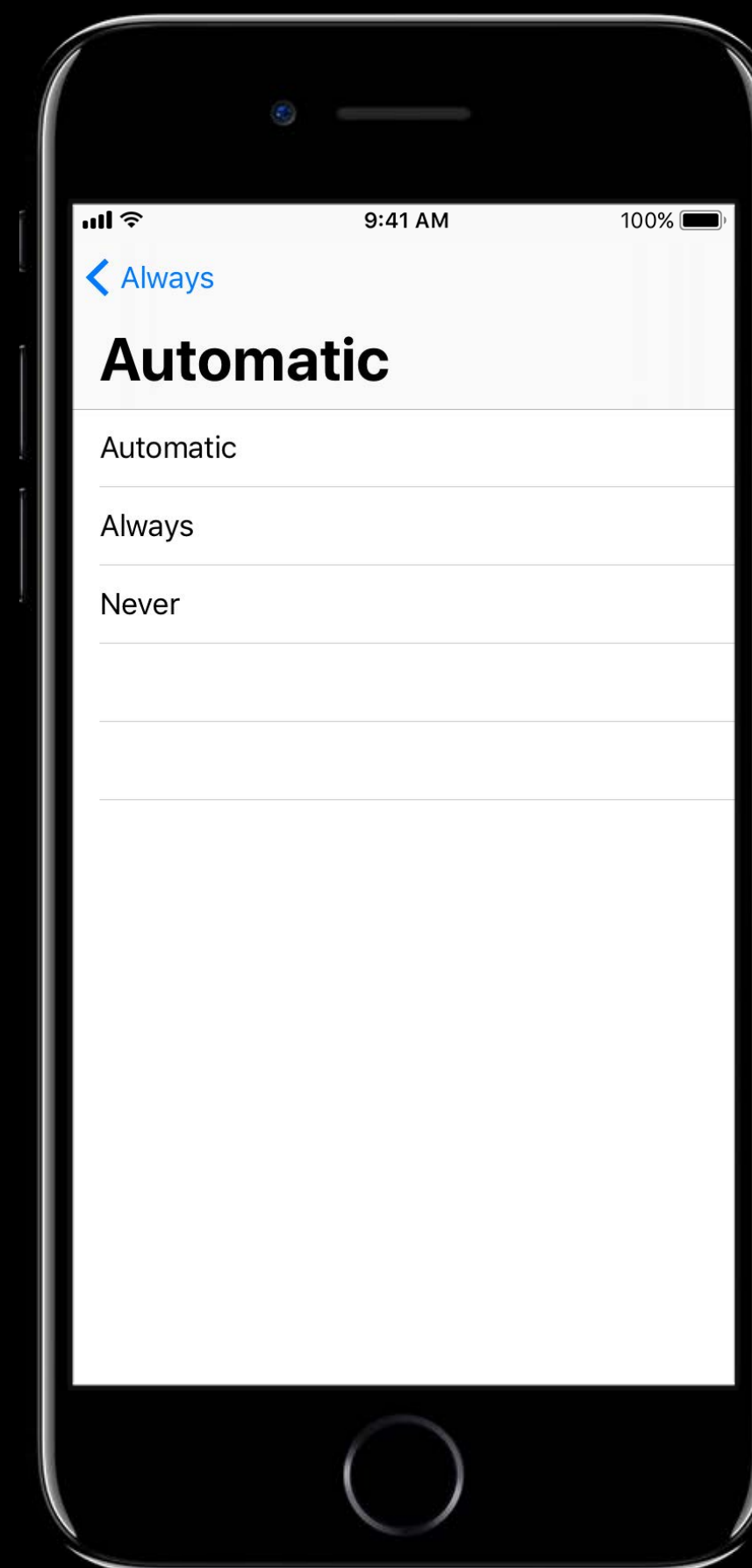
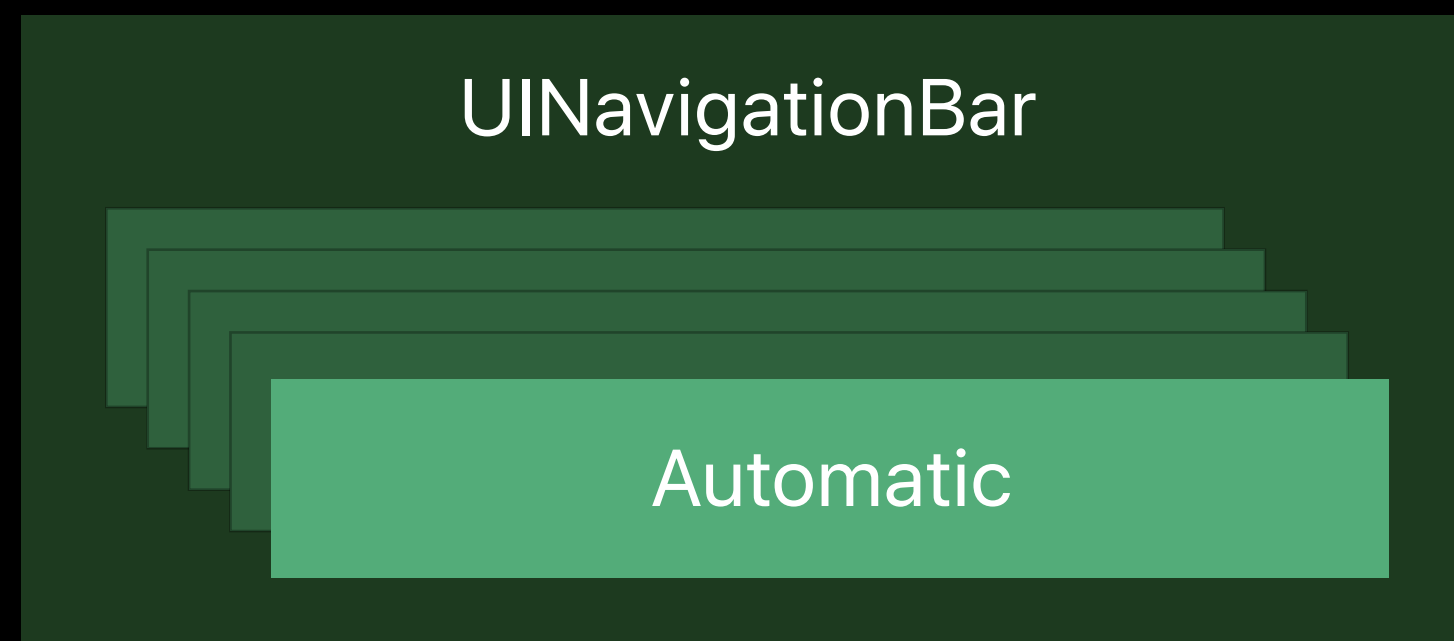


# Controlling When Large Titles Display

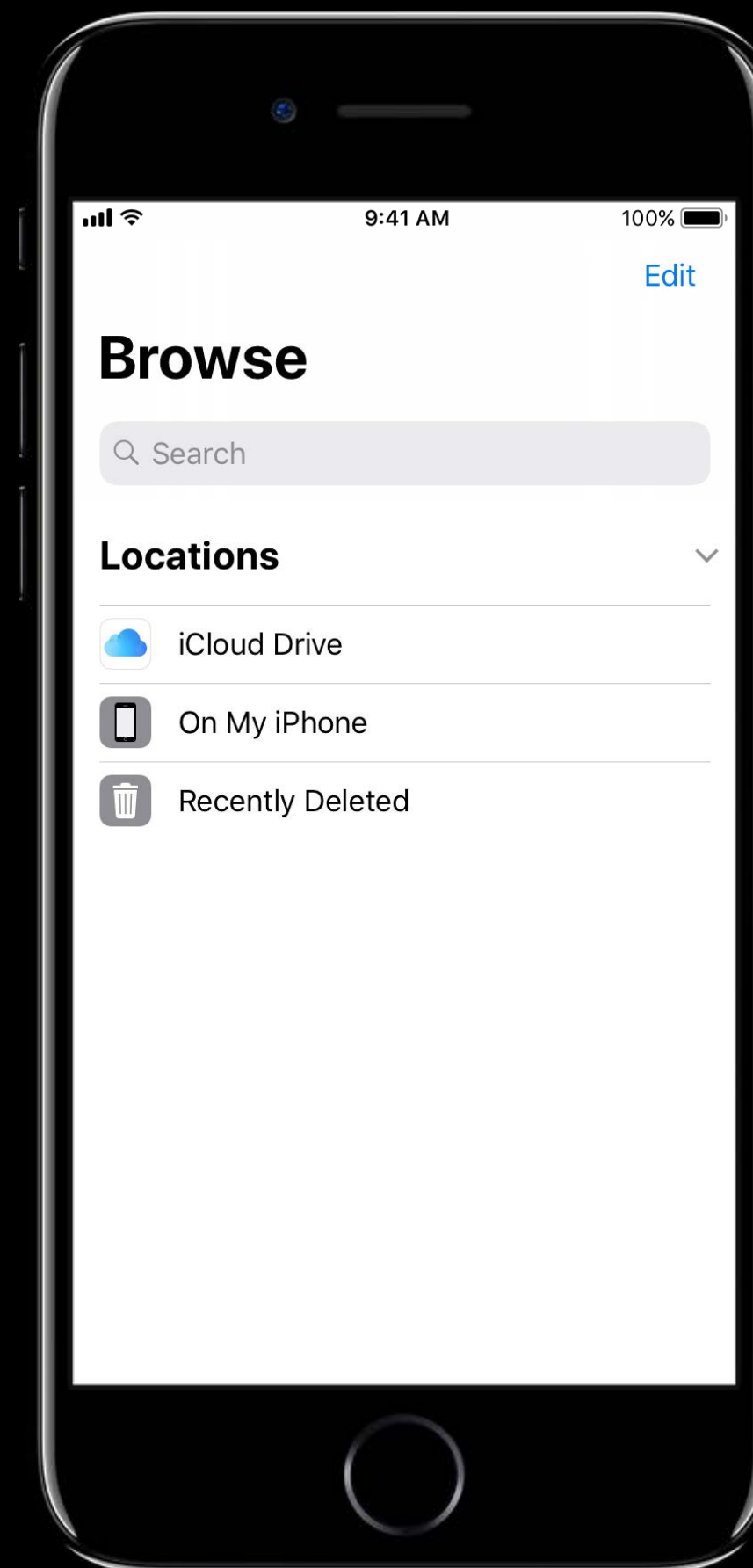




# Controlling When Large Titles Display

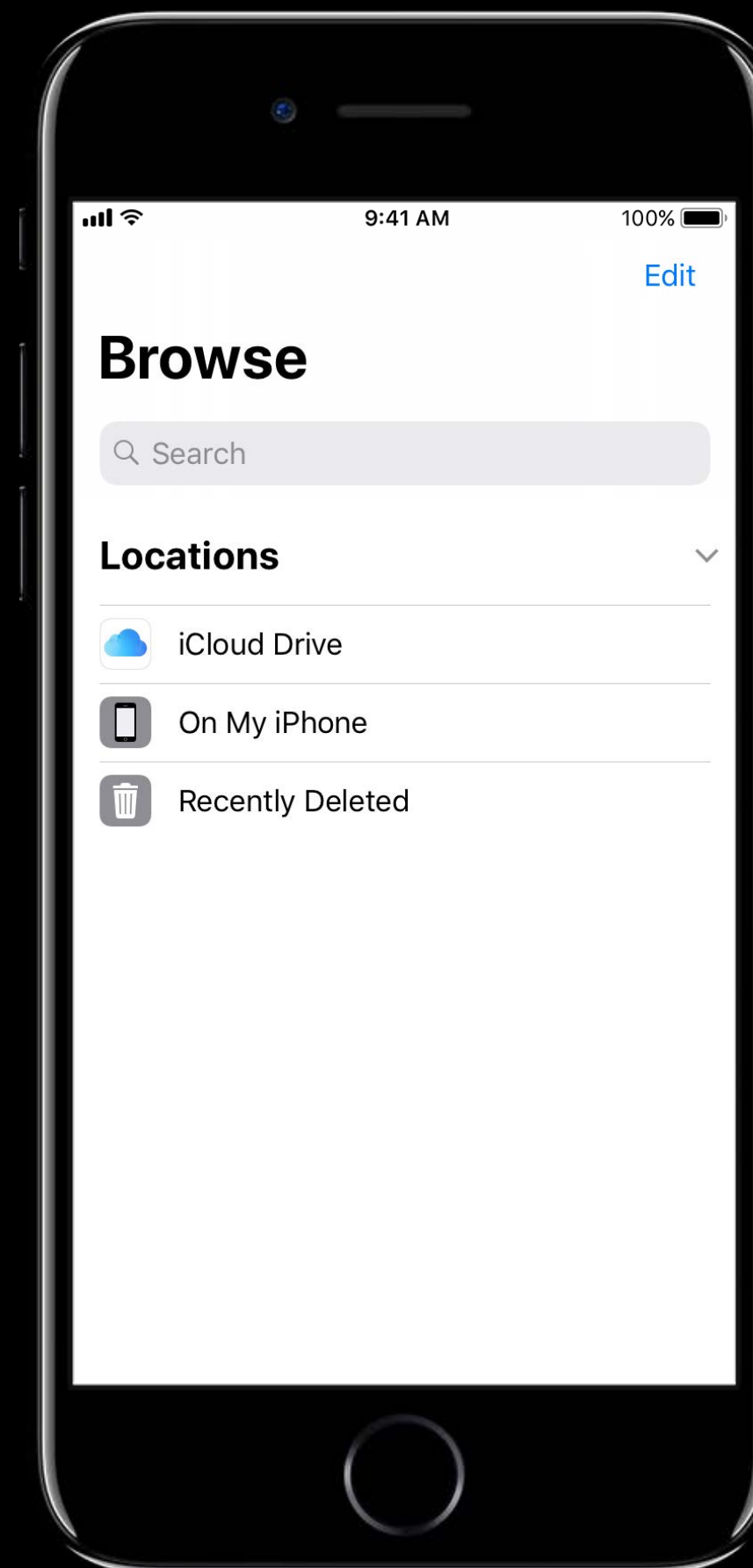


# Integrated UISearchController with Navigation



# Integrated UISearchController with Navigation

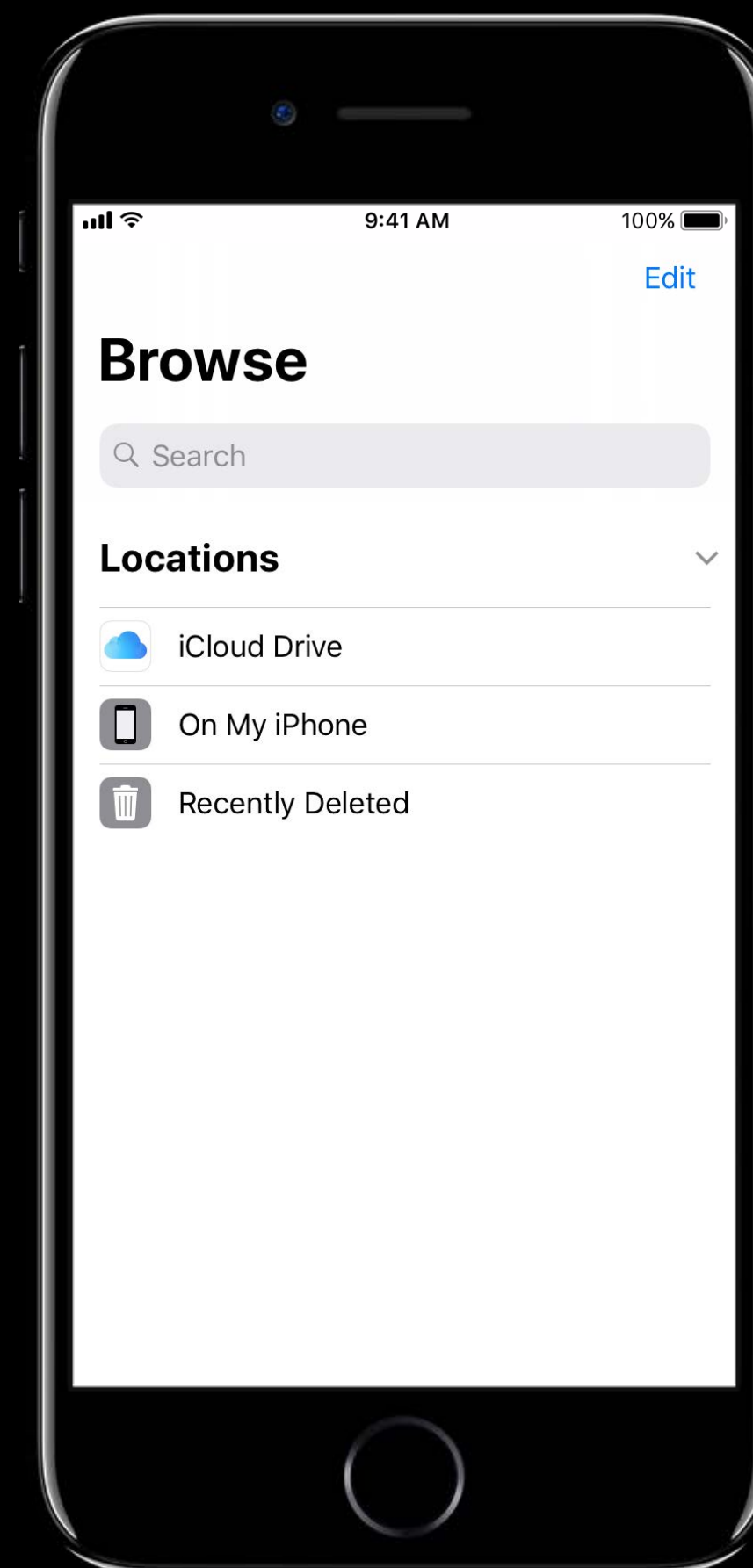
```
navigationItem.searchController
```



# Integrated UISearchController with Navigation

```
navigationItem.searchController
```

```
navigationItem.hidesSearchBarWhenScrolling
```



# UINavigationController and Scroll Interactions

# UINavigationController and Scroll Interactions

UINavigationController is responsible for some features

# UINavigationController and Scroll Interactions

UINavigationController is responsible for some features

- UISearchControllers
- Refresh controls
- Rubber banding

# UIToolbar and UINavigationController— Layout



# UIToolbar and UINavigationController— Layout

Extensive new Auto Layout support

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Extensive new Auto Layout support

Keep your constraints inside your views

# UIToolbar and UINavigationController— Layout

Extensive new Auto Layout support

Keep your constraints inside your views

“We assume you know what you’re doing”

# Avoiding Zero-Sized Custom Views

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UINavigationController and UIToolbar provide position

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You must provide size

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UINavigationController and UIToolbar provide position

You must provide size

- Constraints for width and height

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UINavigationController and UIToolbar provide position

You must provide size

- Constraints for width and height
- Implement `intrinsicContentSize`



# Avoiding Zero-Sized Custom Views

UINavigationController and UIToolbar provide position

You must provide size

- Constraints for width and height
- Implement `intrinsicContentSize`
- Connect your subviews via constraints

***Demo***

Raj Ramamurthy, iOS System Experience

# Margins and Insets

Kyle Sluder, iOS System Experience

# Title

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things. They push the human race forward. And while some may see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do.

layout margins

## Title

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things. They push the human race forward. And while some may see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do.

layoutMarginsGuide

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layoutMargins

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NEW

layoutMargins

directionalLayoutMargins

## Title

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NEW

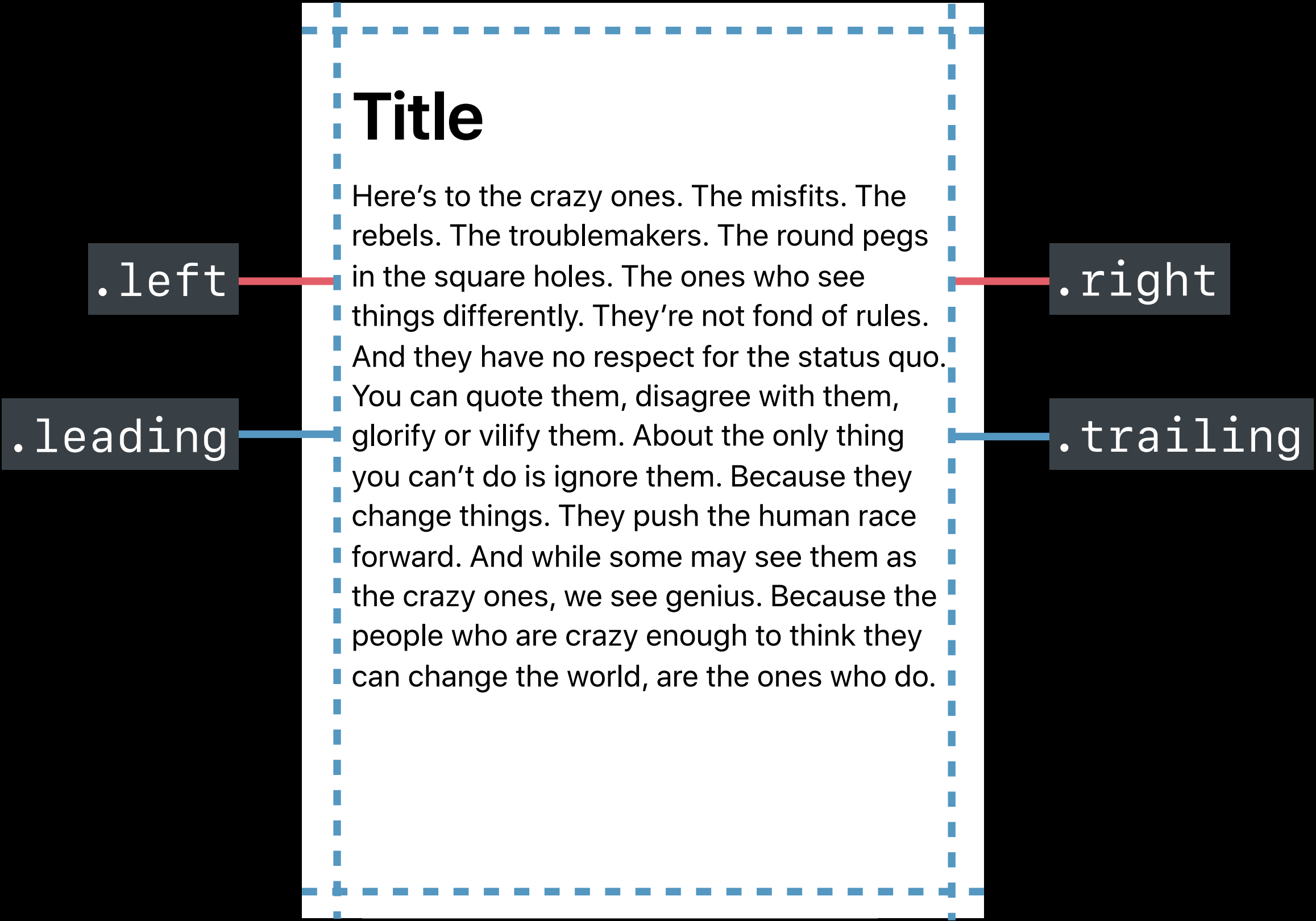
layoutMargins



directionalLayoutMargins

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NEW

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`.trailing = 30`

NEW

## Title

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things. They push the human race forward. And while some may see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do.

`.trailing = 30`

```
.trailing = 30
```

## פּוֹתָרֵת

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`.left = 30`

`.trailing = 30`

layout margins

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layout margins

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NEW

minimum layout margins

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NEW

`systemMinimumLayoutMargins`

## Title

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NEW

`systemMinimumLayoutMargins`

`directionalLayoutMargins`

## Title

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NEW

systemMinimumLayoutMargins

directionalLayoutMargins

## Title

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```
class MyViewController: UIViewController {  
    override func viewDidLoad() {  
        viewRespectsSystemMinimumLayoutMargins = true // default  
    }  
}
```

NEW

directionalLayoutMargins

## Title

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them.

```
class MyViewController: UIViewController {  
    override func viewDidLoad() {  
        viewRespectsSystemMinimumLayoutMargins = false  
    }  
}
```

NEW

`.leading = 0`

## Title

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things. They push the human race forward. And while some may see them as the crazy ones, we see genius. Because the

`.trailing = 0`

NEW

## Title

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`.leading = 0`

`.trailing = 0`







edgesForExtendedLayout

.top

.bottom





edgesForExtendedLayout

.top

.bottom





edgesForExtendedLayout

.top

.bottom



topLayoutGuide

bottomLayoutGuide



edgesForExtendedLayout

.top

.bottom



topLayoutGuide

bottomLayoutGuide

NEW

edgesForExtendedLayout

.top

.bottom



safe area





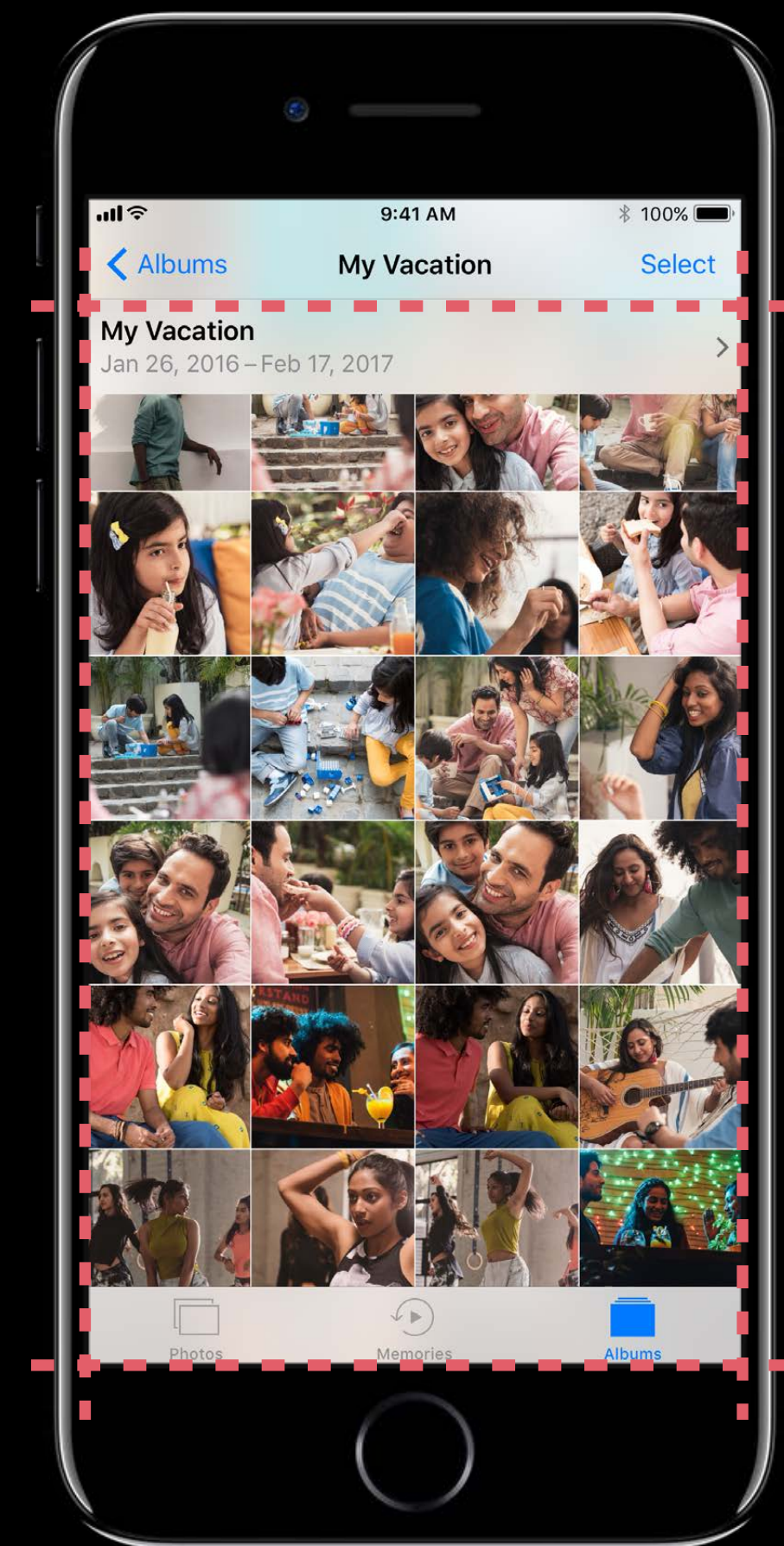
# Safe Area

NEW

Describes area of view not occluded  
by ancestors

Available as insets or layout guide

Incorporates overscan compensation insets



# Safe Area

NEW

Describes area of view not occluded  
by ancestors

Available as insets or layout guide

Incorporates overscan compensation insets

`UIView.safeAreaInsets`





# Safe Area

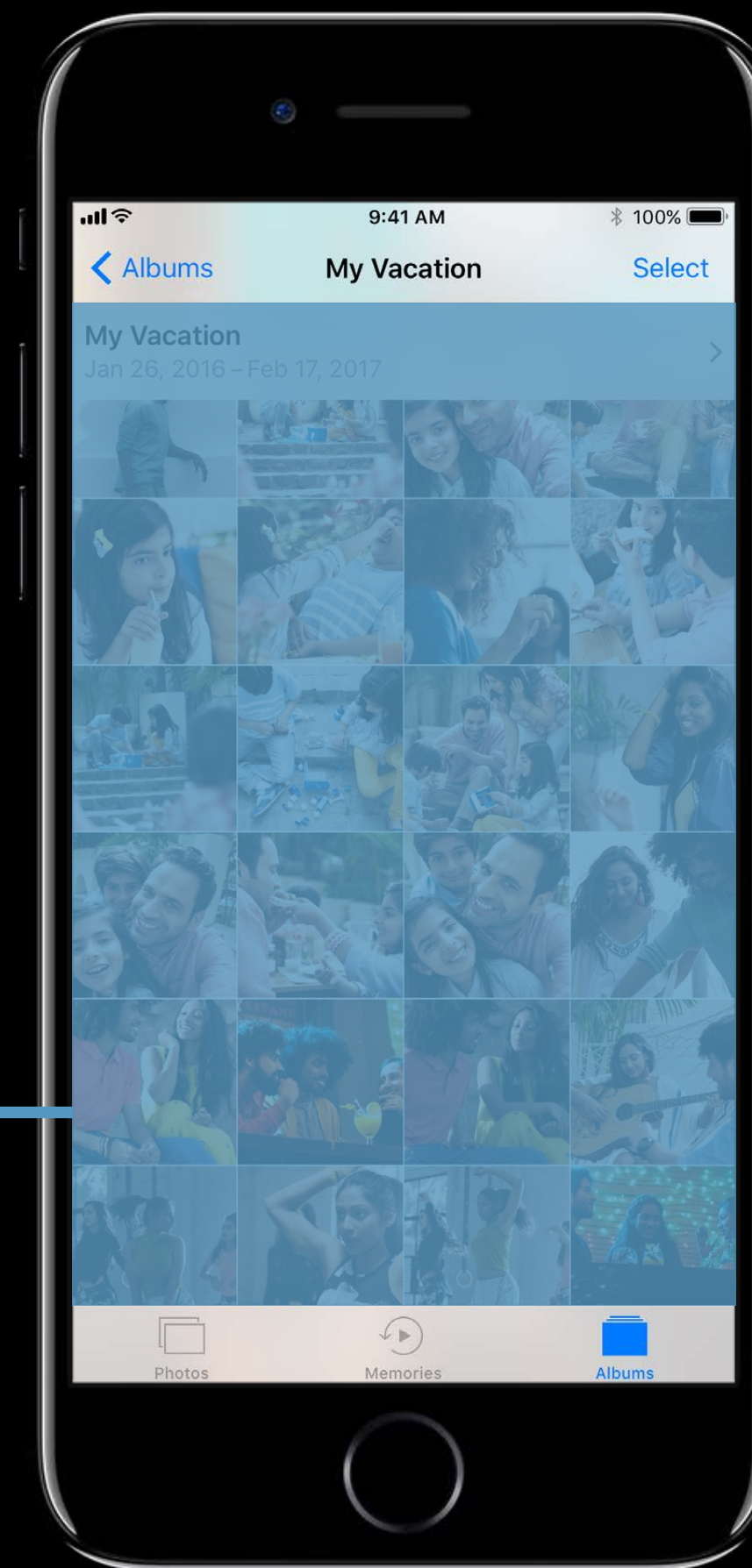
NEW

Describes area of view not occluded  
by ancestors

Available as insets or layout guide

Incorporates overscan compensation insets

`UIView.safeAreaLayoutGuide`





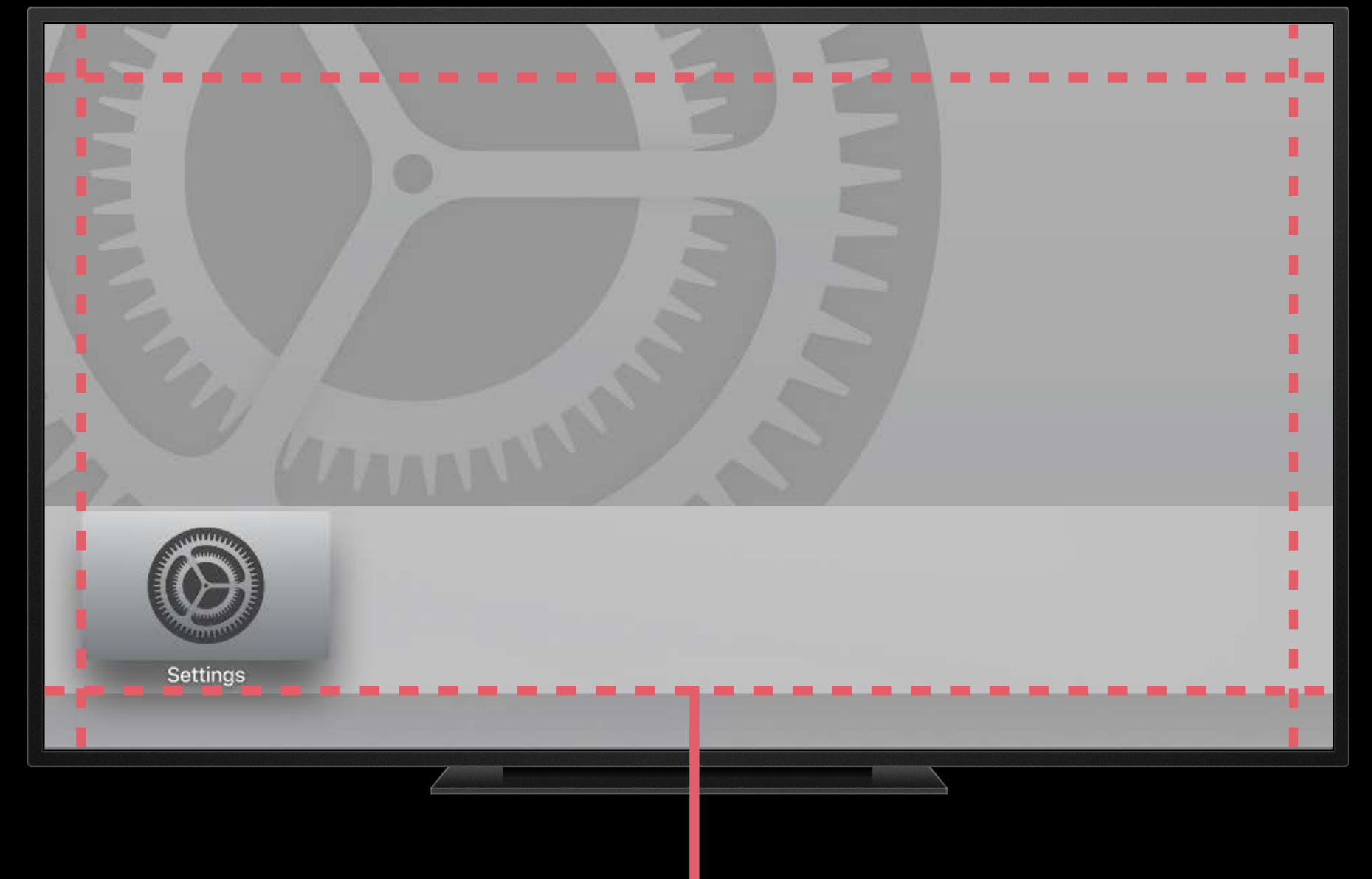
# Safe Area

NEW

Describes area of view not occluded by ancestors

Available as insets or layout guide

Incorporates overscan compensation insets



`UIScreen.overscanCompensationInsets`

# Extending the Safe Area Insets

NEW

```
UIViewController.additionalSafeAreaInsets
```

```
UIView.safeAreaInsetsDidChange()
```

```
UIViewController.viewSafeAreaInsetsDidChange()
```



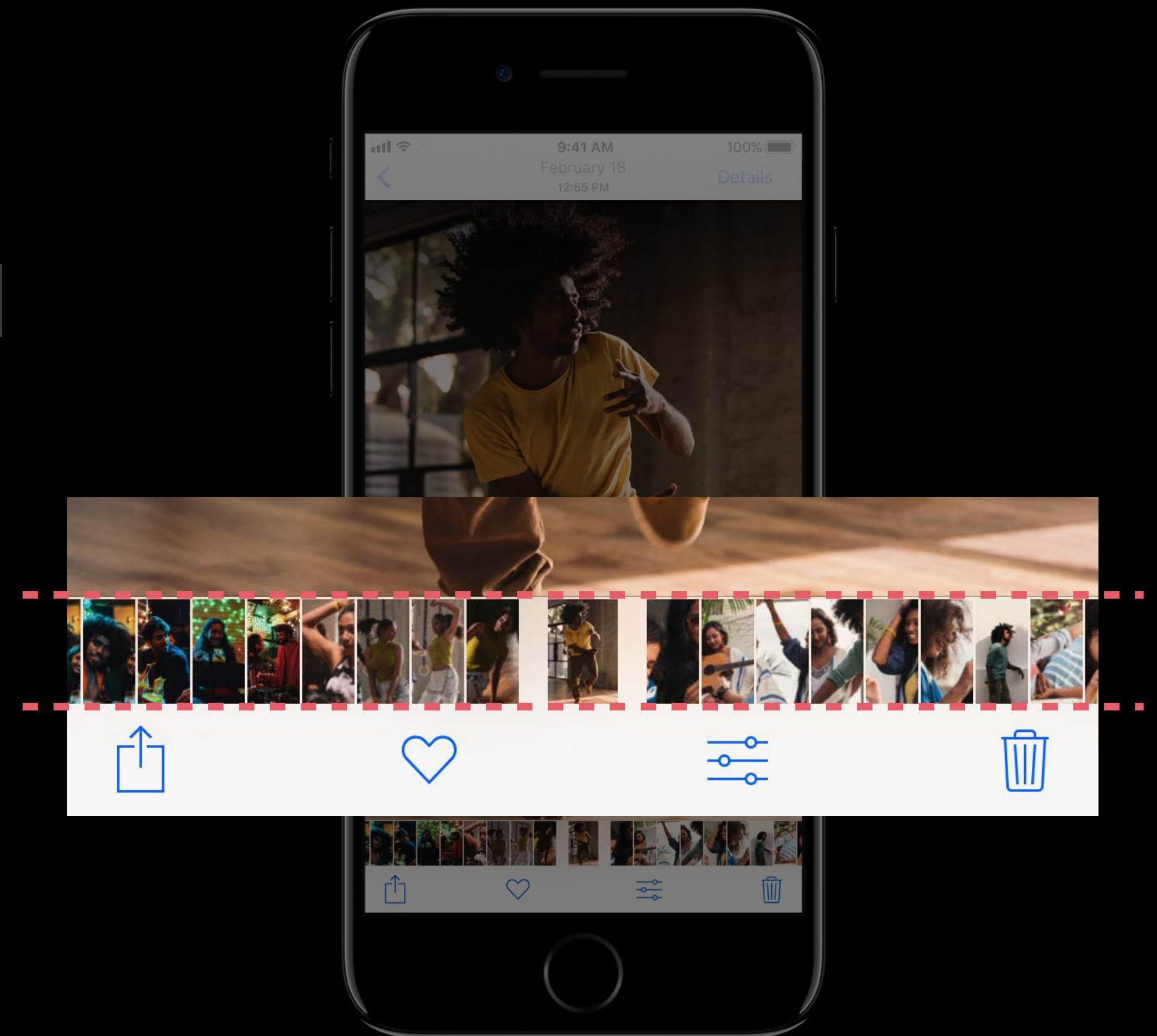
# Extending the Safe Area Insets

NEW

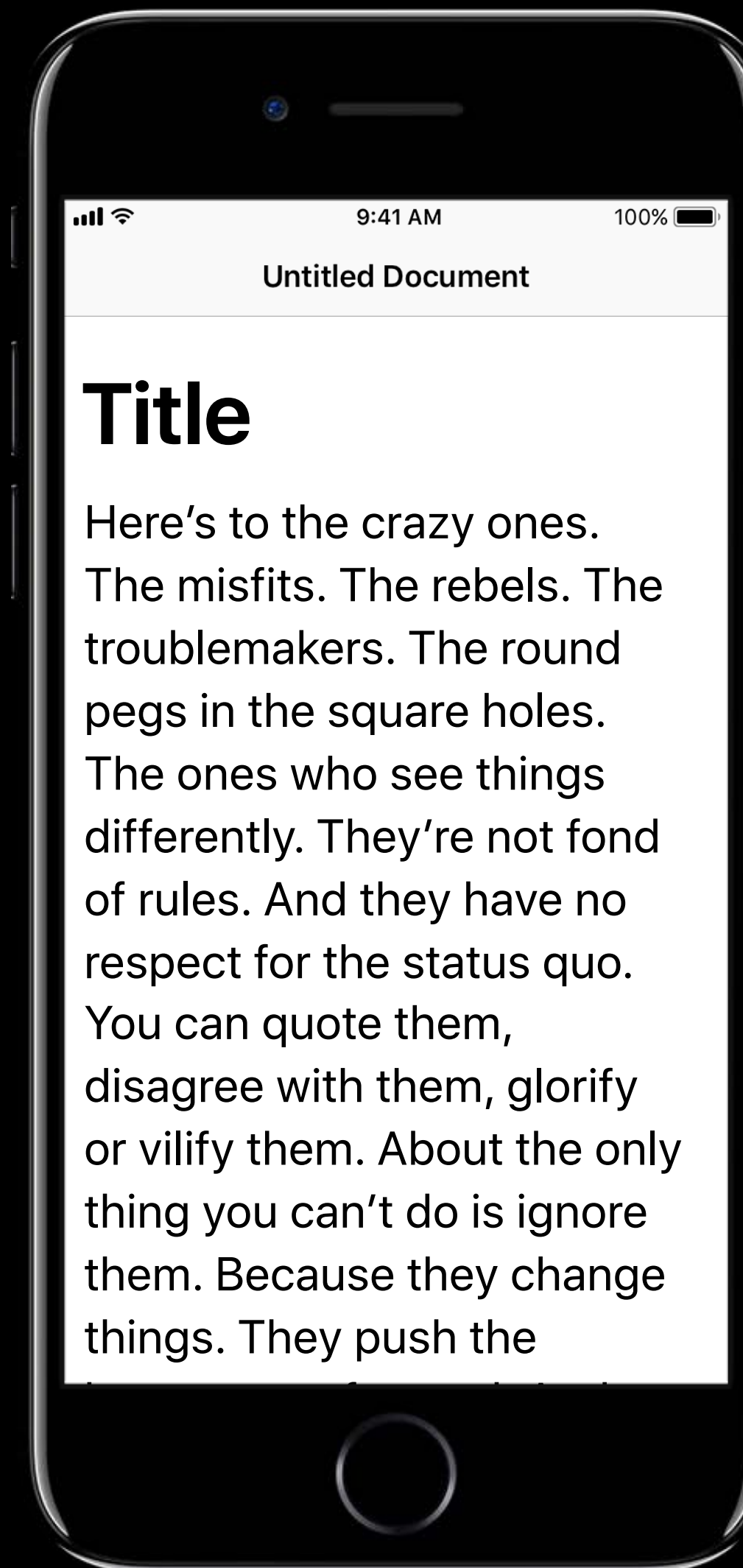
```
UIViewController.additionalSafeAreaInsets
```

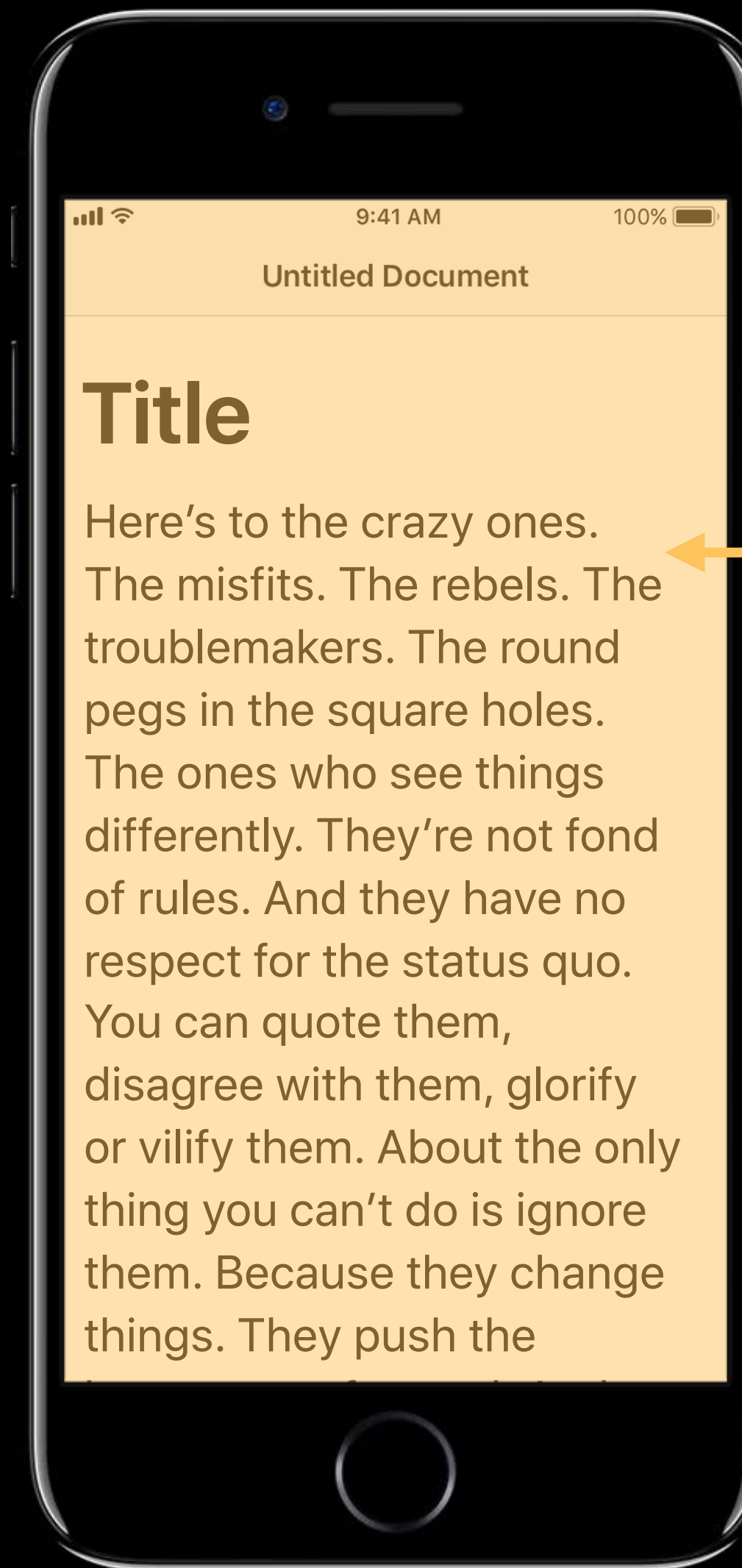
```
UIView.safeAreaInsetsDidChange()
```

```
UIViewController.viewSafeAreaInsetsDidChange()
```



# Scroll Views





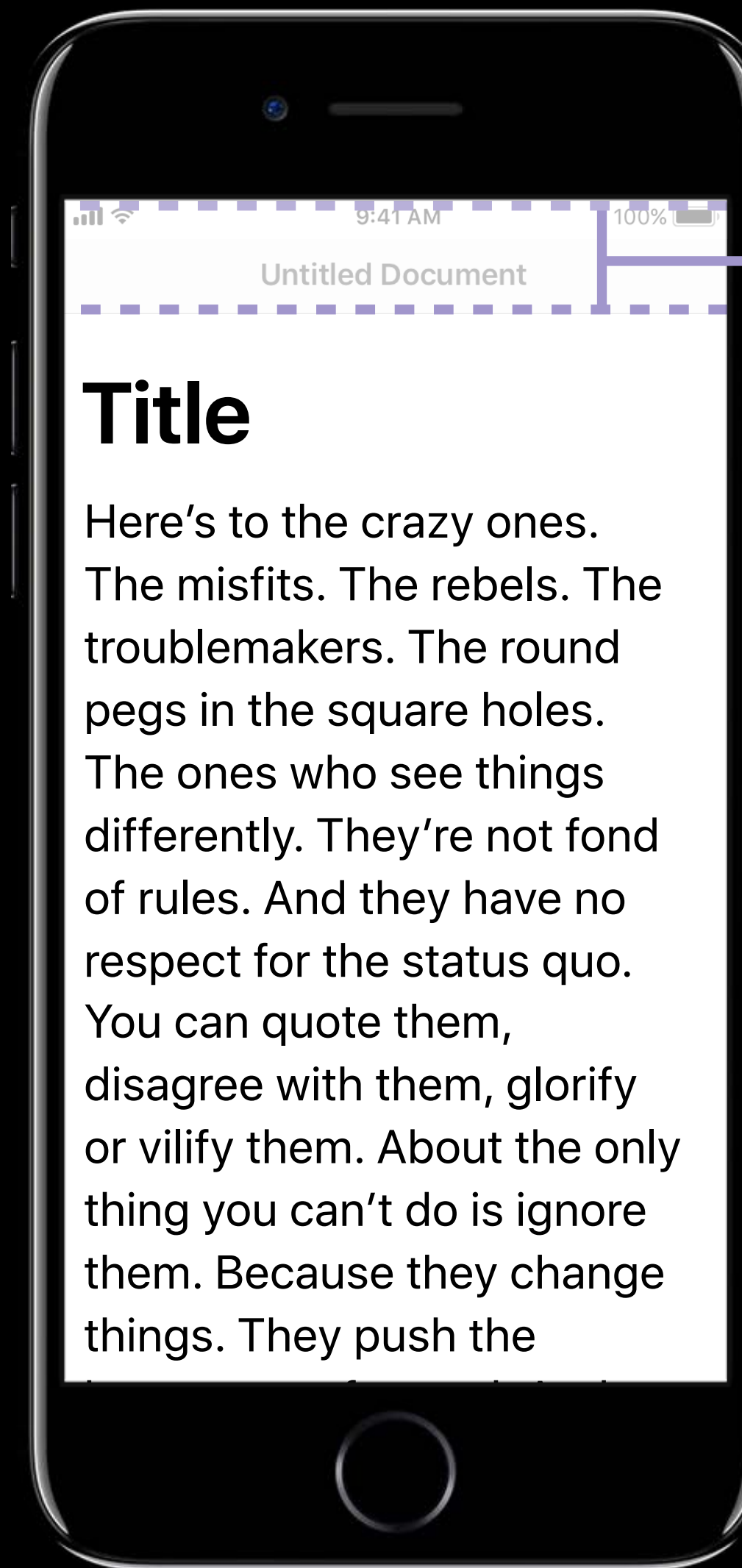
Untitled Document

# Title

Here's to the crazy ones.  
The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things. They push the

scroll view





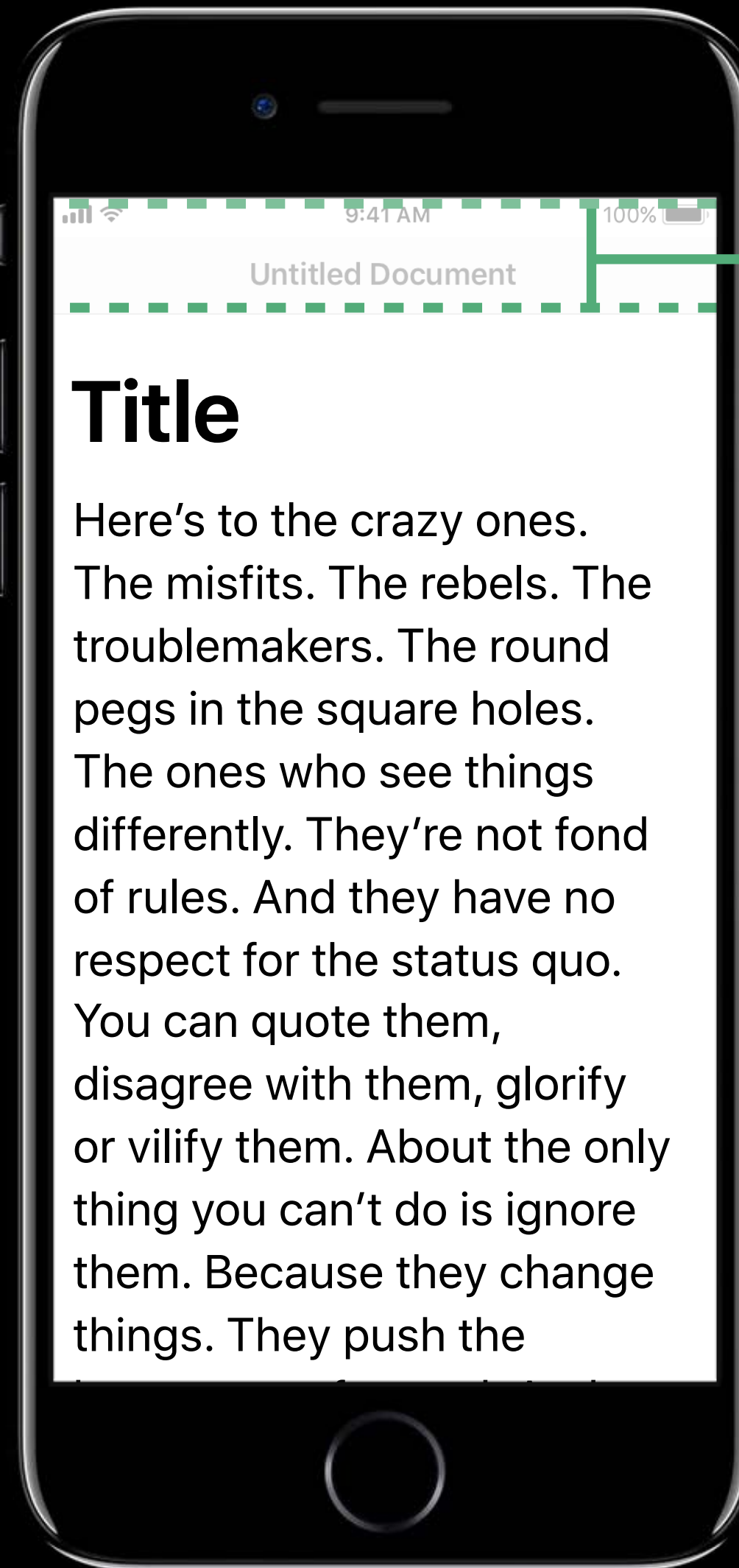
`contentInset.top`

# Title

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NEW

`adjustedContentInset.top`

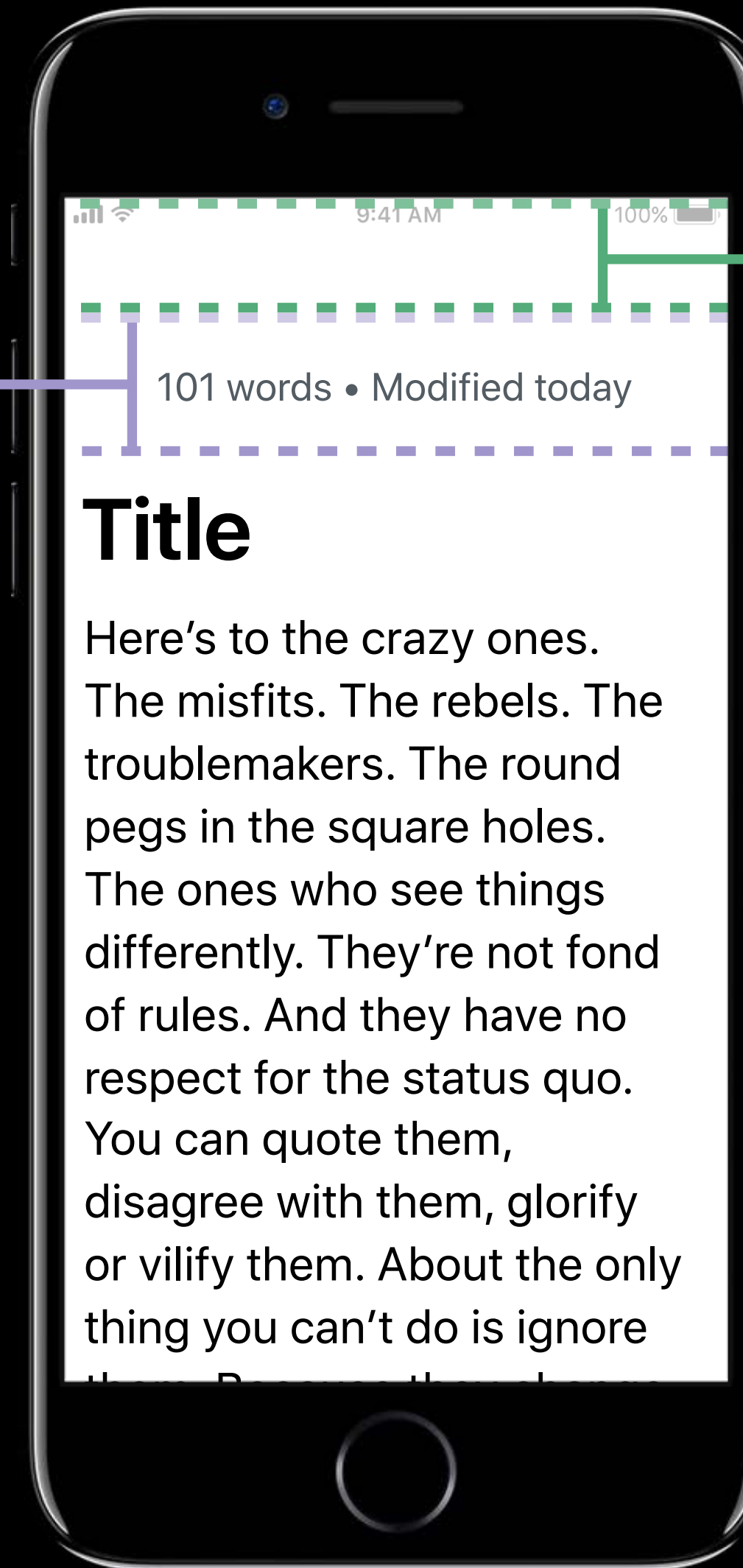


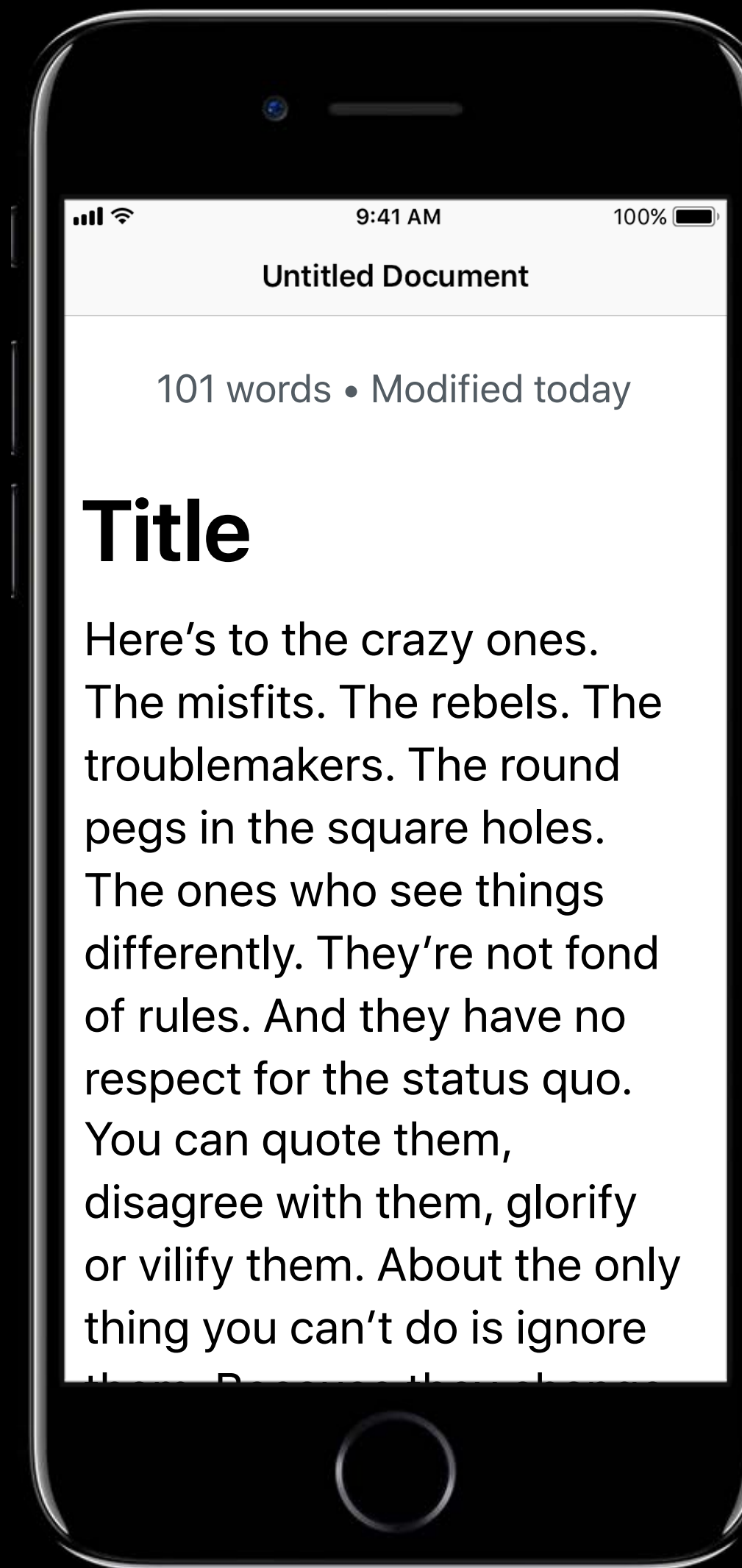


NEW

`contentInset.top`

`adjustedContentInset.top`





NEW

101 words • Modified today

## Title

Here's to the crazy ones.  
The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore

frameLayoutGuide

NEW

Page 1

101 words • Modified today

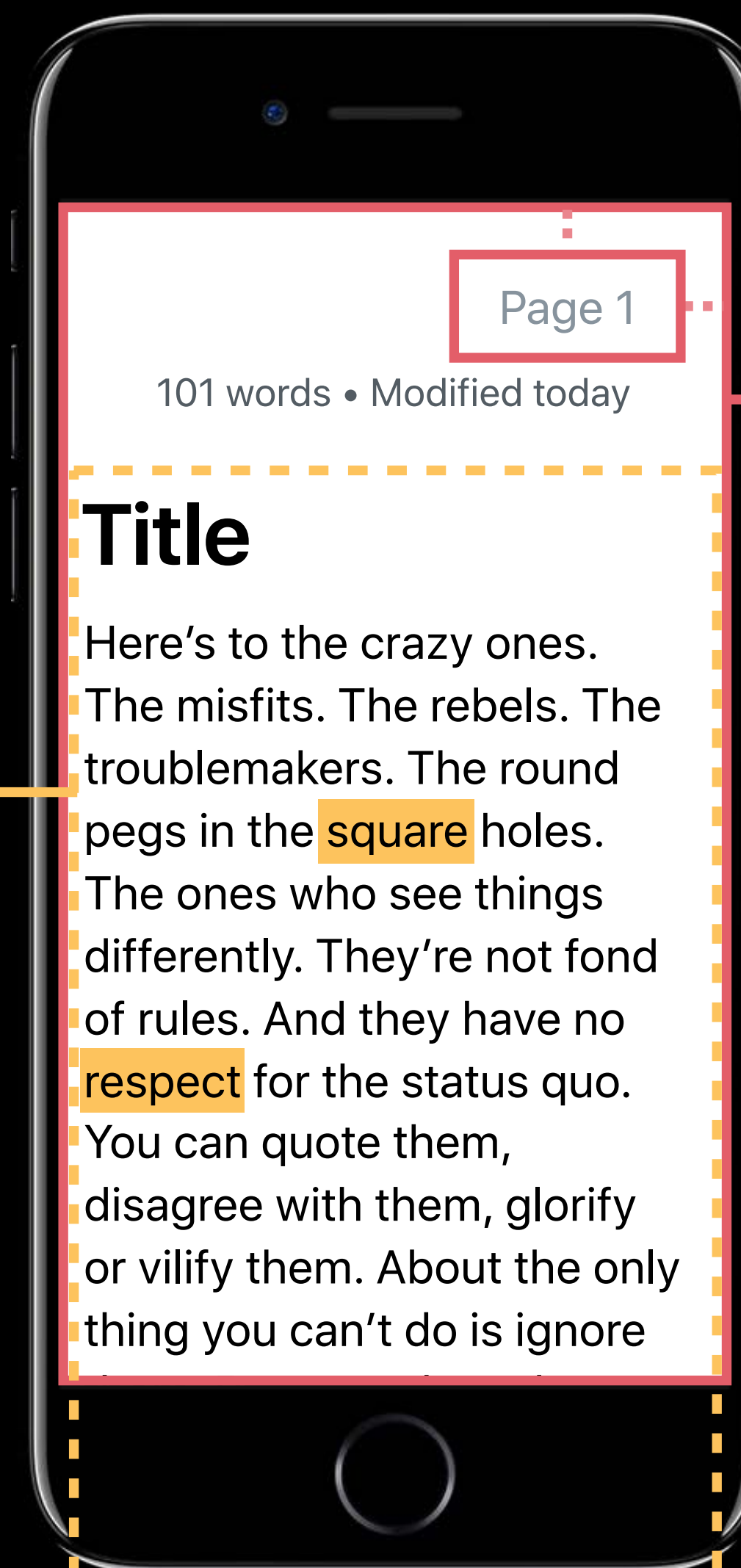
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frameLayoutGuide

NEW

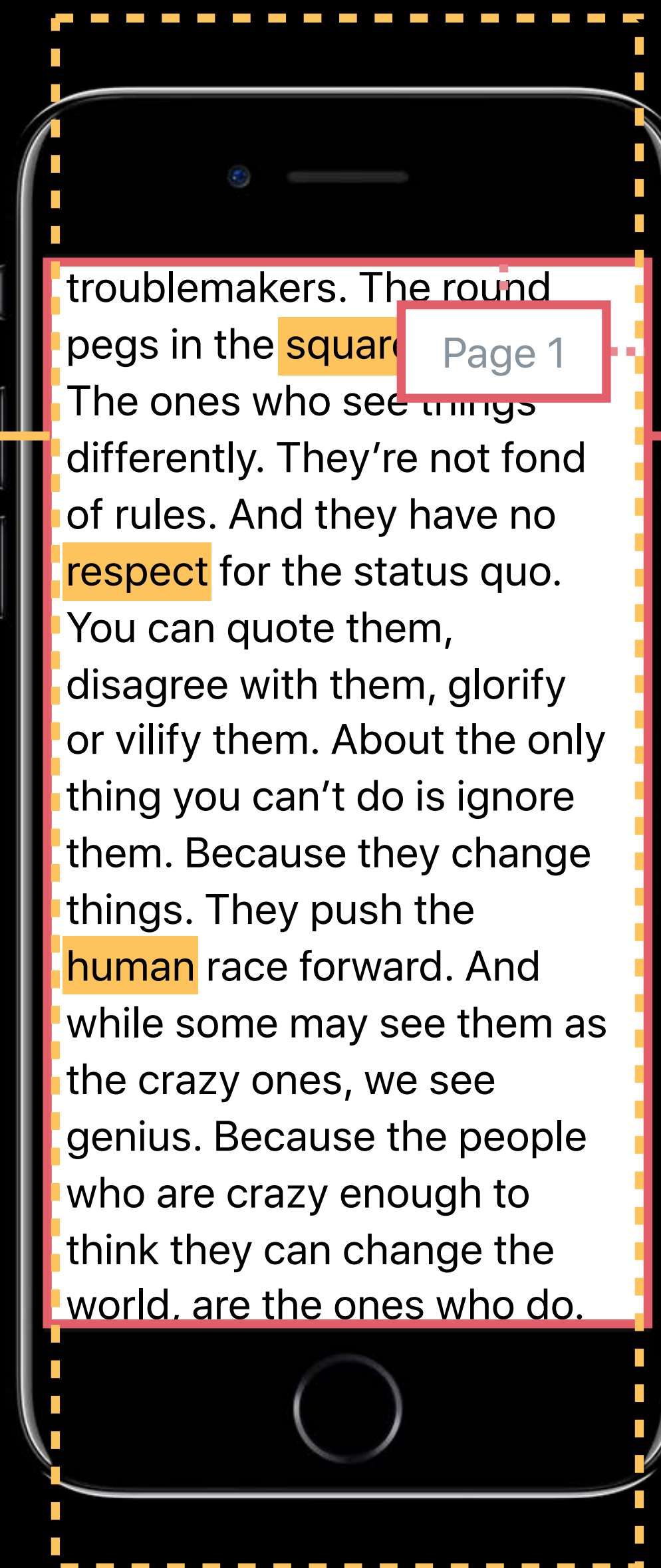
contentLayoutGuide



frameLayoutGuide

NEW

contentLayoutGuide



frameLayoutGuide

# Table Views

# Self-Sizing by Default

NEW

Link on iOS 11, all estimated heights default to `UITableViewAutomaticDimension`

Headers, footers, and cells use self-sizing by default

iOS only—behavior is not changed on tvOS

Ensure all views have sufficient internal constraints

Return fixed sizes from delegate methods



# Opting Out of New Behavior

NEW

Set table view estimated height properties to zero

Also disables self-sizing

```
override func viewDidLoad() {  
    tableView.estimatedRowHeight = 0  
    tableView.estimatedSectionHeaderHeight = 0  
    tableView.estimatedSectionFooterHeight = 0  
}
```

# Opting Out of New Behavior

NEW

Set table view estimated height properties to zero

Also disables self-sizing

```
override func viewDidLoad() {  
    tableView.estimatedRowHeight = 0  
    tableView.estimatedSectionHeaderHeight = 0  
    tableView.estimatedSectionFooterHeight = 0  
}
```

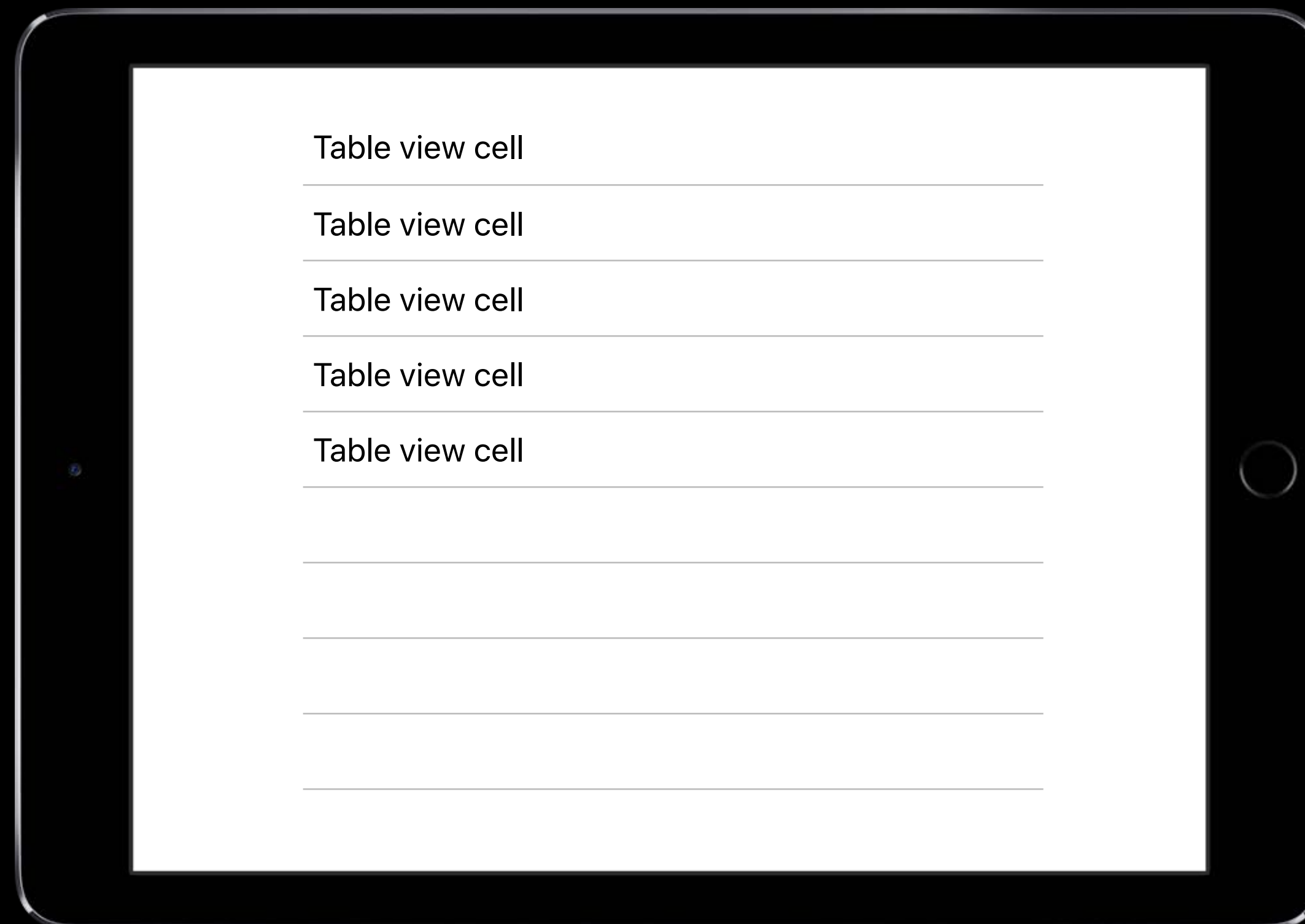


Table view cell

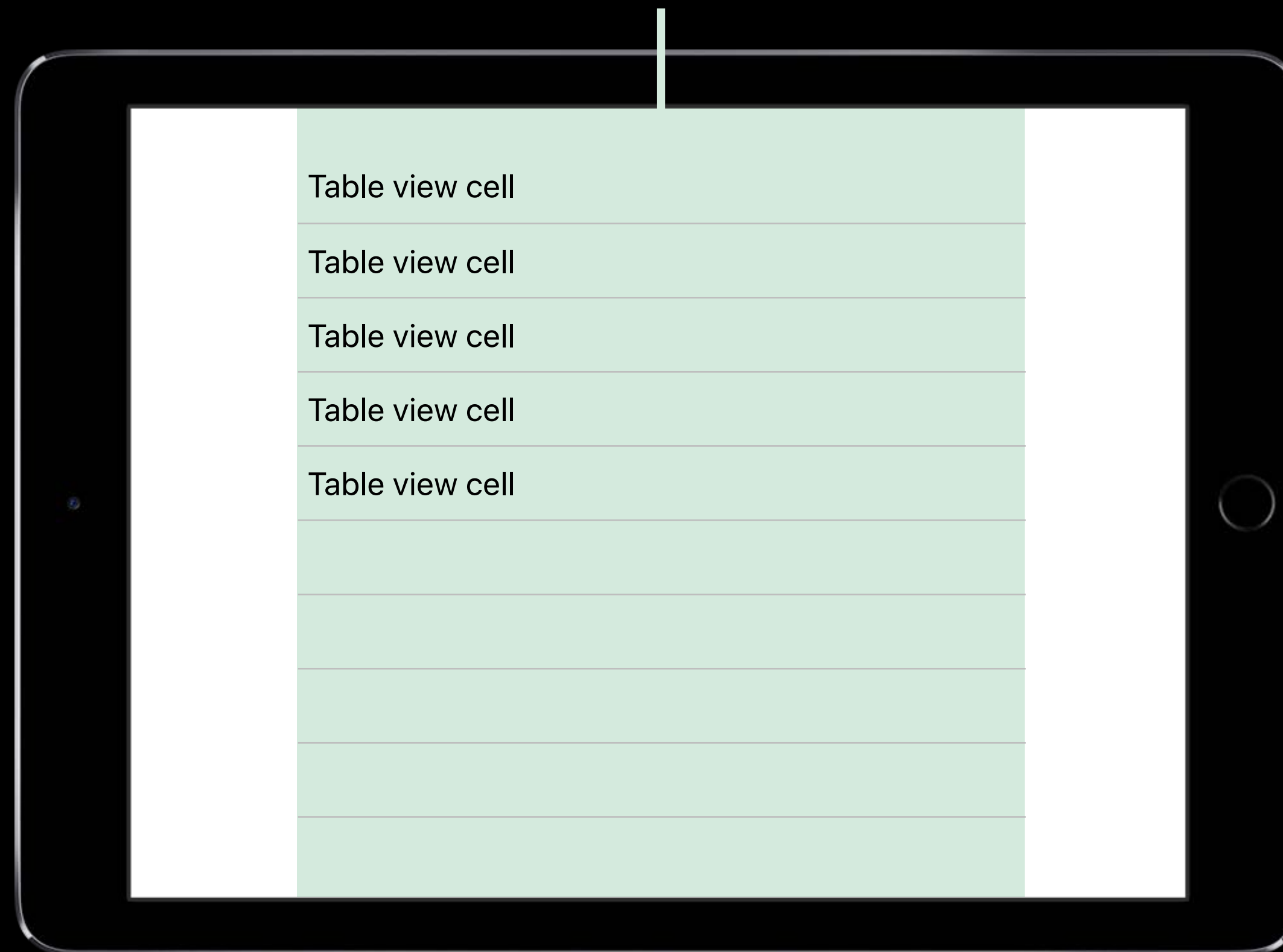
Table view cell

Table view cell

Table view cell

Table view cell

## readable content guide



separatorInset



```
separatorInset.left = 30
```

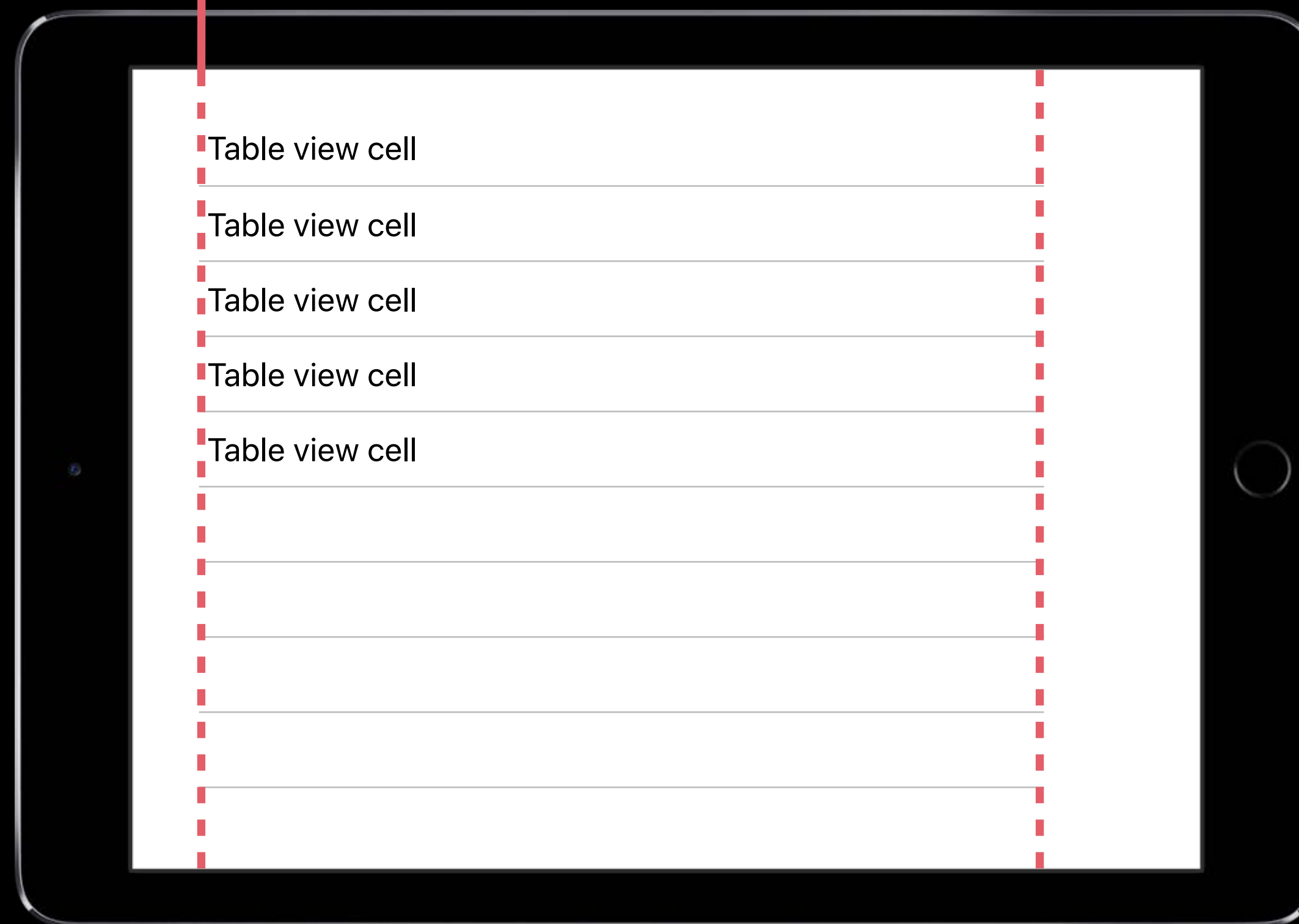


```
separatorInset.left = 30
```



NEW

```
.left = 30
```

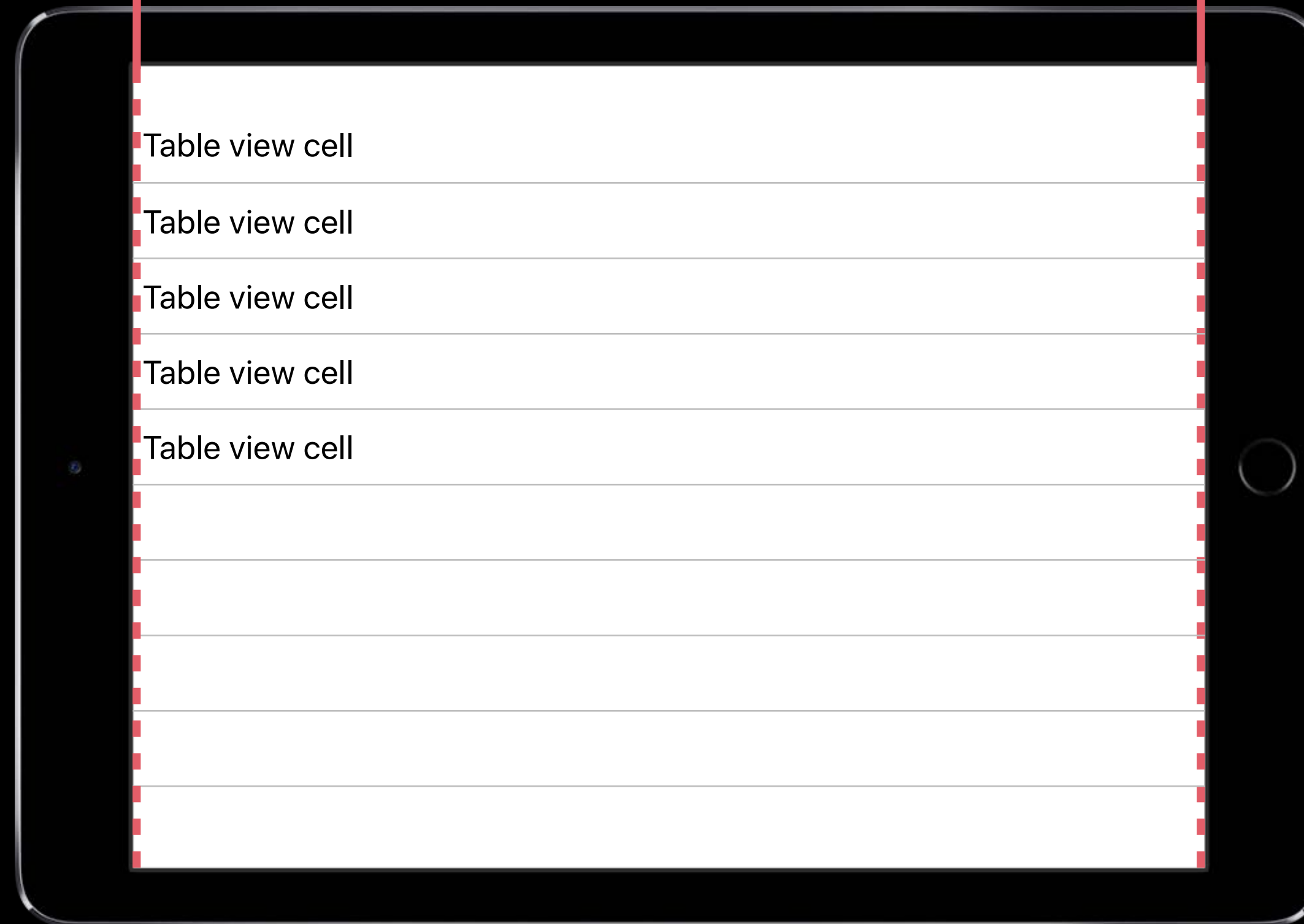




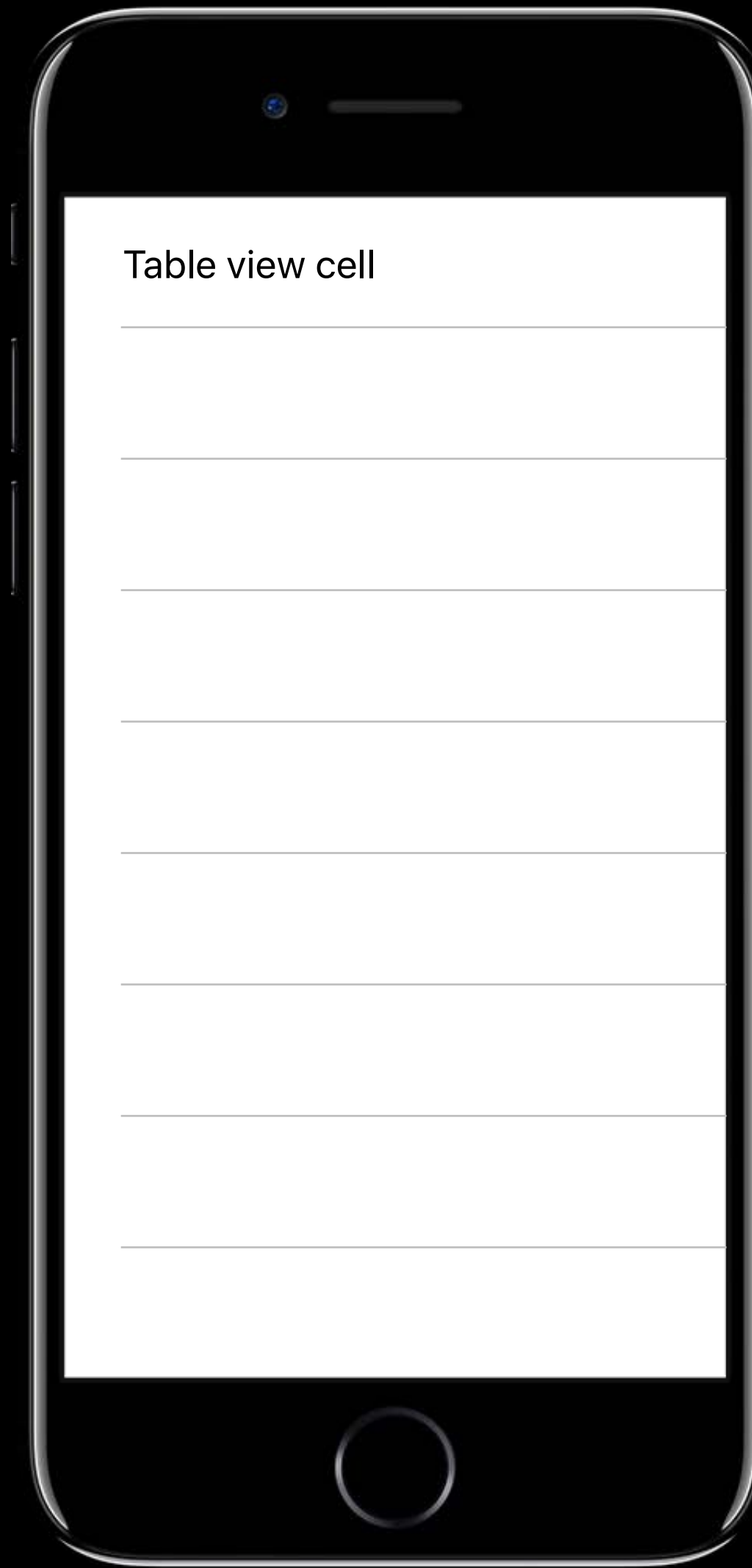
NEW

```
.left = 0
```

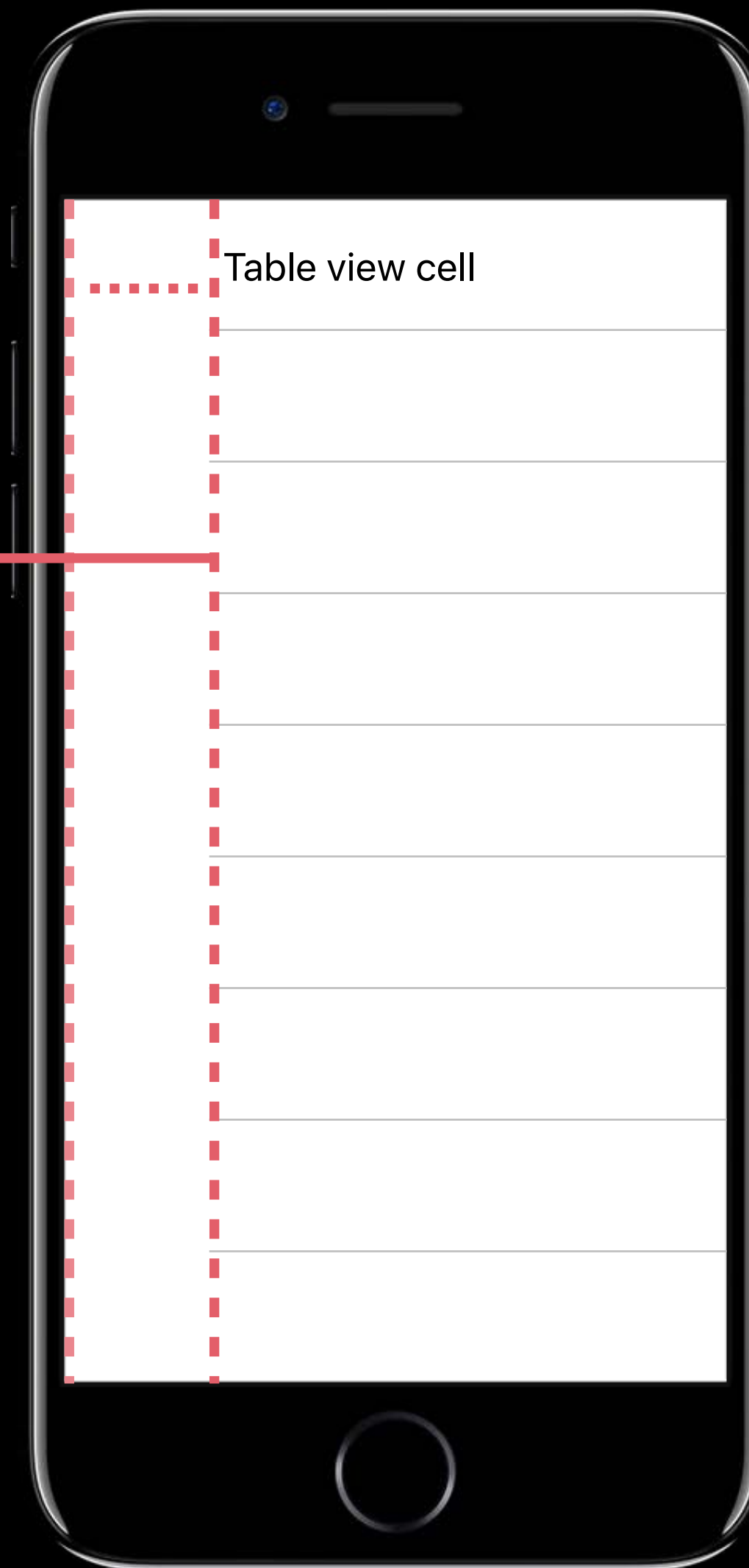
```
.right = 0
```





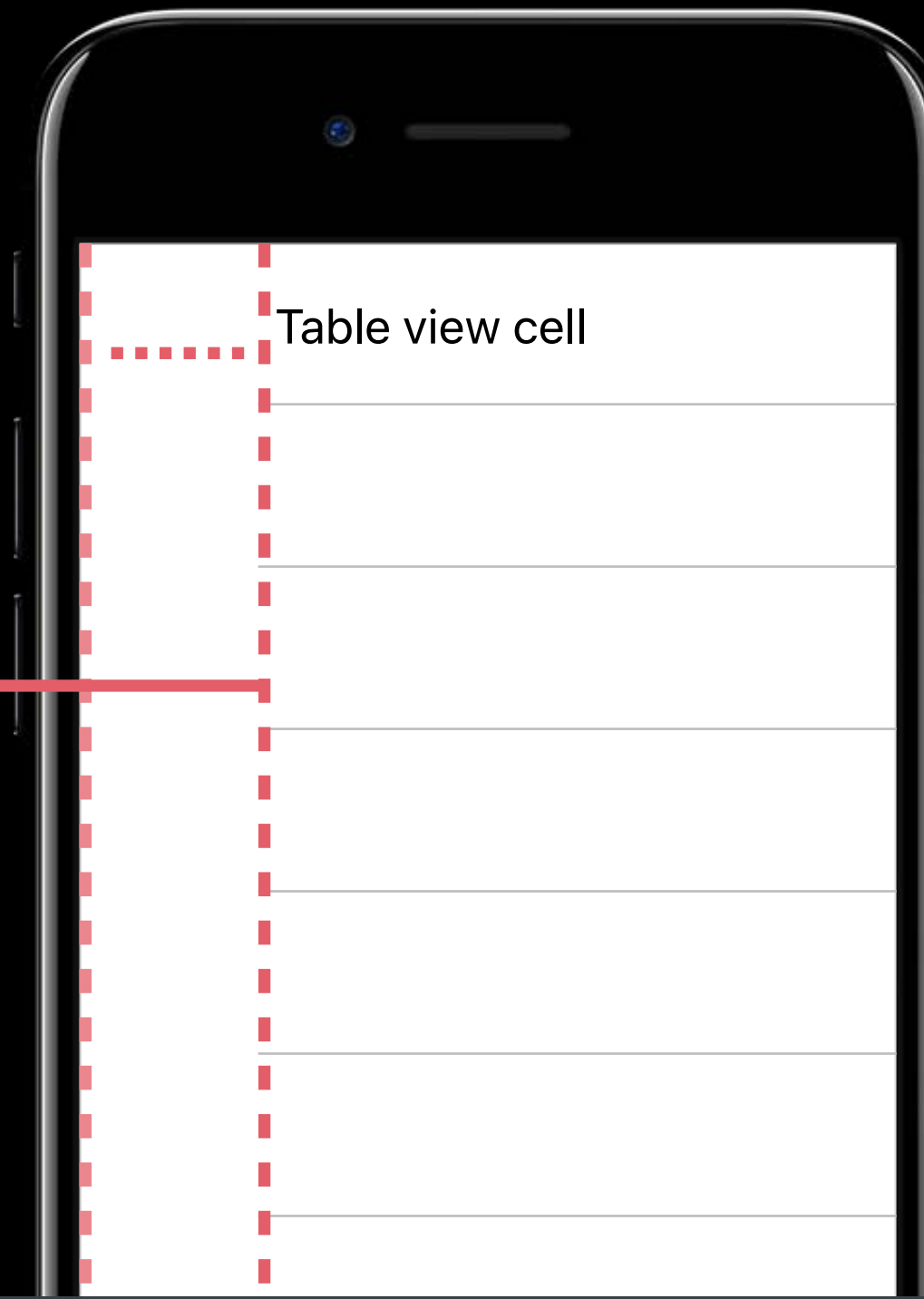


```
separatorInset.left = 60
```



NEW

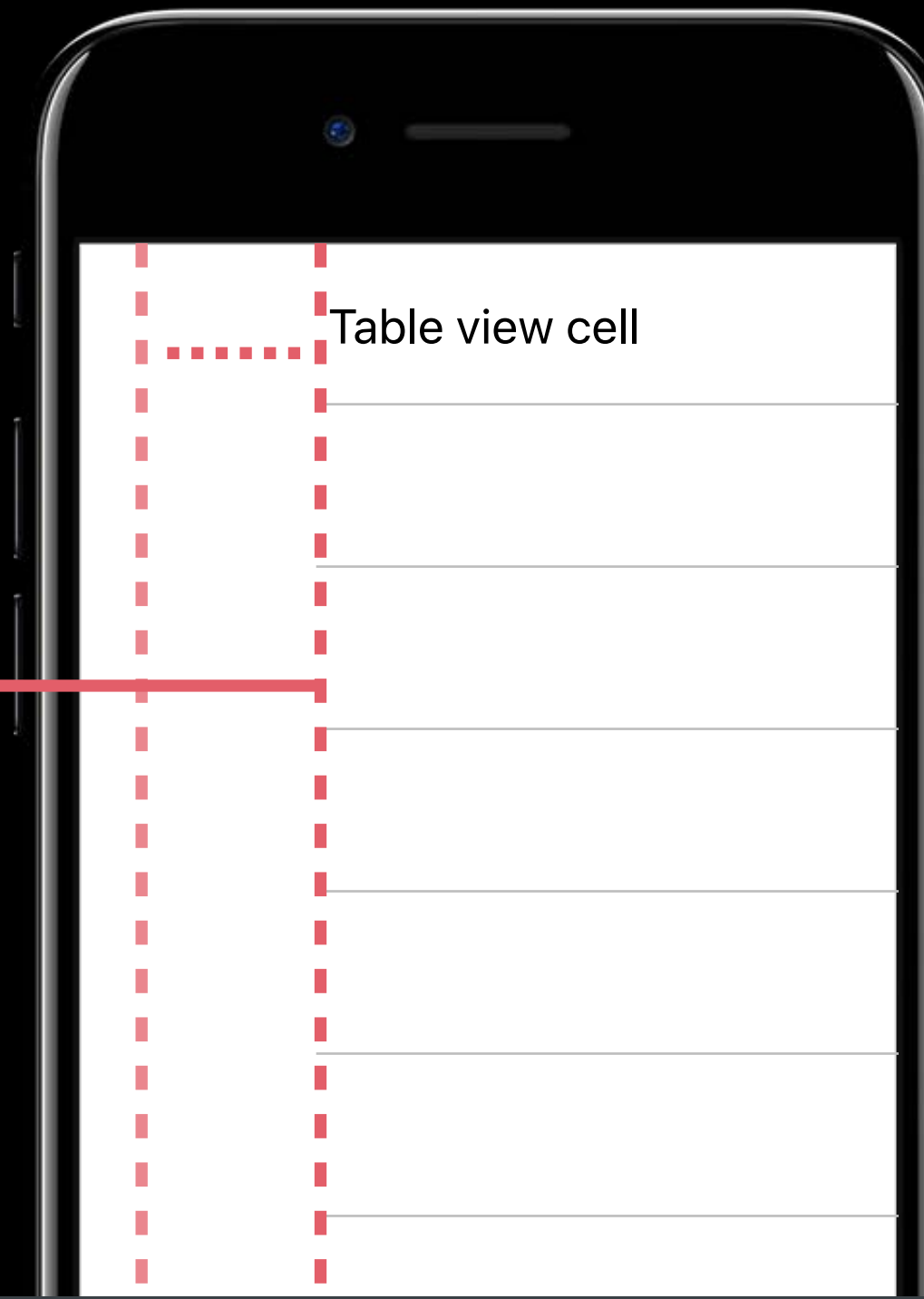
`separatorInset.left = 60`



```
class MyViewController: UITableViewController {  
    override func viewDidLoad() {  
        tableView.separatorInsetReference = .fromCellEdges // default  
    }  
}
```

NEW

`separatorInset.left = 60`



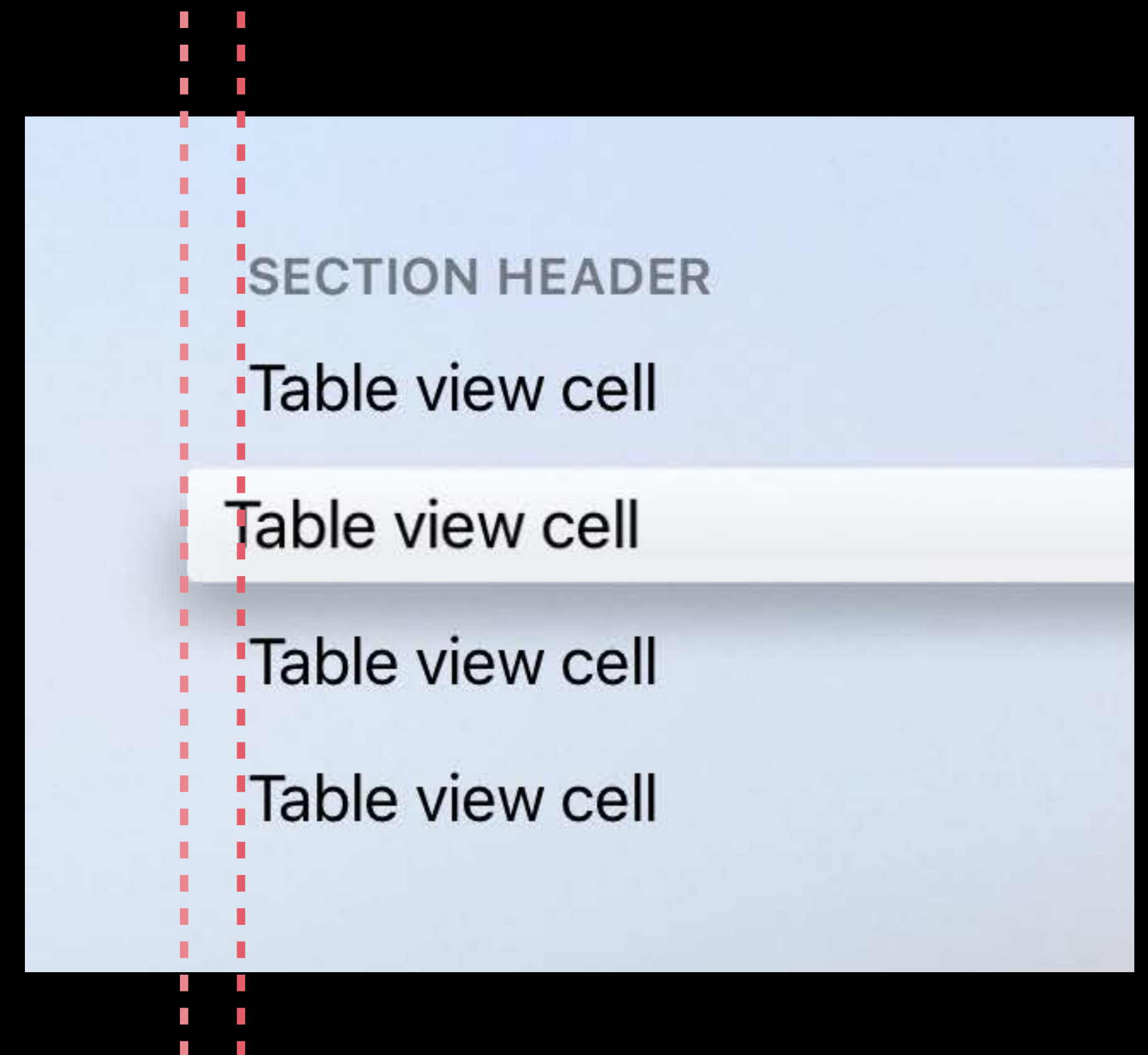
```
class MyViewController: UITableViewController {  
    override func viewDidLoad() {  
        tableView.separatorInsetReference = .fromAutomaticInsets  
    }  
}
```

# Table Views and Safe Area

Automatic separator insets are relative to safe area insets

UITableViewCell and UITableViewHeaderFooterView inset their content view within the safe area

Use UITableViewHeaderFooterView for all headers and footers



# Swipe Actions

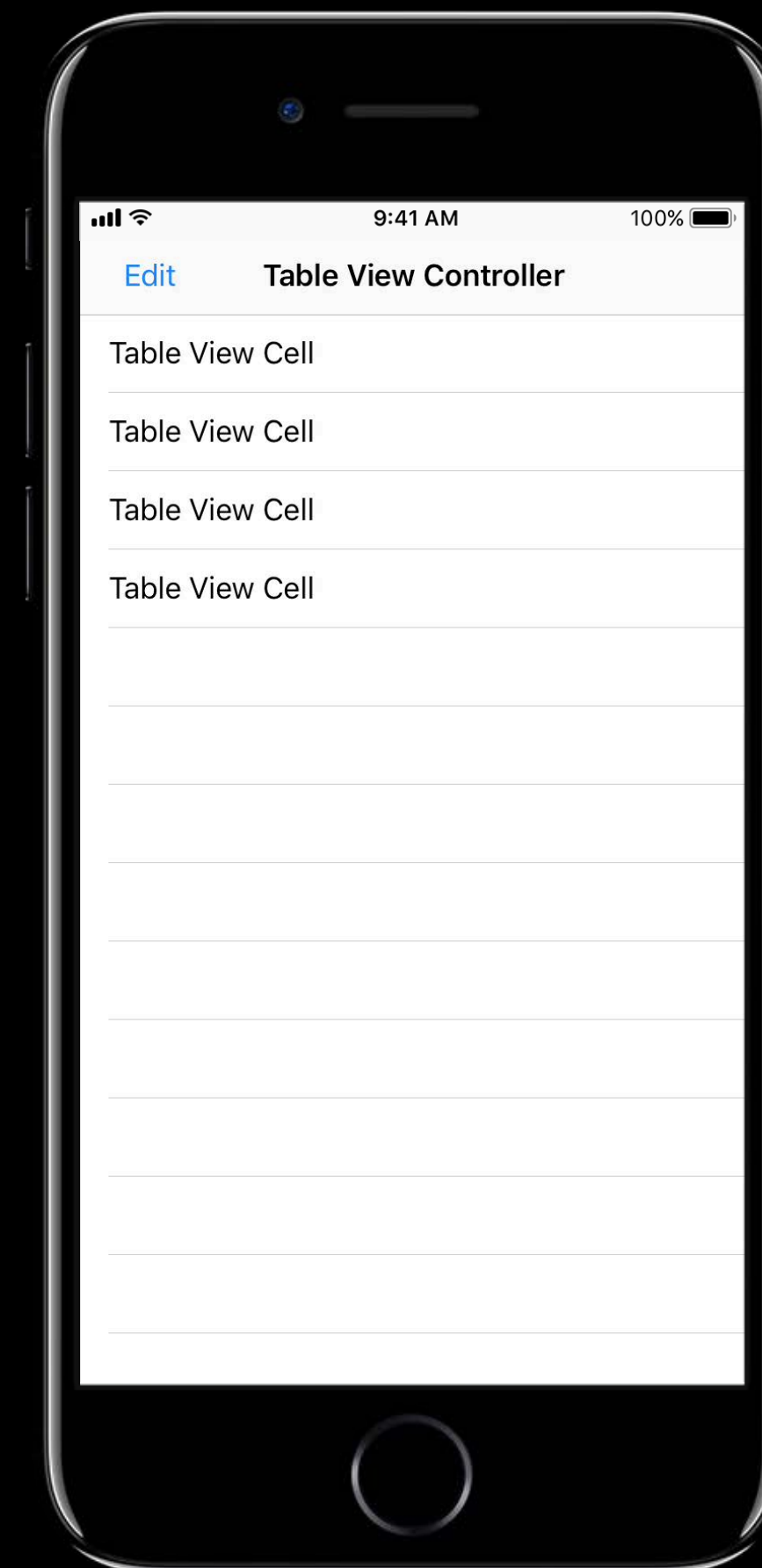
NEW

New look-and-feel automatically for all table views

Supports full swipe-to-delete for iOS 11-linked apps

New features with API adoption

- Images
- Leading and trailing actions
- Completion handler and cancellation





# Swipe Actions

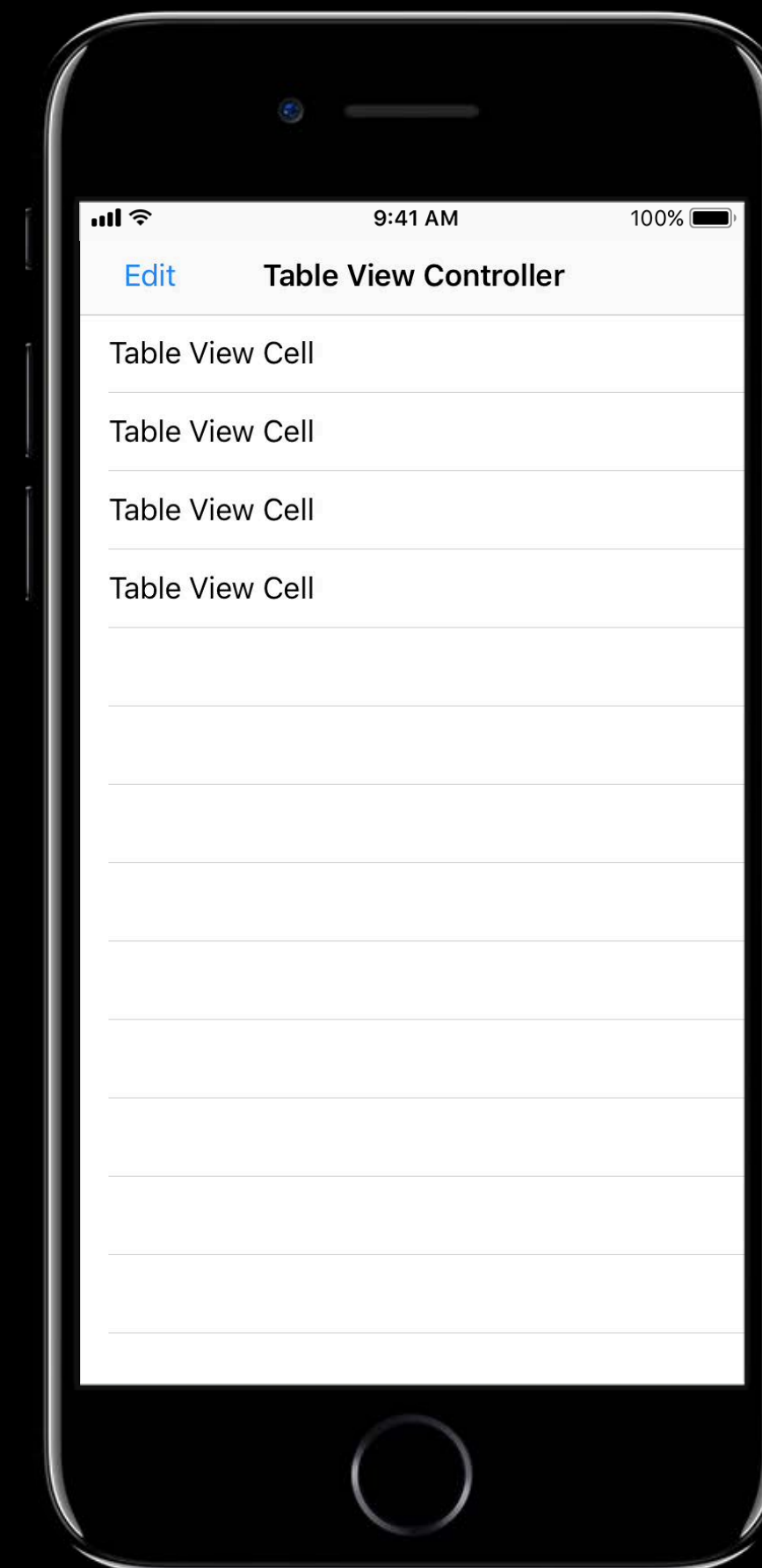
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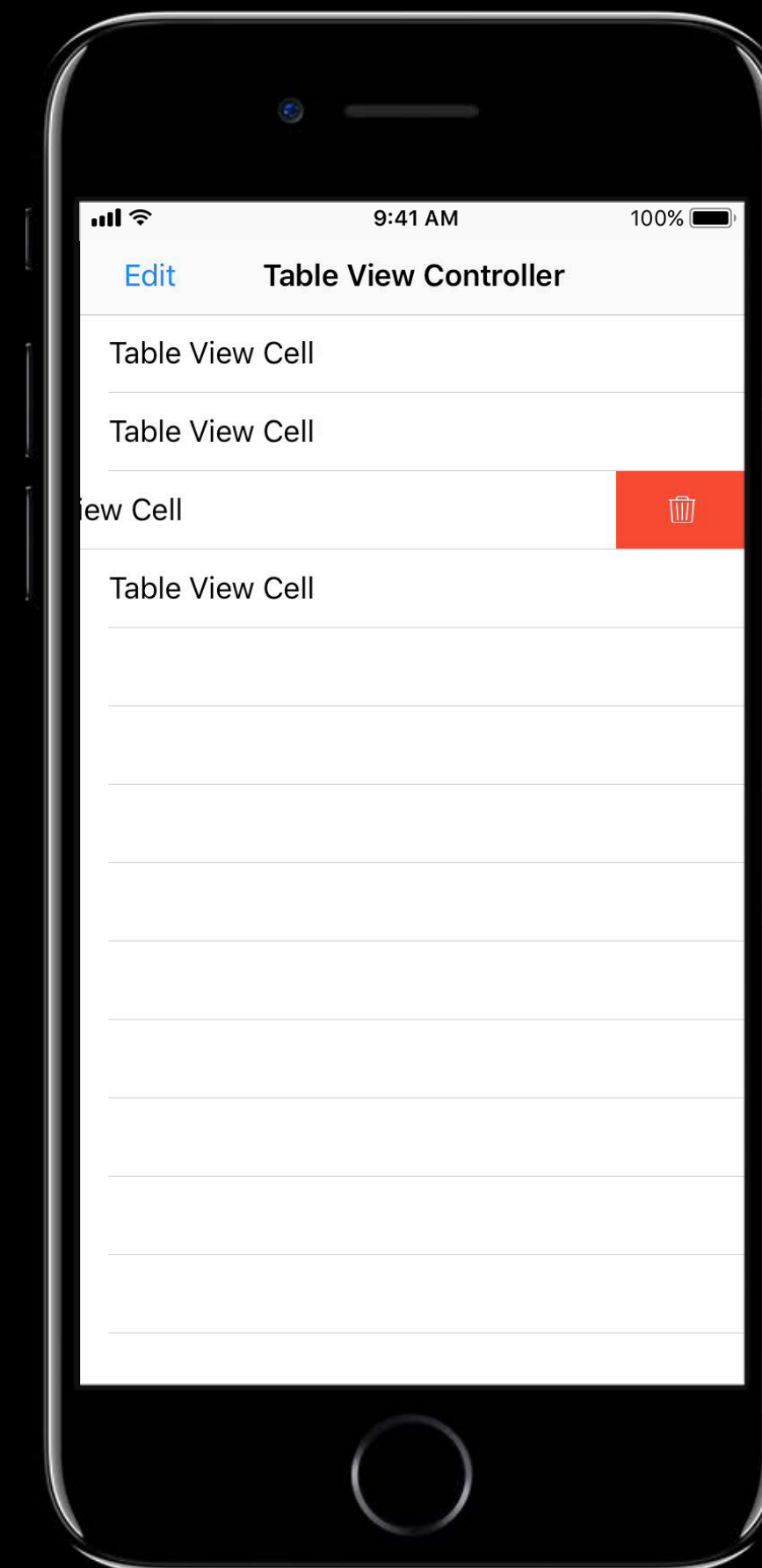
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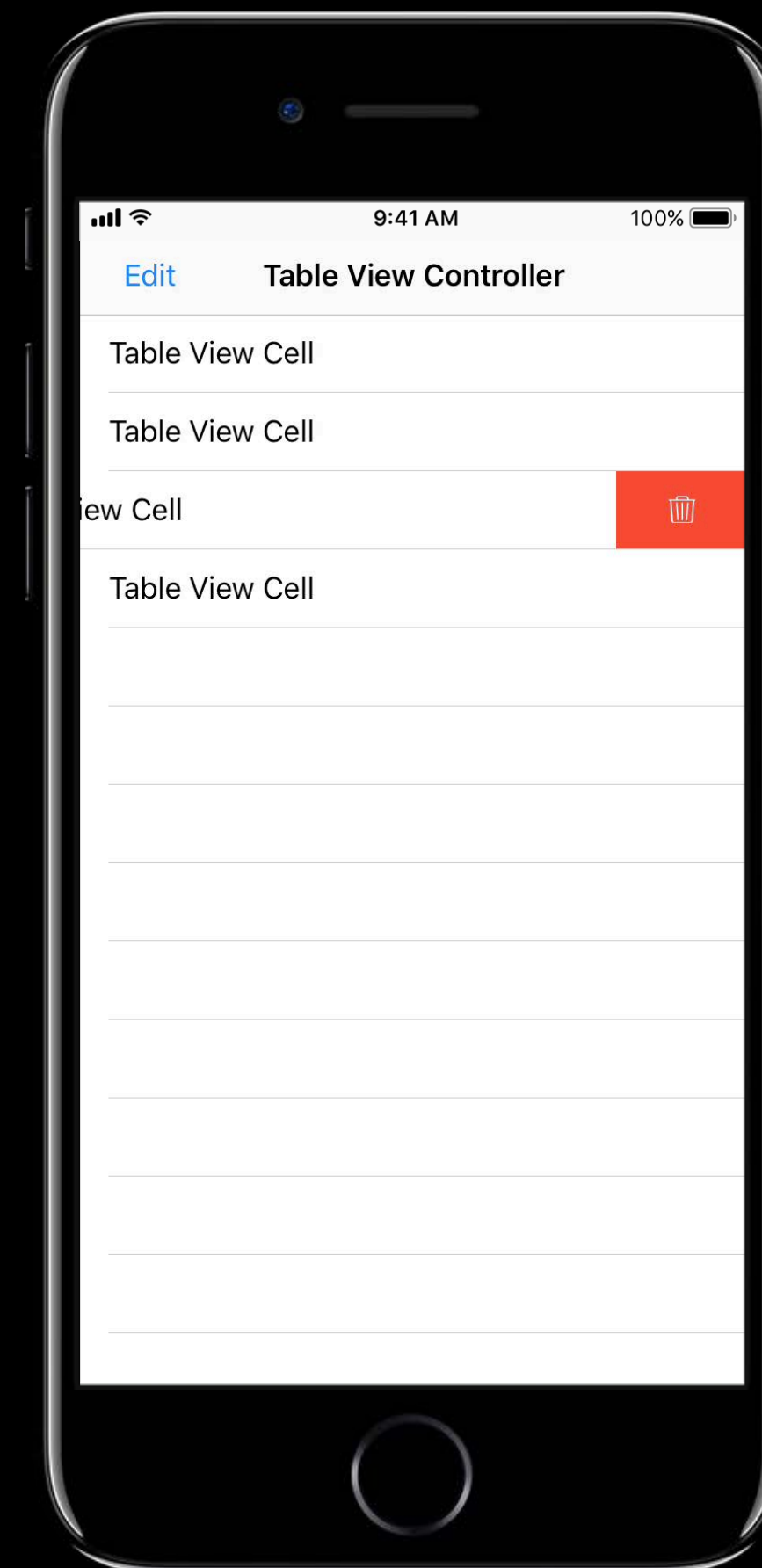
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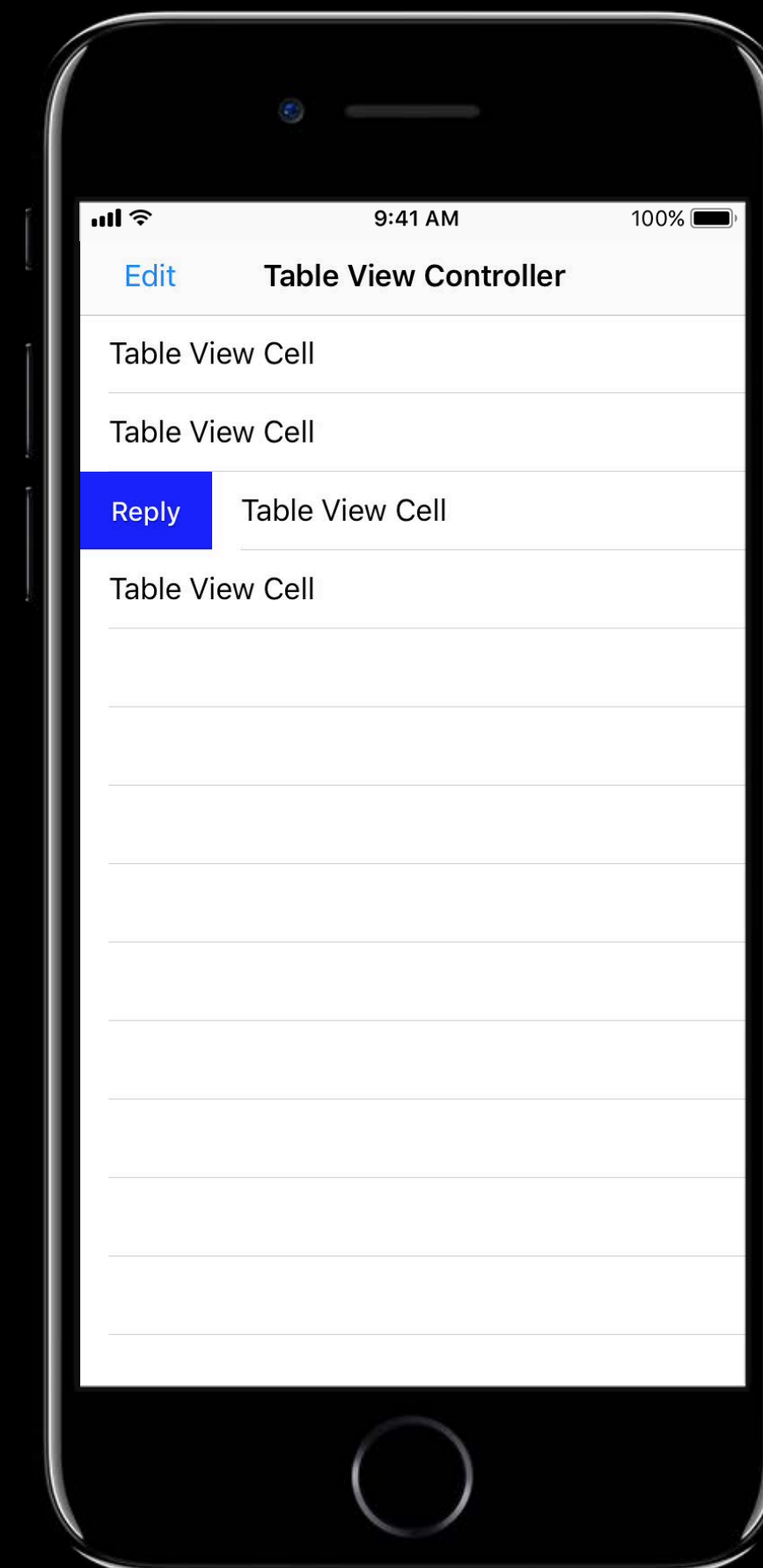
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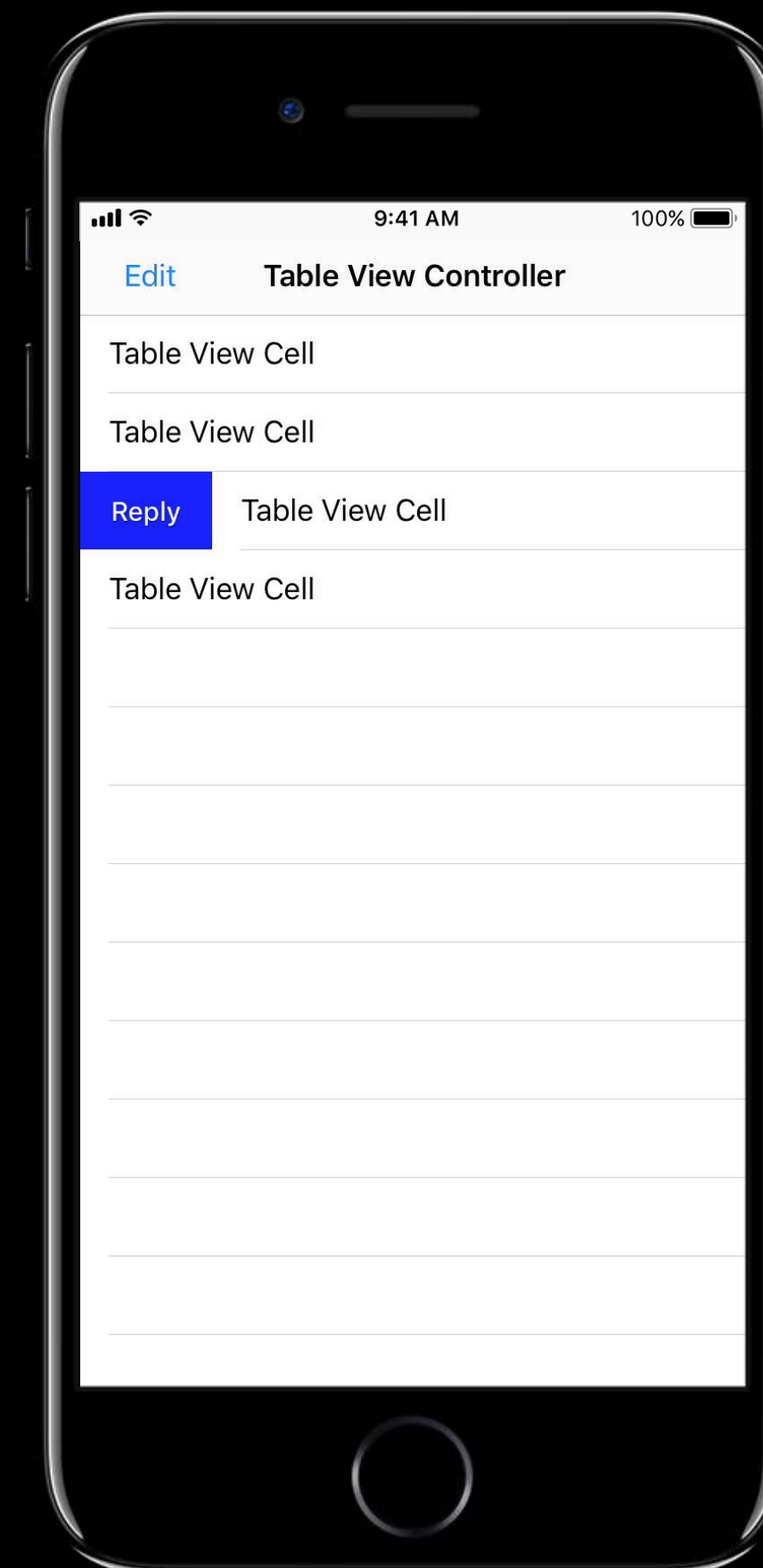
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***Demo***

Raj Ramamurthy, iOS System Experience

# Summary

Large navigation titles

New search experience

Layout margins

Safe area

Scroll views

Table views

# Summary

Large navigation titles

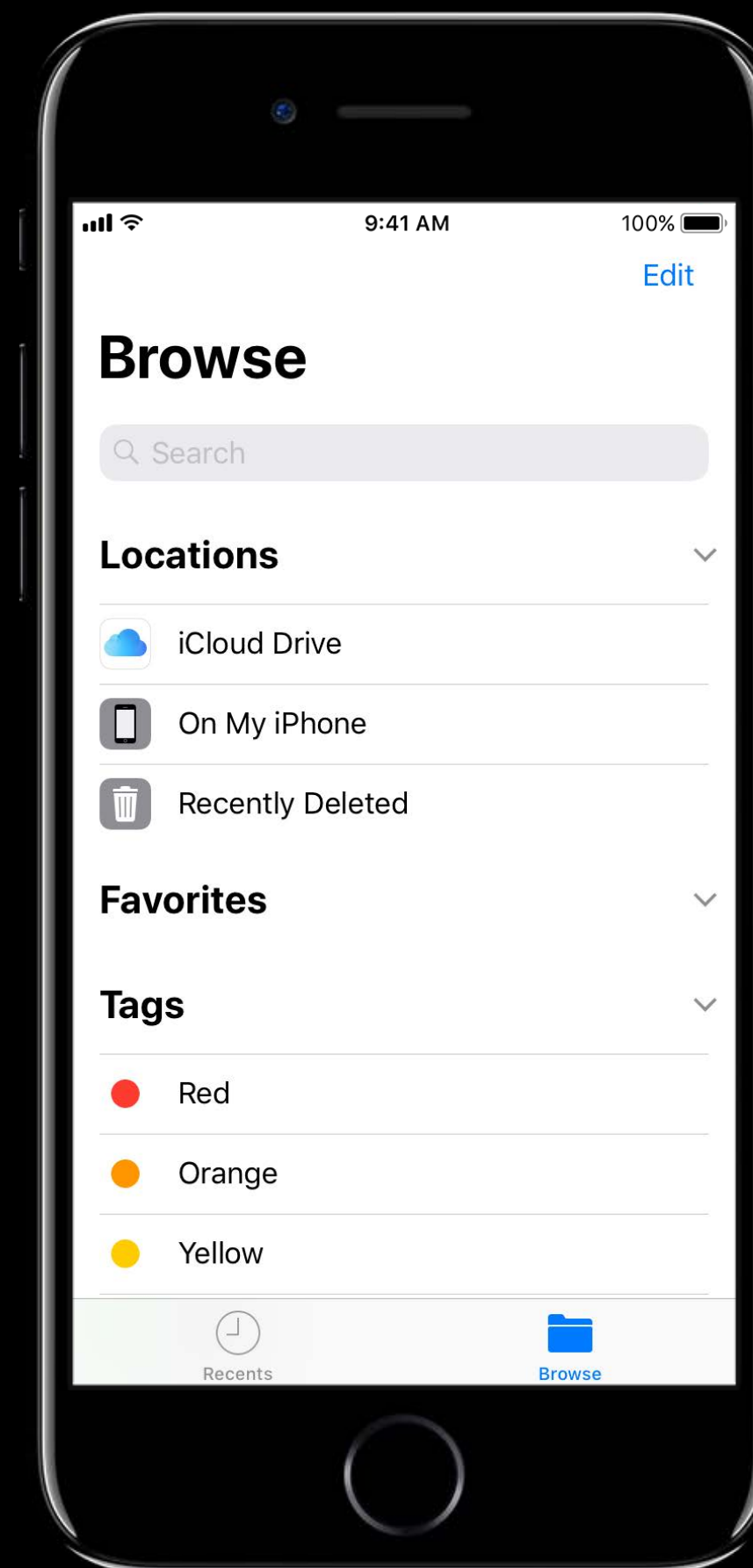
New search experience

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# Summary

Large navigation titles

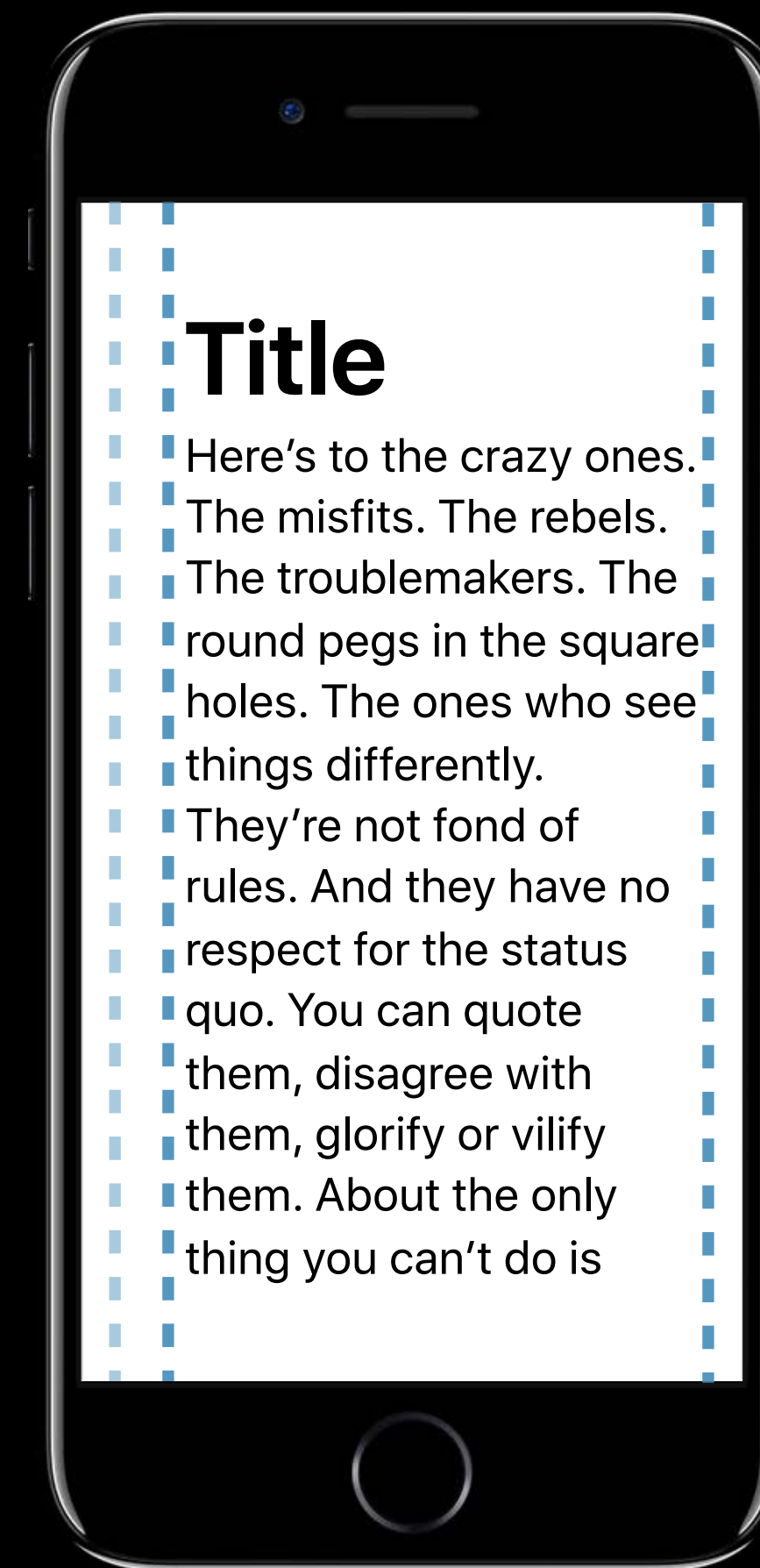
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Large navigation titles

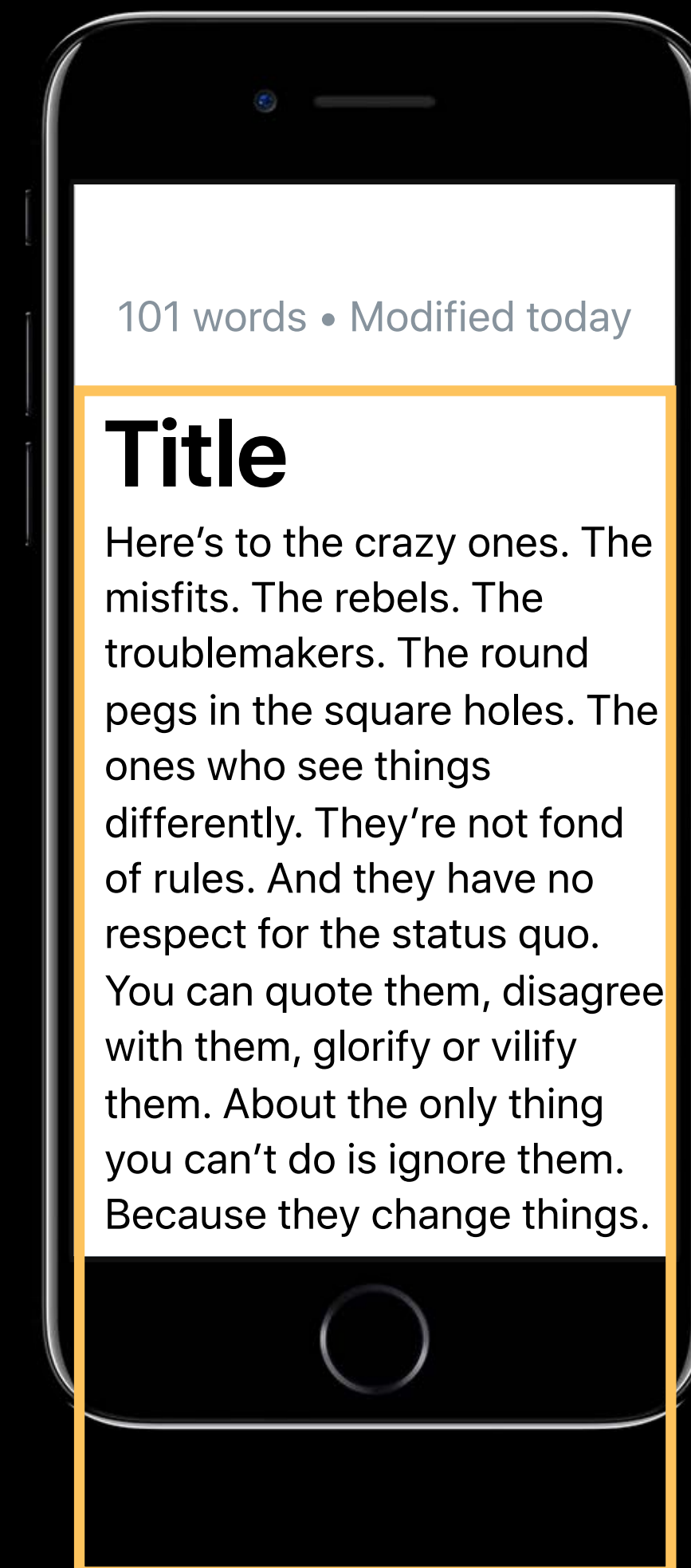
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Large navigation titles

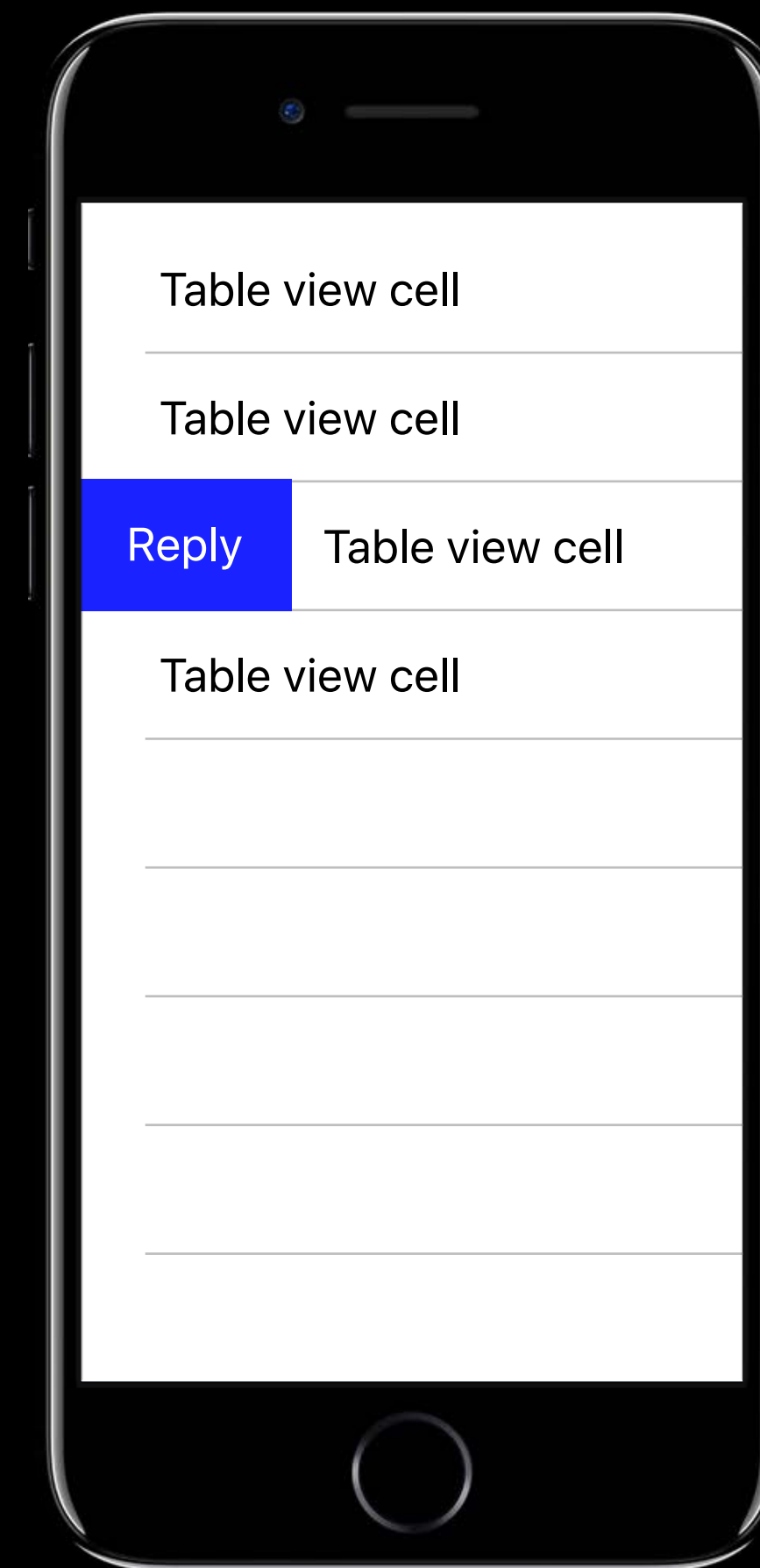
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# More Information

<https://developer.apple.com/wwdc17/204>

# Labs

Cocoa Touch Lab	Technology Lab I	Wed 3:10PM–6:00PM
UIKit and Collection View Lab	Technology Lab B	Thu 10:00AM–12:30PM

