

Updating Your App For iOS 11

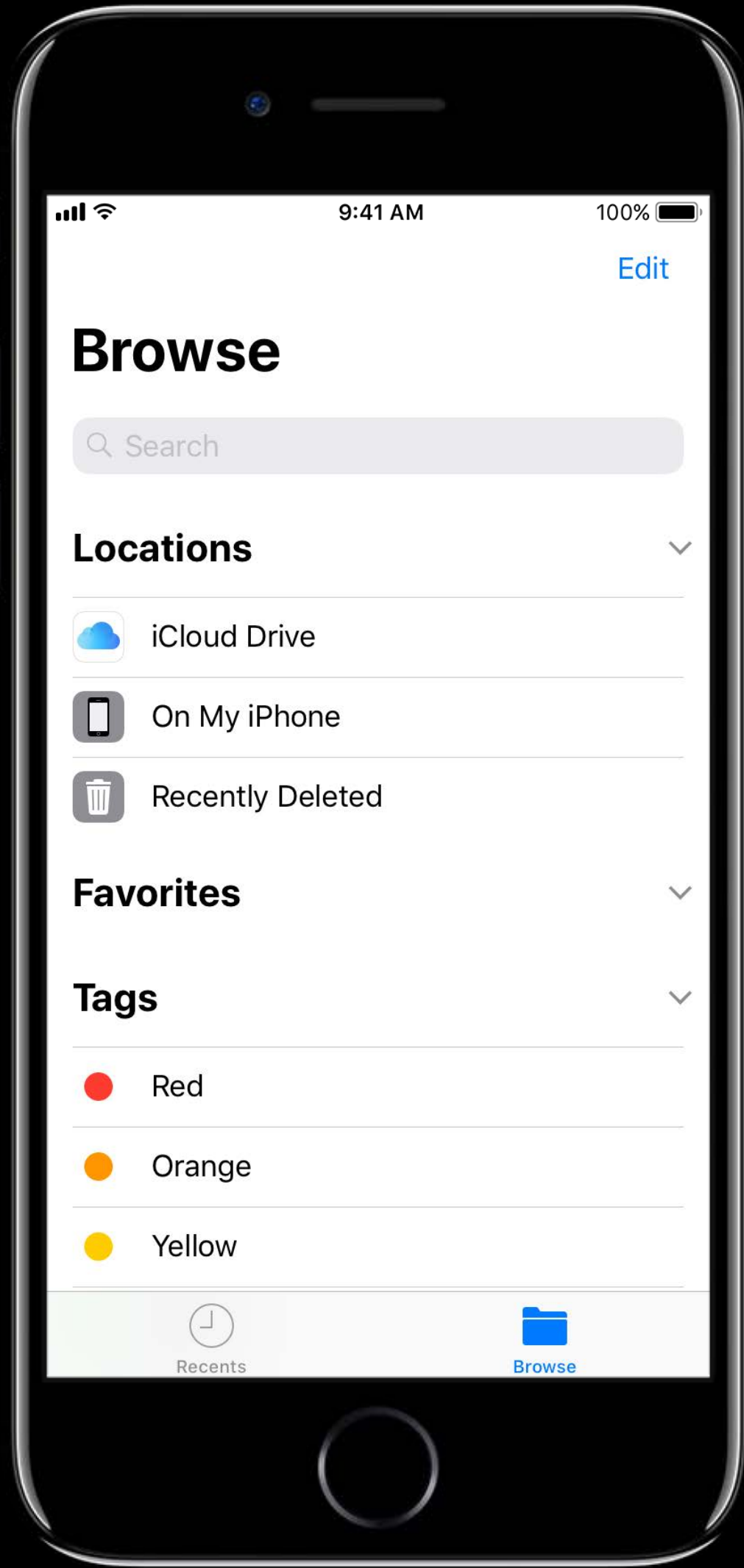
Session 204

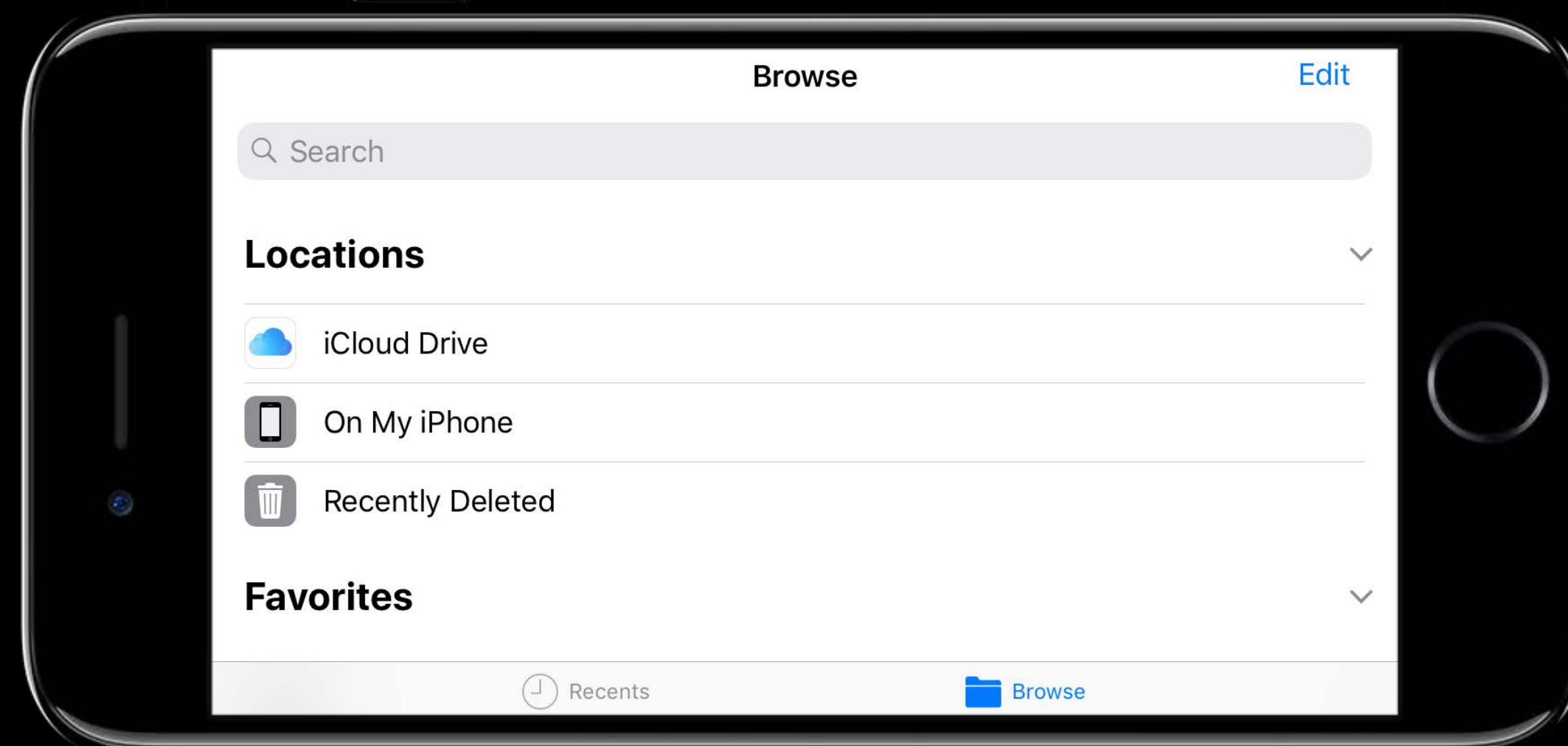
David Duncan, iOS System Experience
Raj Ramamurthy, iOS System Experience
Kyle Sluder, iOS System Experience

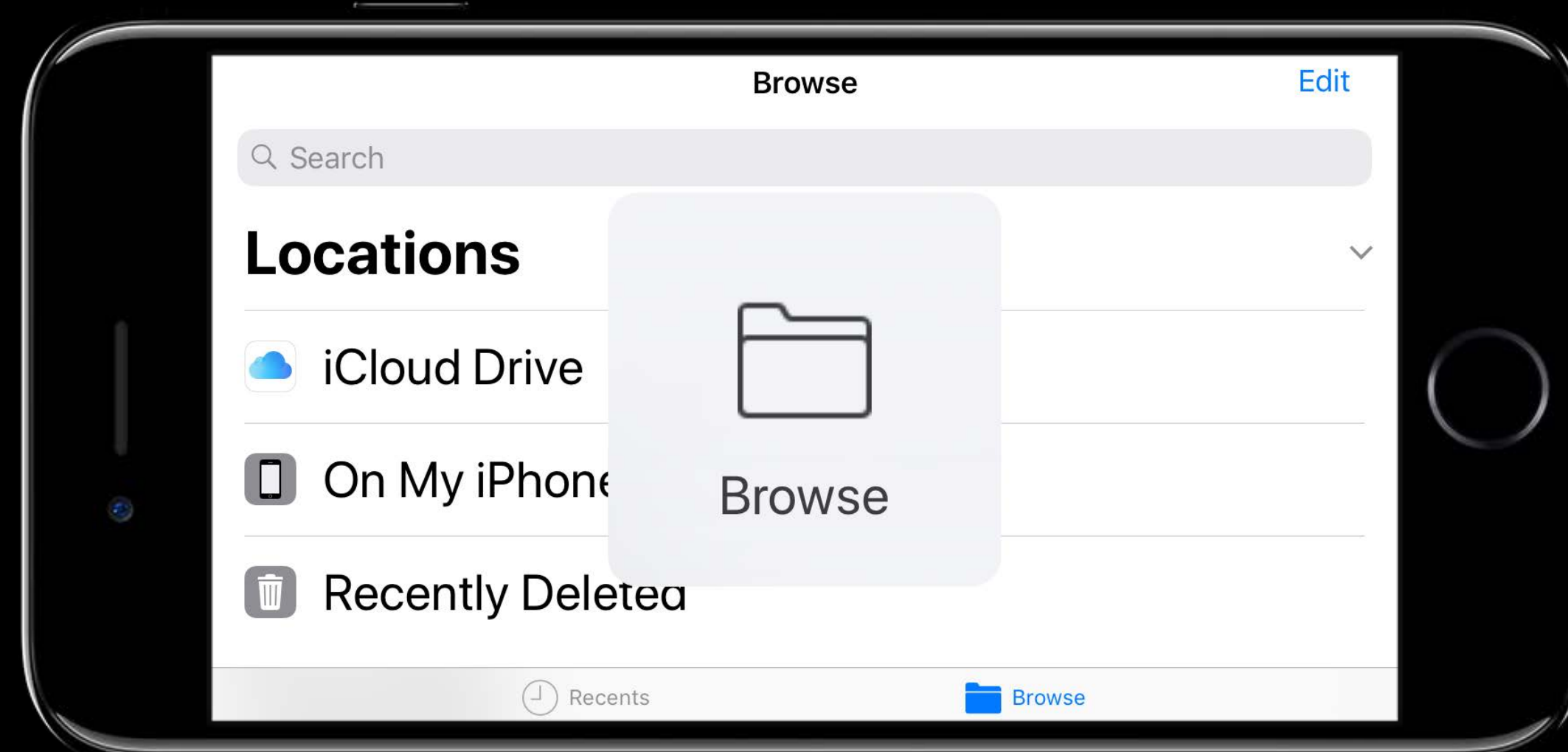
Adopting new functionality in UIKit's Bars

Managing margins and insets

New features of UIScrollView and UITableView







UIBarItem

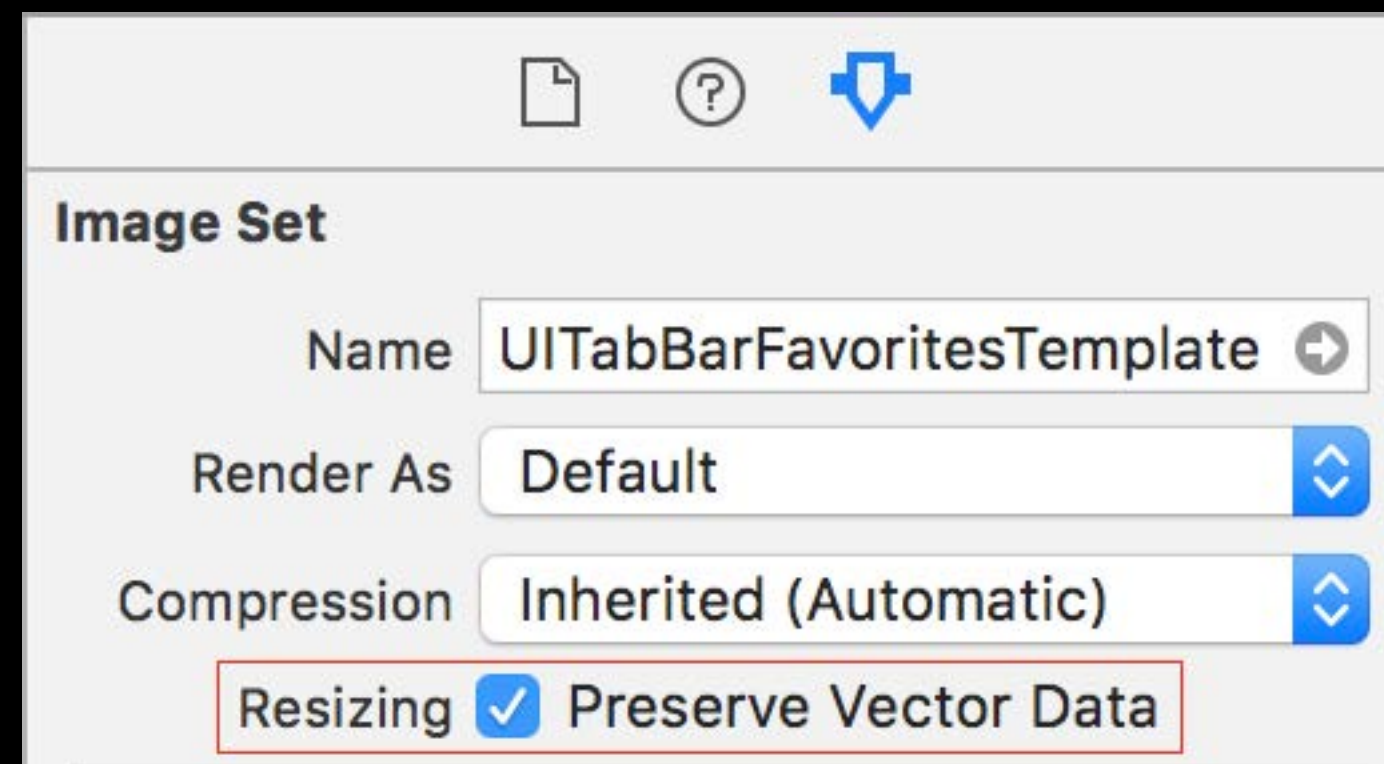
UIBarButtonItem

UIBarButtonItem.landscapeImagePhone

UIBarButtonItem

`UIBarButtonItem.landscapeImagePhone`

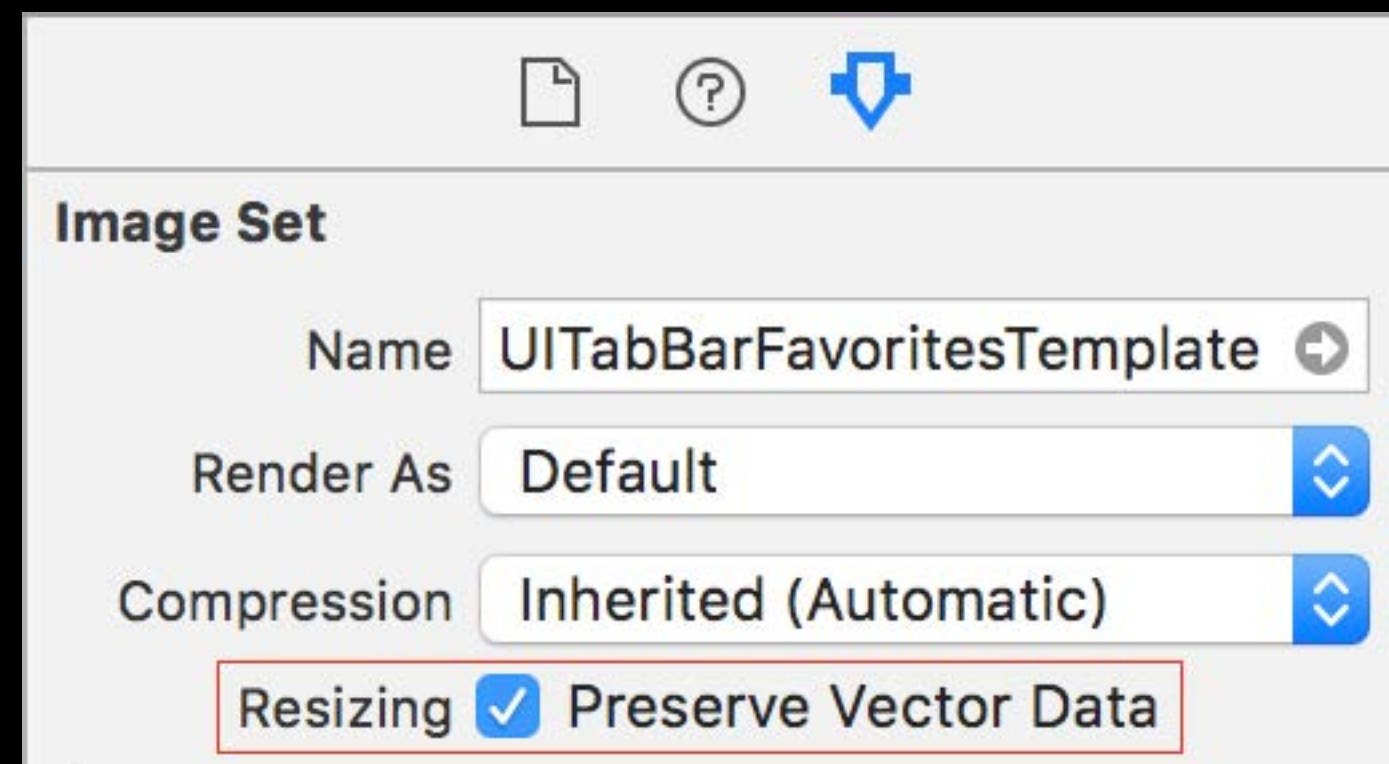
`UIBarButtonItem.largeContentSizeImage`



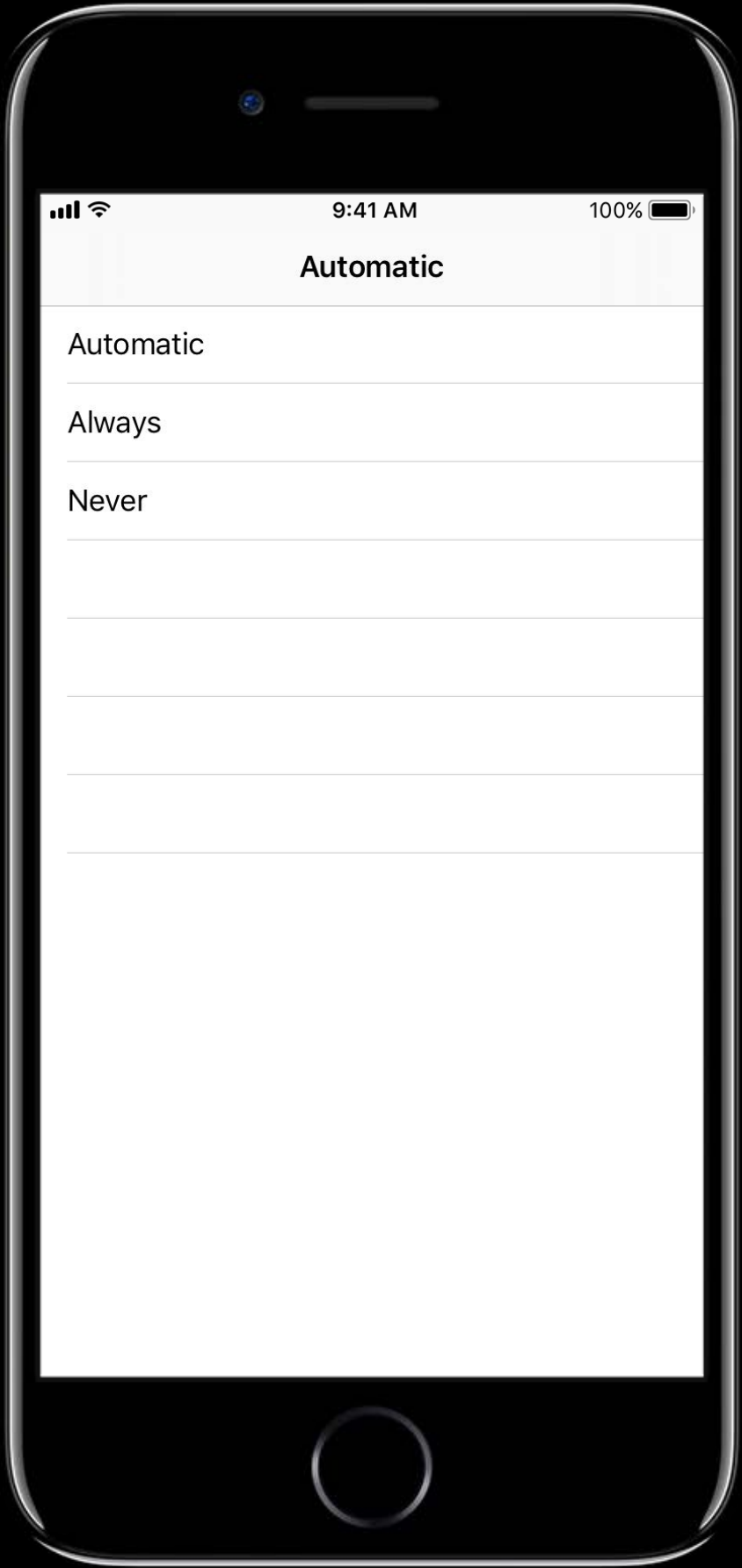
UIBarButtonItem

`UIBarButtonItem.landscapeImagePhone`

`UIBarButtonItem.largeContentSizeImage`

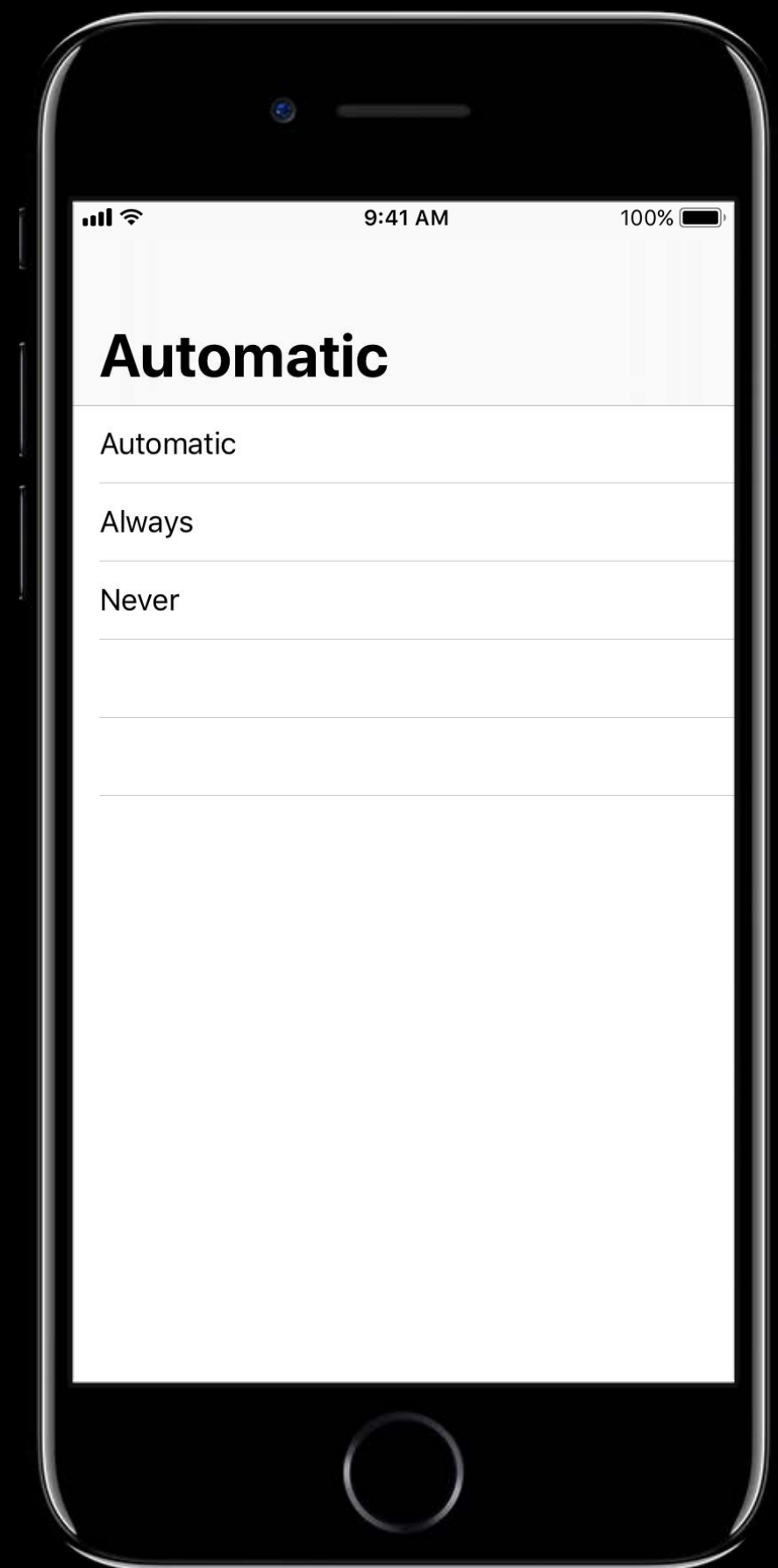


Controlling When Large Titles Display



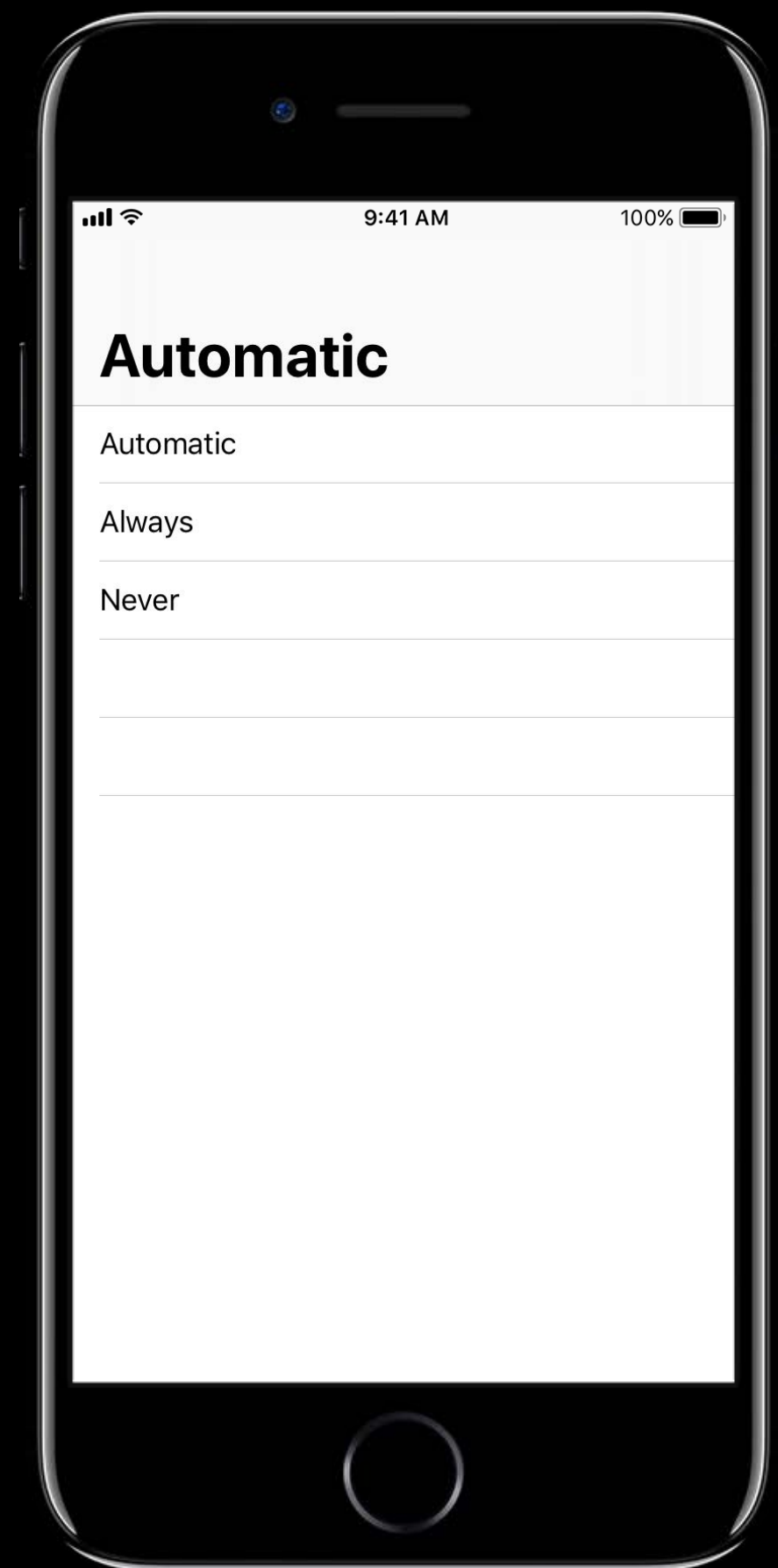
Controlling When Large Titles Display

```
navigationBar.prefersLargeTitles = true
```



Controlling When Large Titles Display

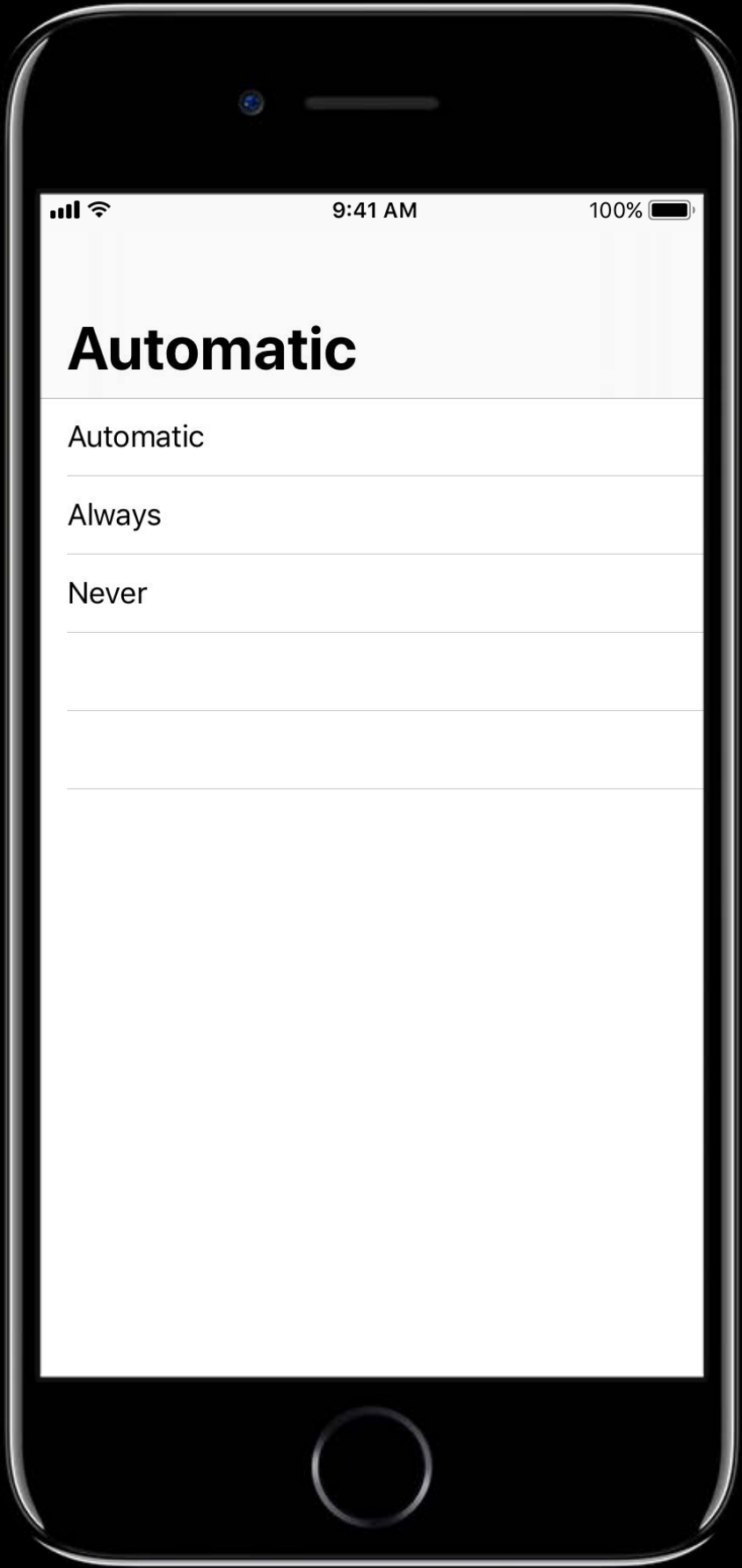
```
navigationItem.largeTitleDisplayMode
```



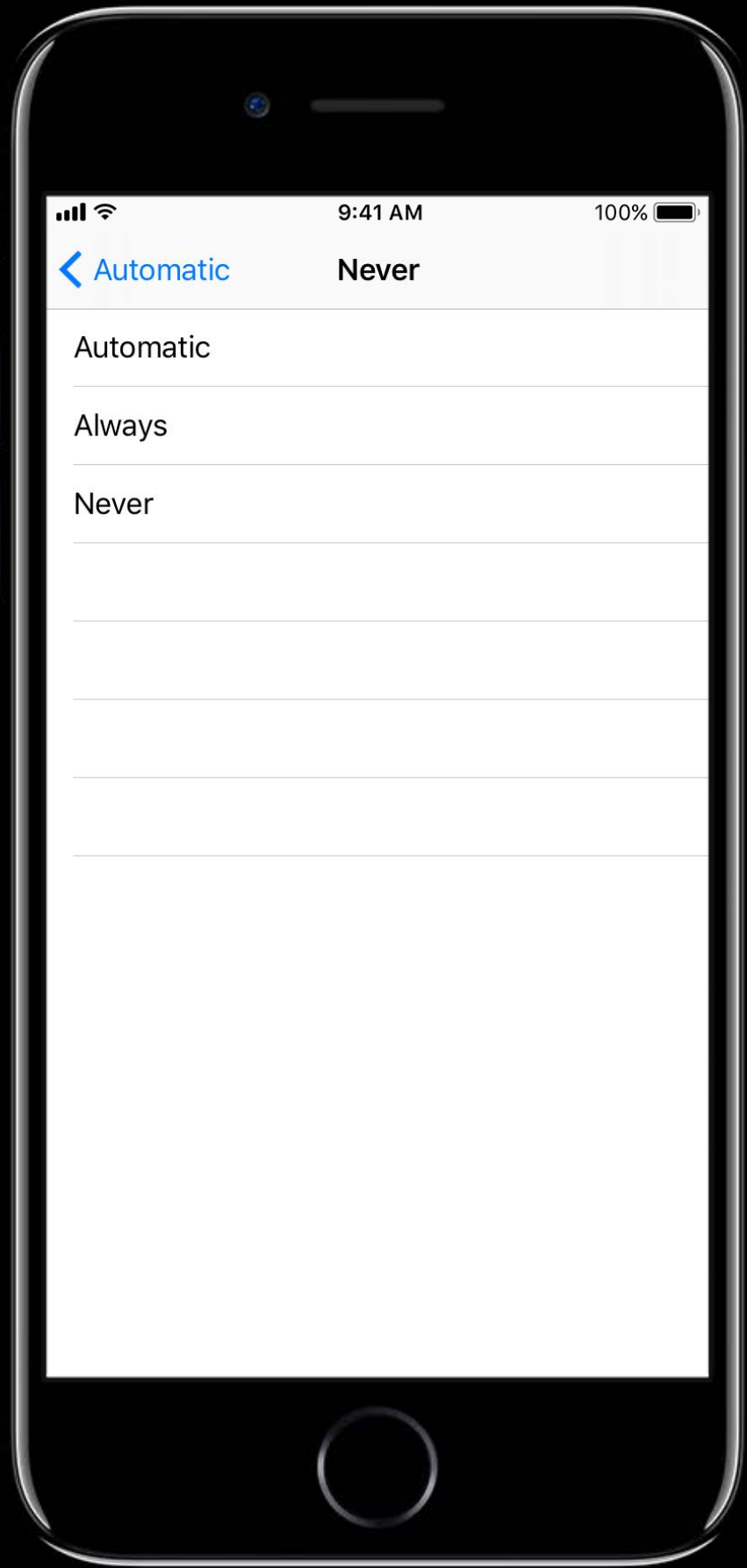
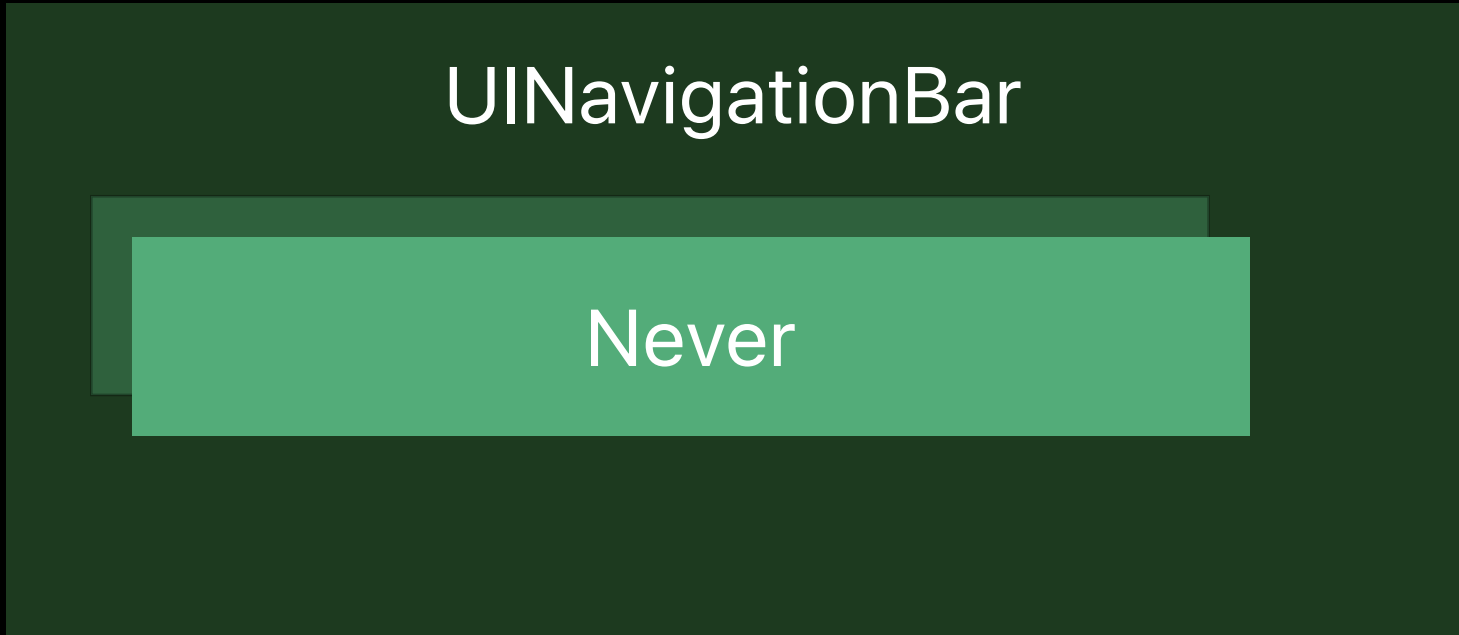
Controlling When Large Titles Display

UINavigationController

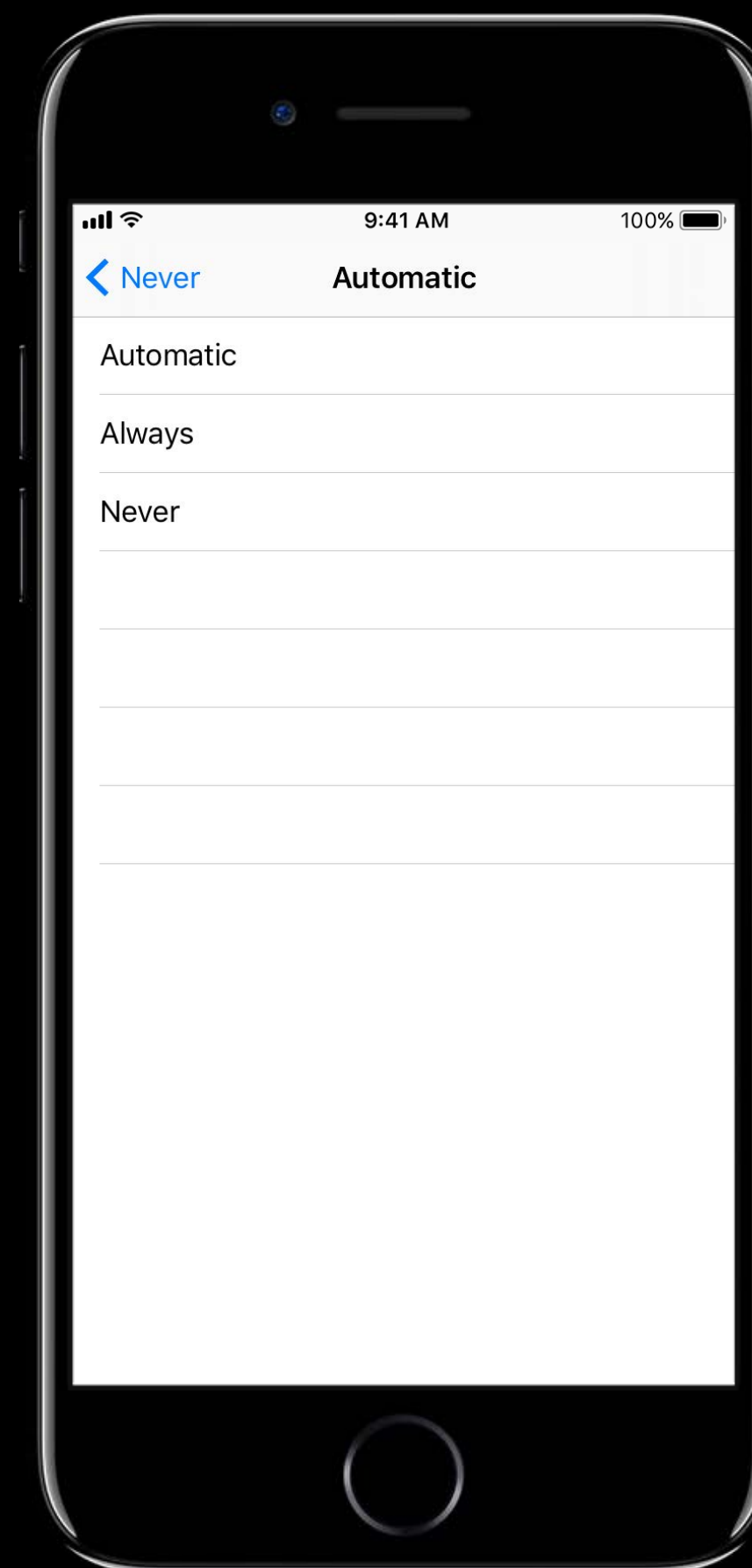
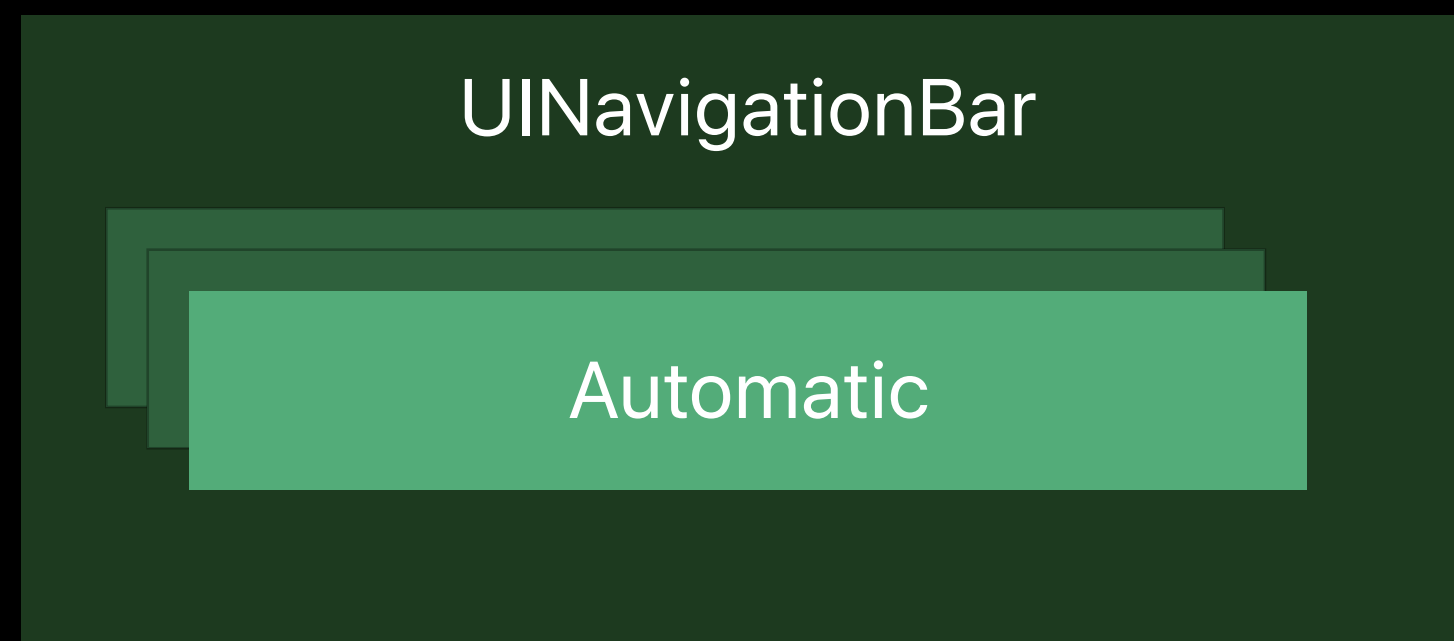
Automatic



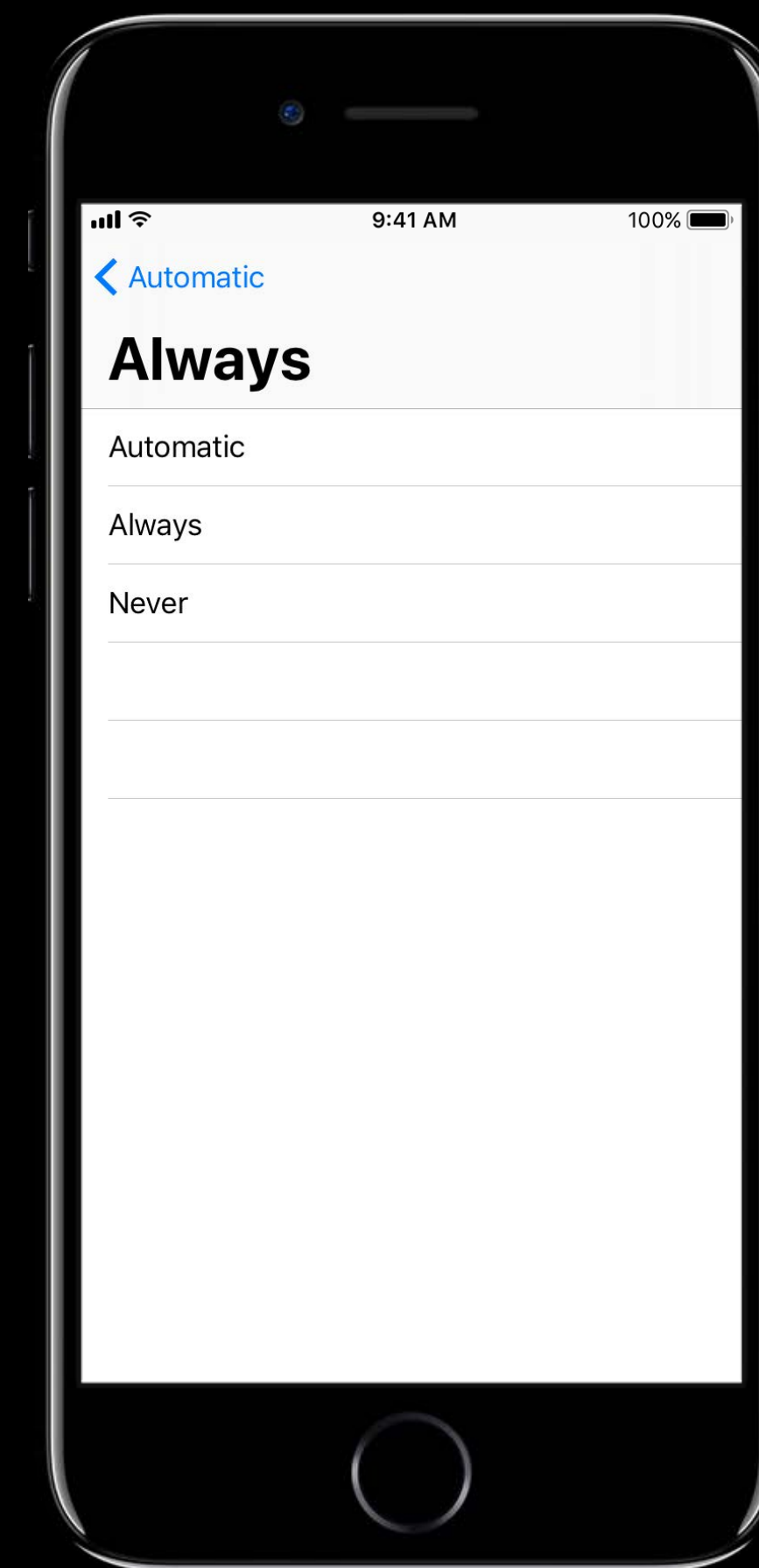
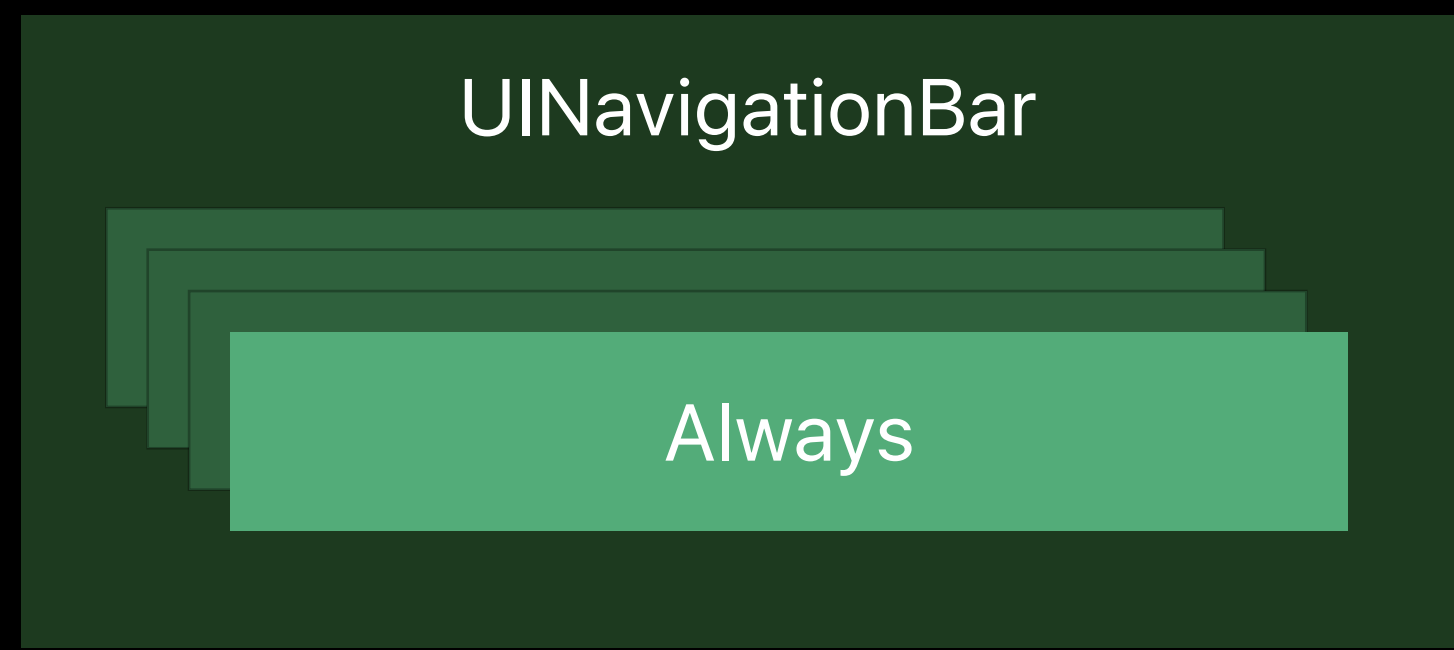
Controlling When Large Titles Display



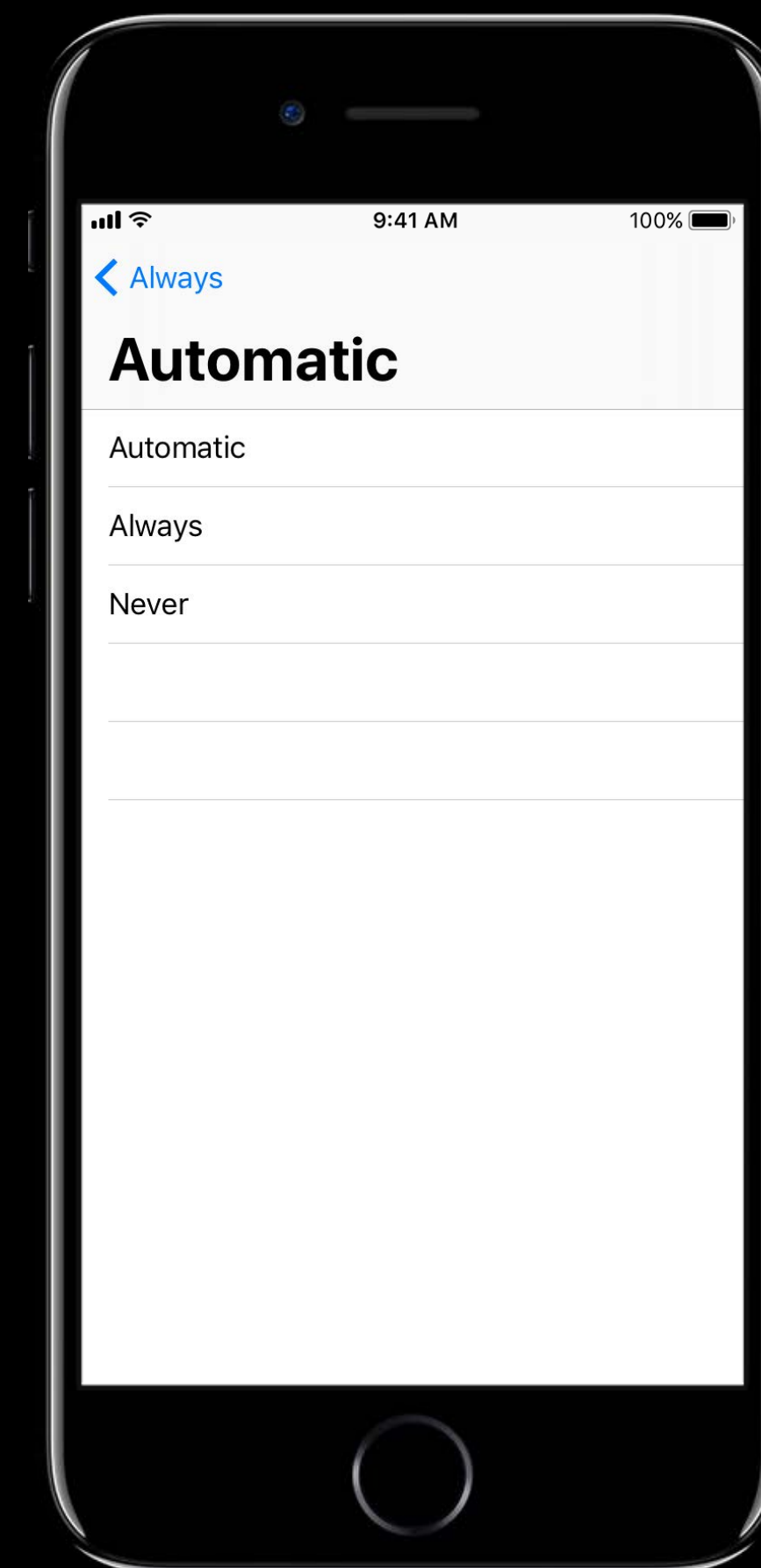
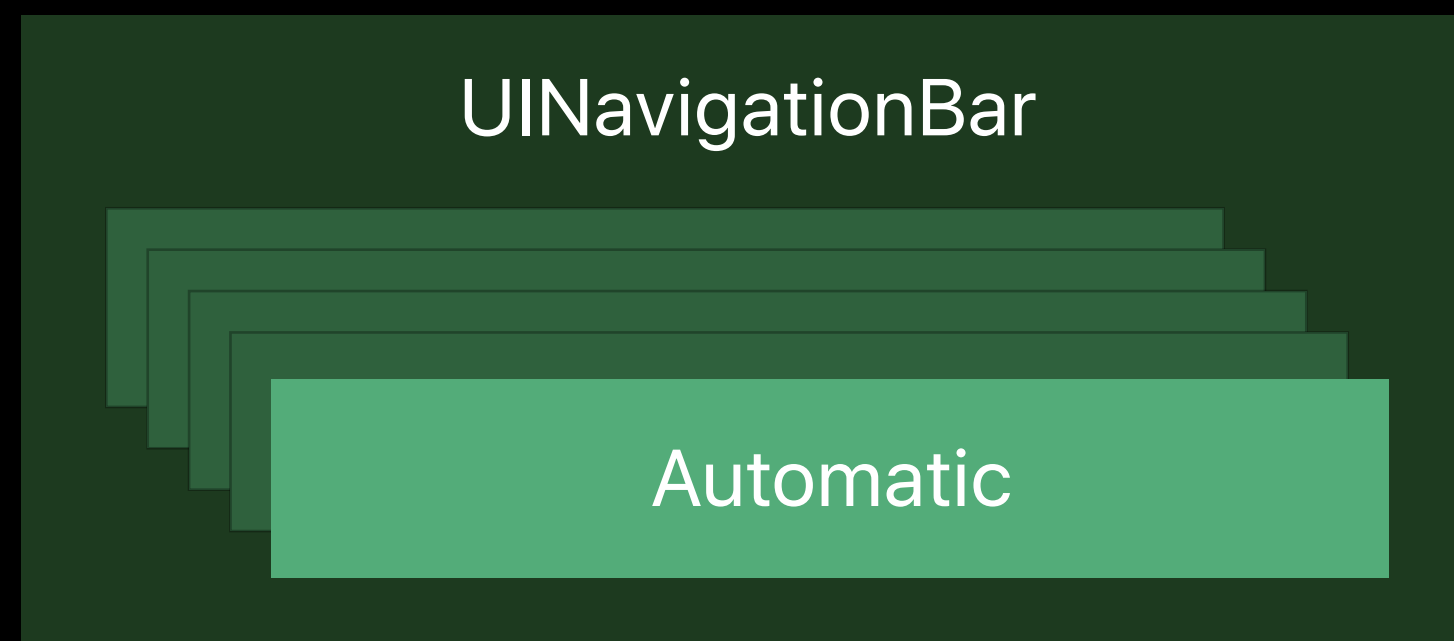
Controlling When Large Titles Display



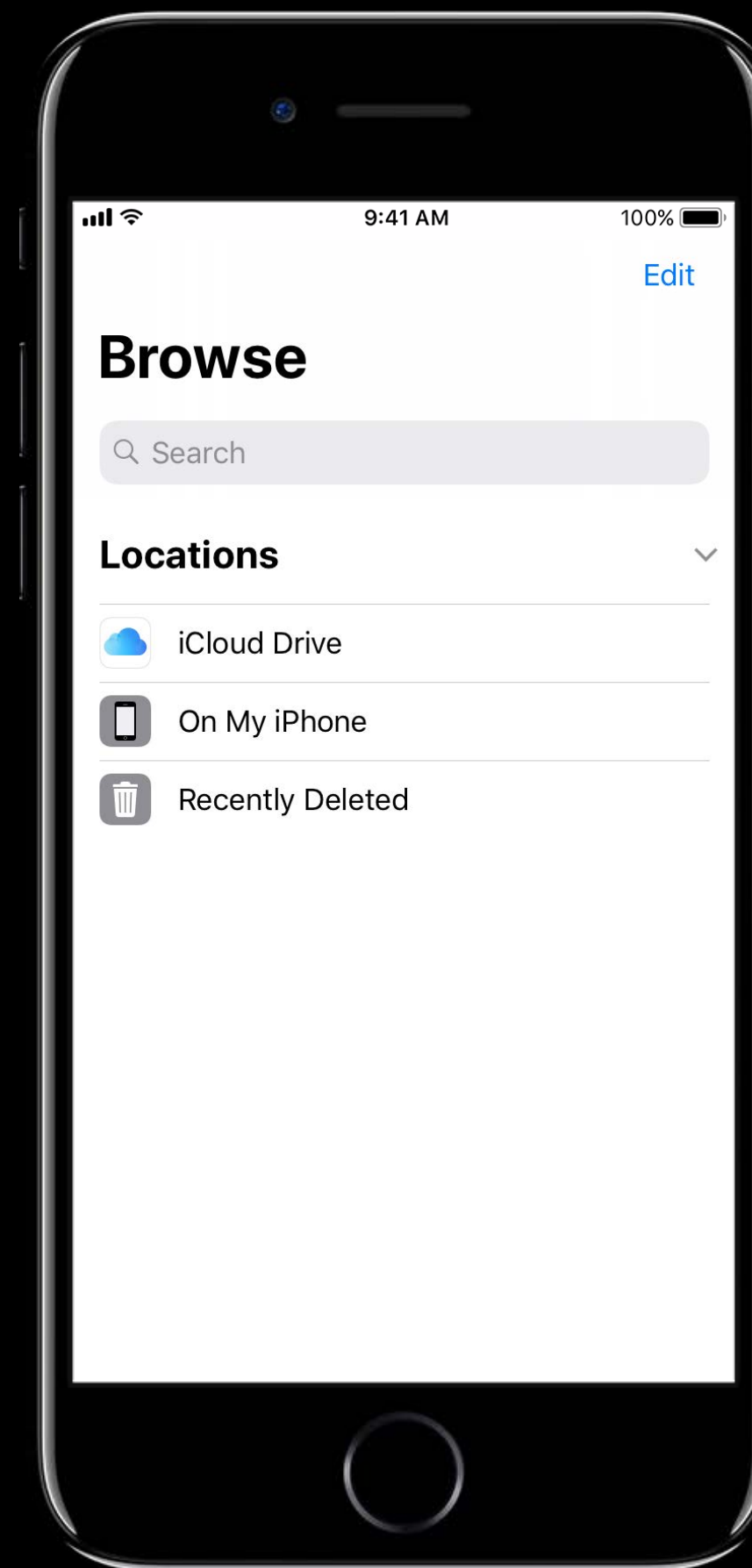
Controlling When Large Titles Display



Controlling When Large Titles Display

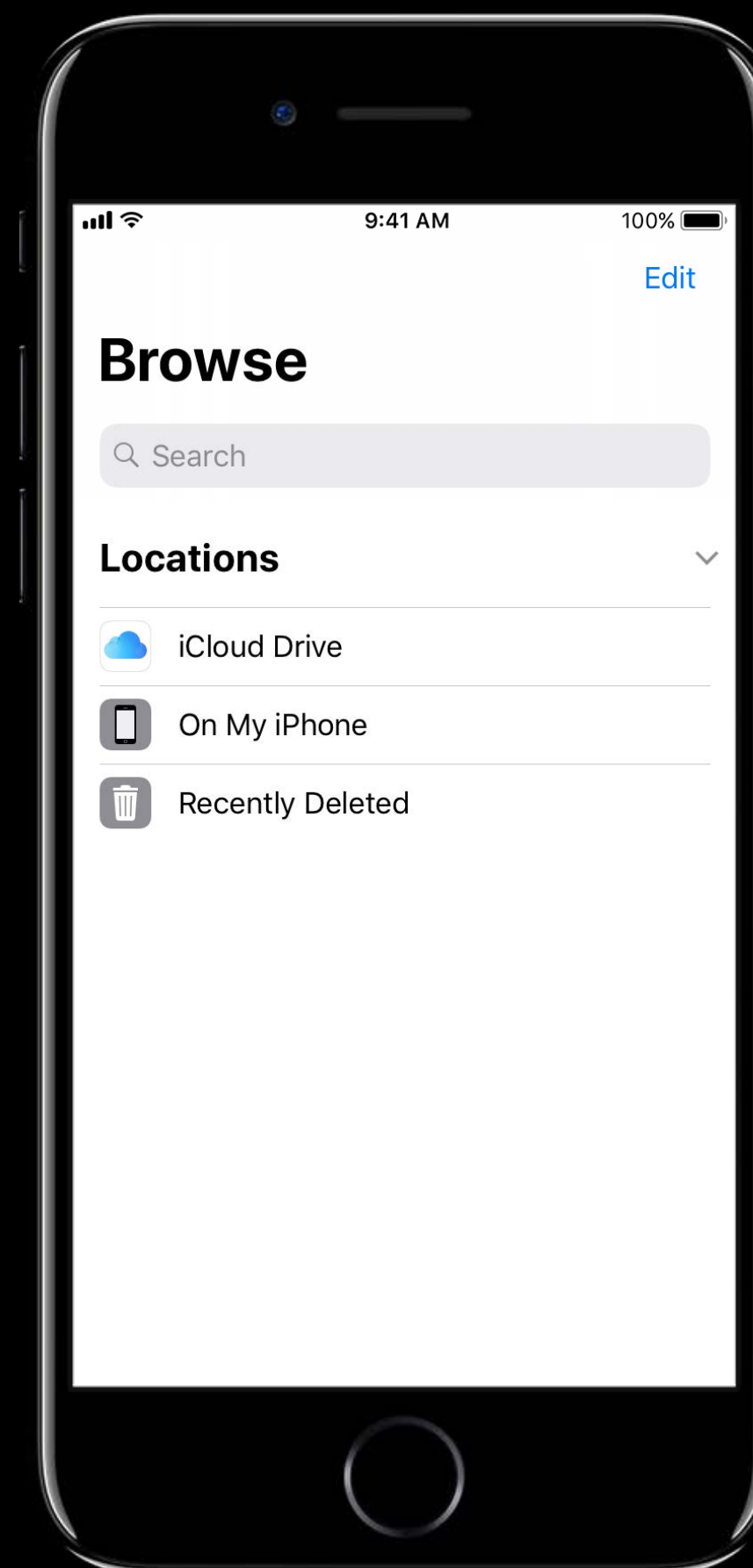


Integrated UISearchController with Navigation



Integrated UISearchController with Navigation

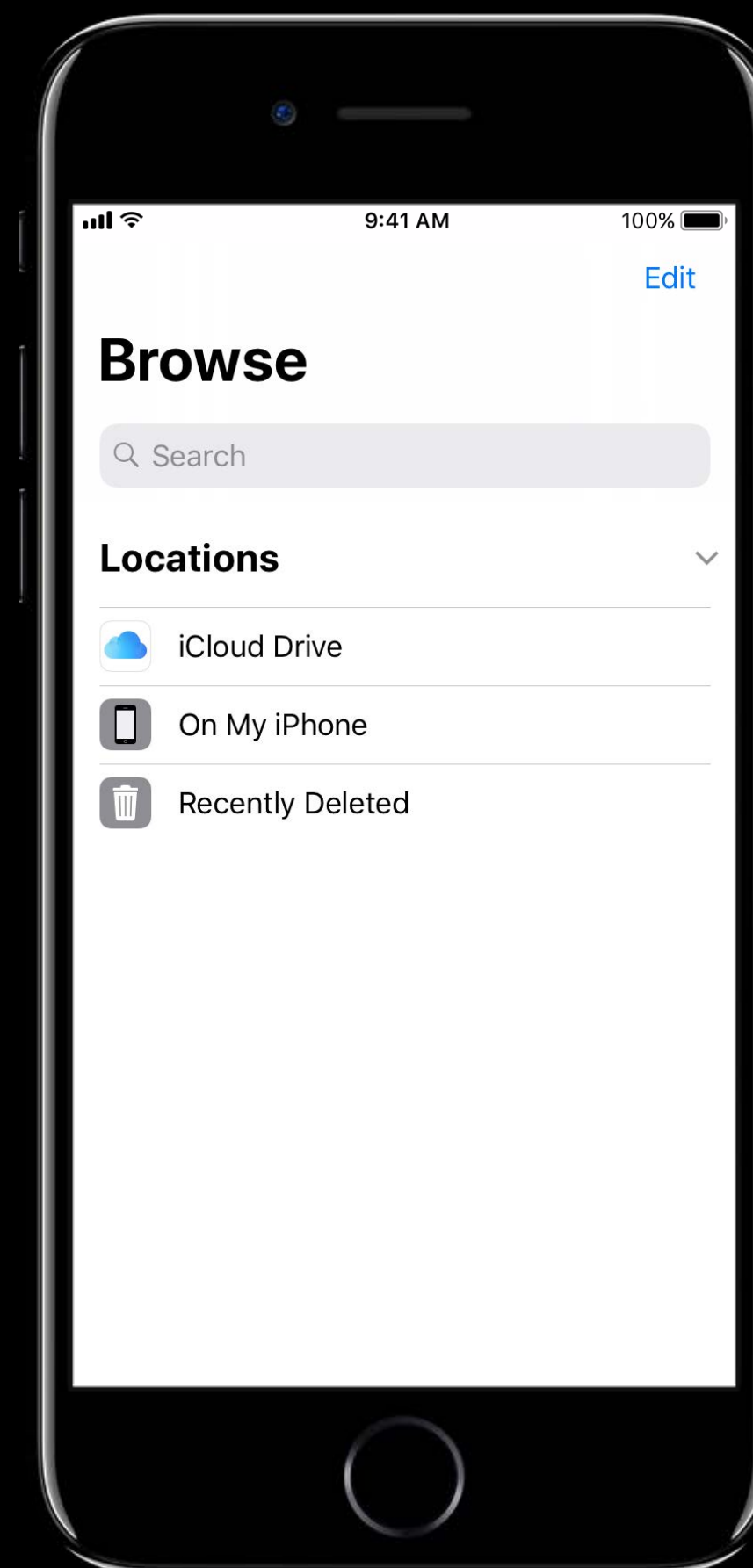
```
navigationItem.searchController
```



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

UIToolbar and UINavigationController— Layout

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

Avoiding Zero-Sized Custom Views

UINavigationController and UIToolbar provide position

You must provide size

Avoiding Zero-Sized Custom Views

UINavigationController and UIToolbar provide position

You must provide size

- Constraints for width and height

Avoiding Zero-Sized Custom Views

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

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layoutMarginsGuide

Title

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layoutMargins

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NEW

layoutMargins

directionalLayoutMargins

Title

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NEW

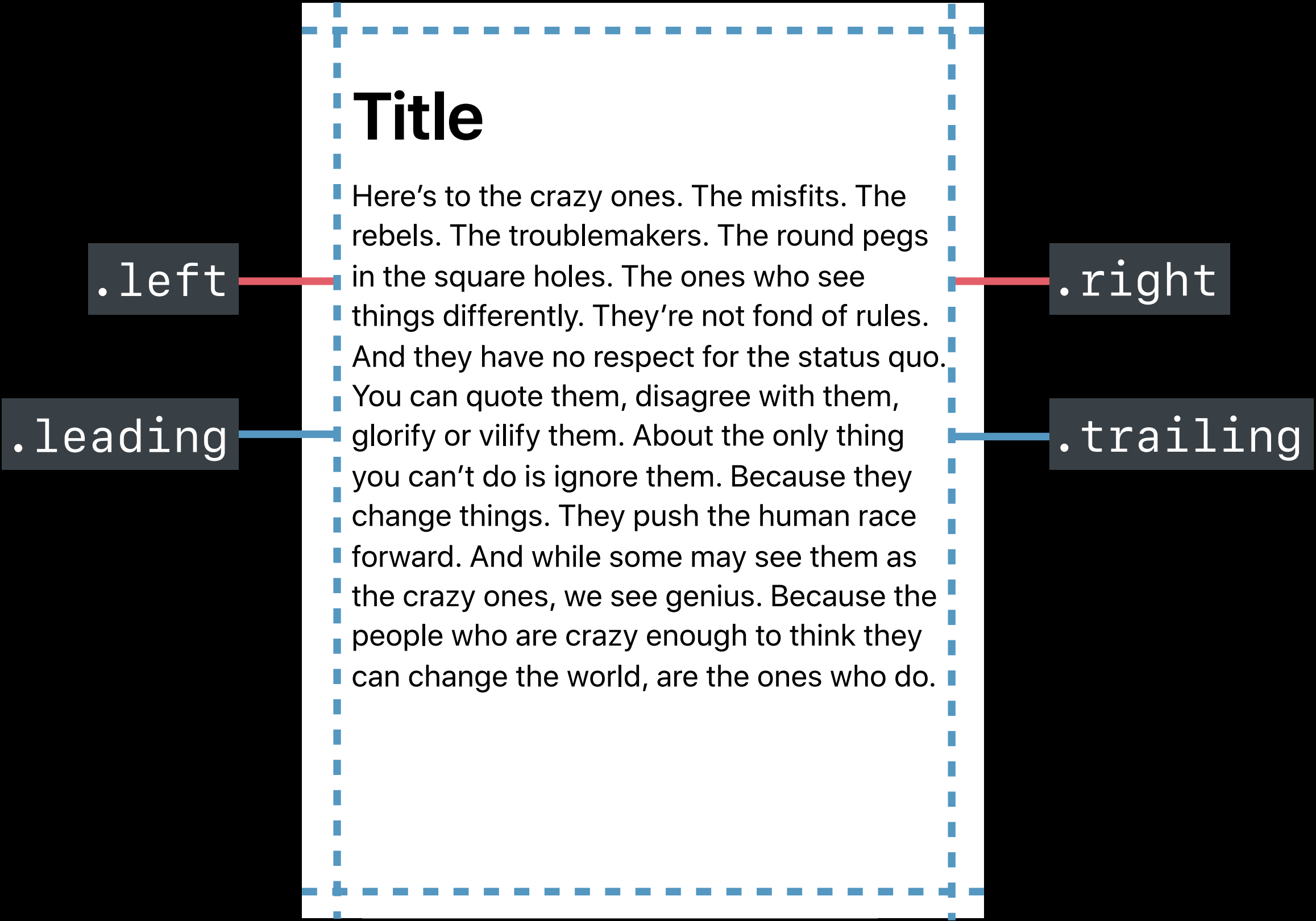
layoutMargins



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

Title

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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

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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

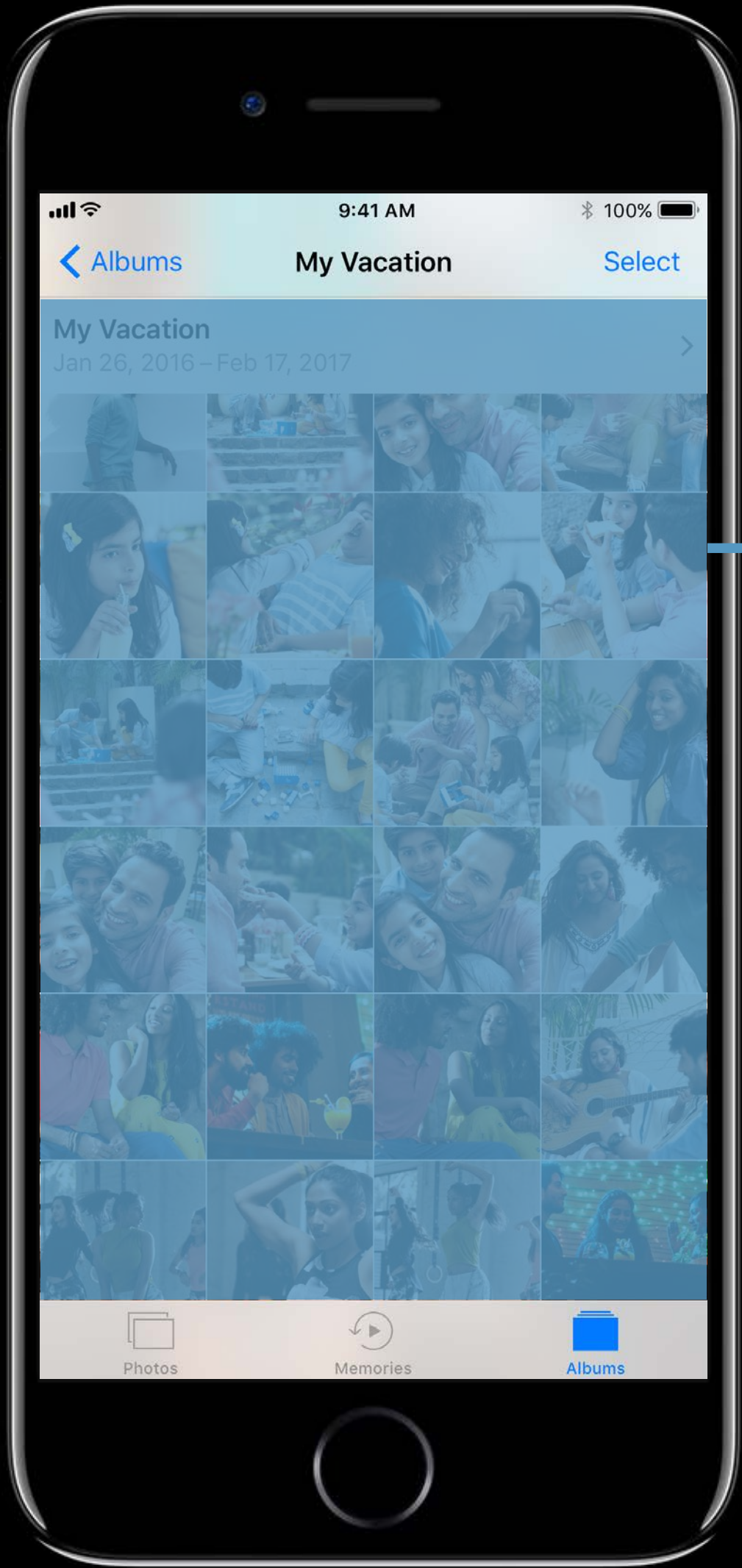
bottomLayoutGuide

NEW

edgesForExtendedLayout

.top

.bottom



safe area



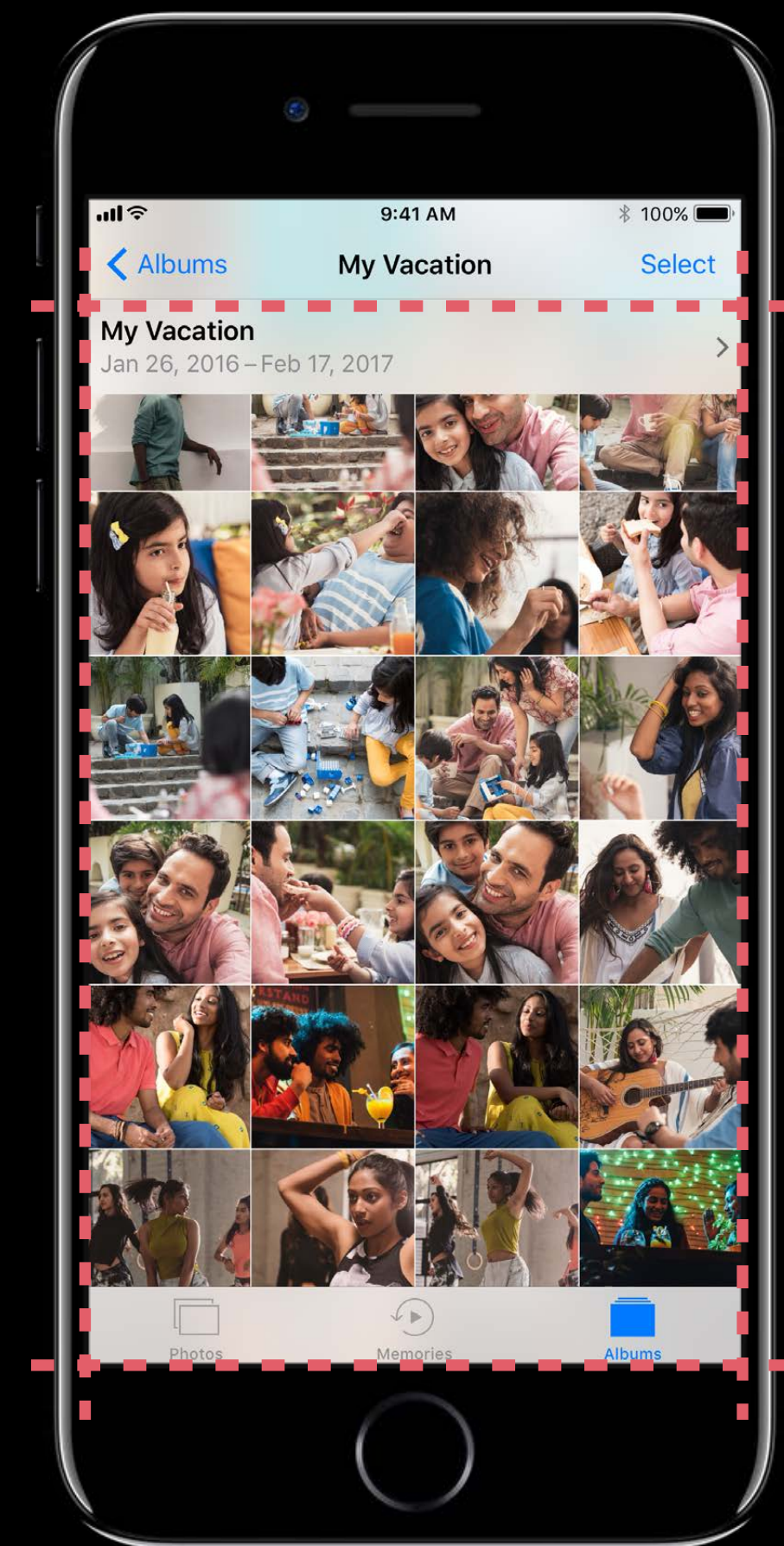
Safe Area

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

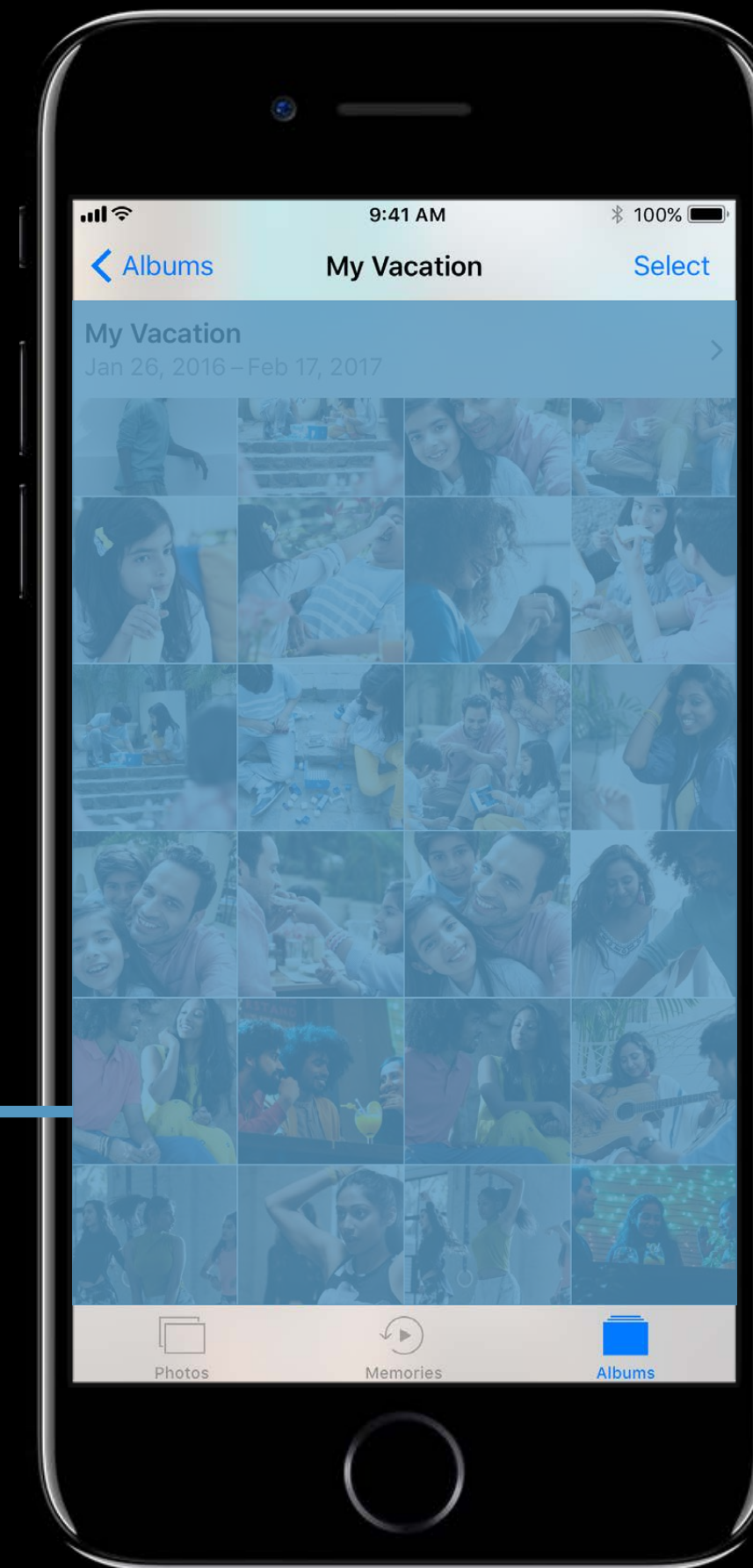
NEW

Describes area of view not occluded
by ancestors

Available as insets or layout guide

Incorporates overscan compensation insets

`UIView.safeAreaLayoutGuide`



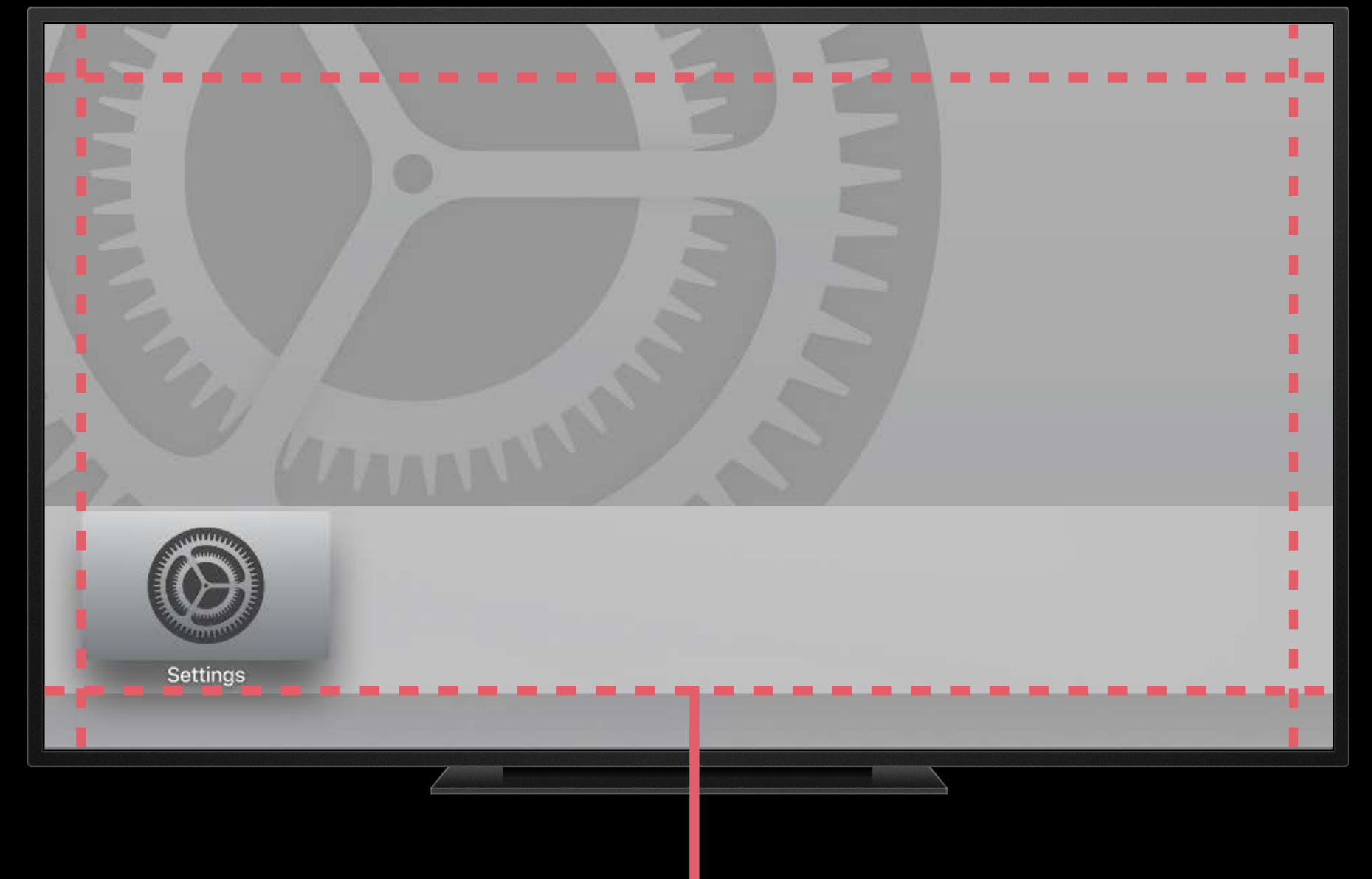
Safe Area

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()
```



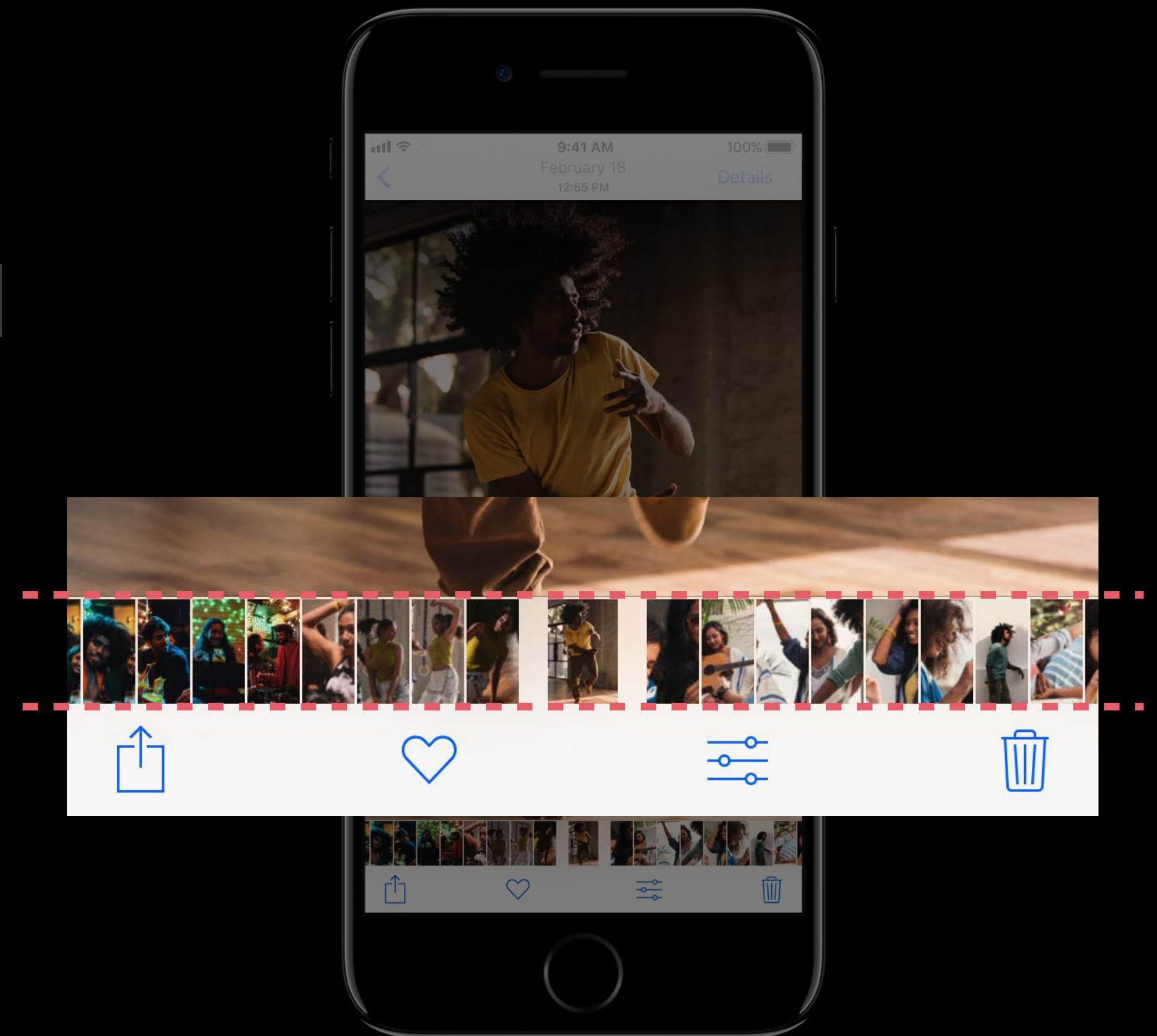
Extending the Safe Area Insets

NEW

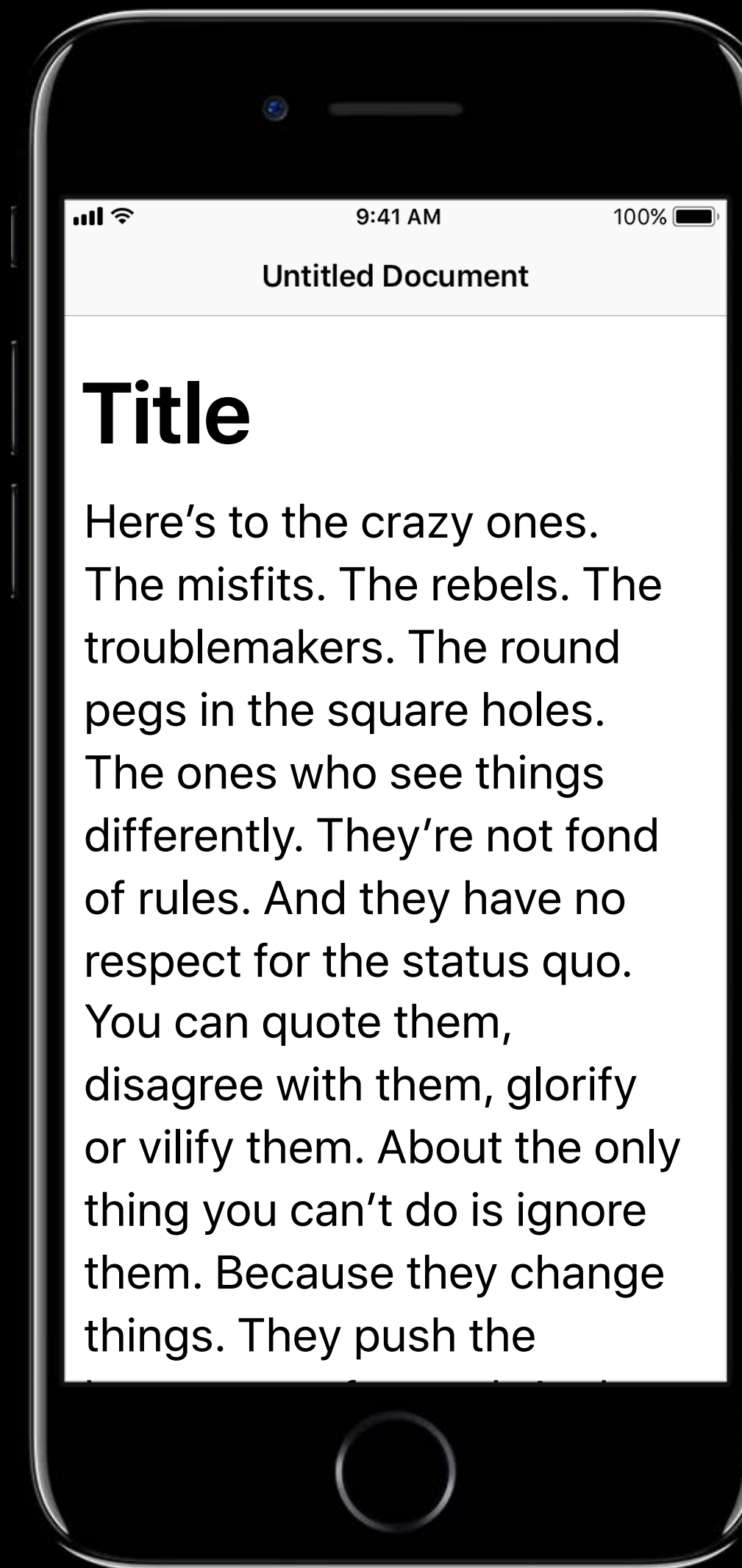
```
UIViewController.additionalSafeAreaInsets
```

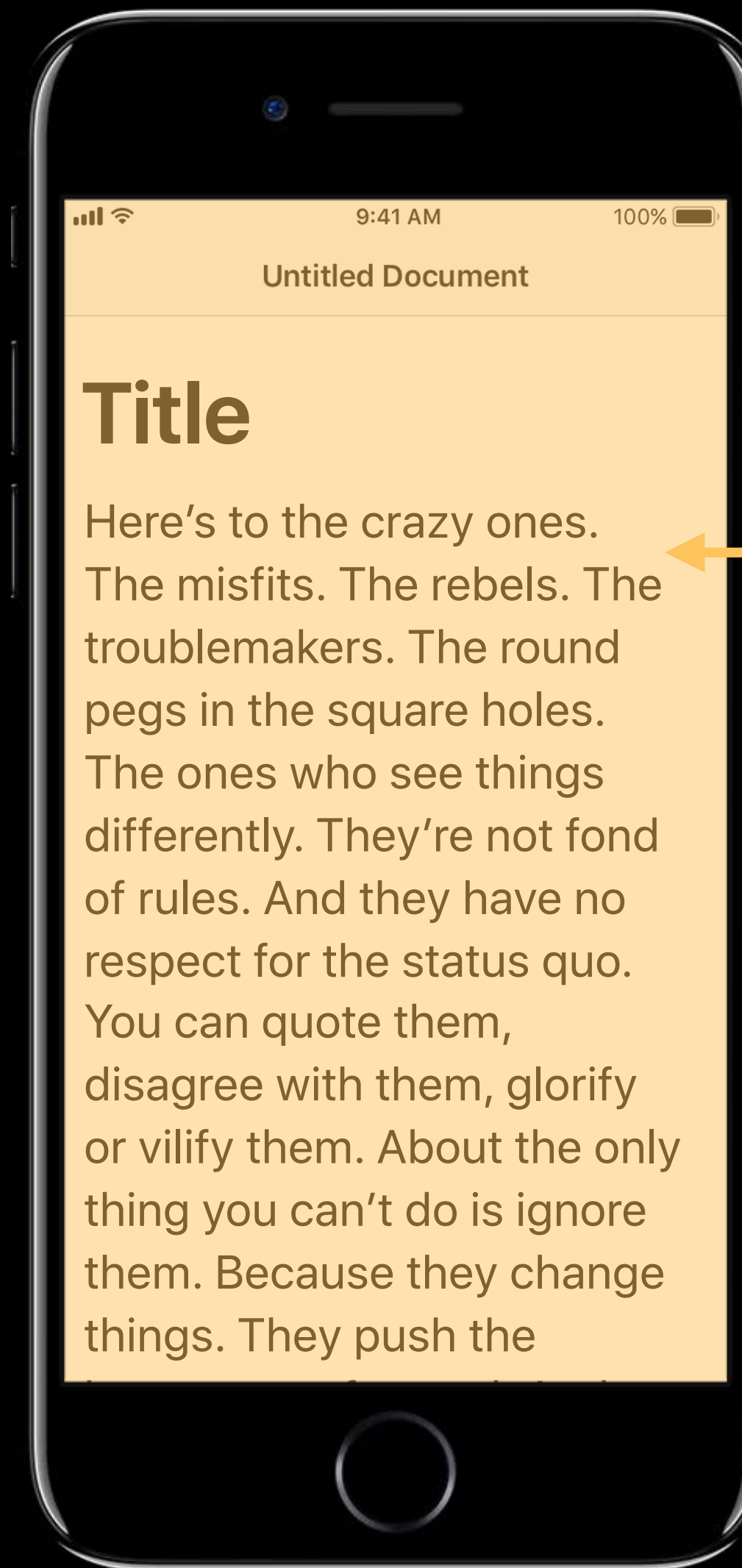
```
UIView.safeAreaInsetsDidChange()
```

```
UIViewController.viewSafeAreaInsetsDidChange()
```



Scroll Views

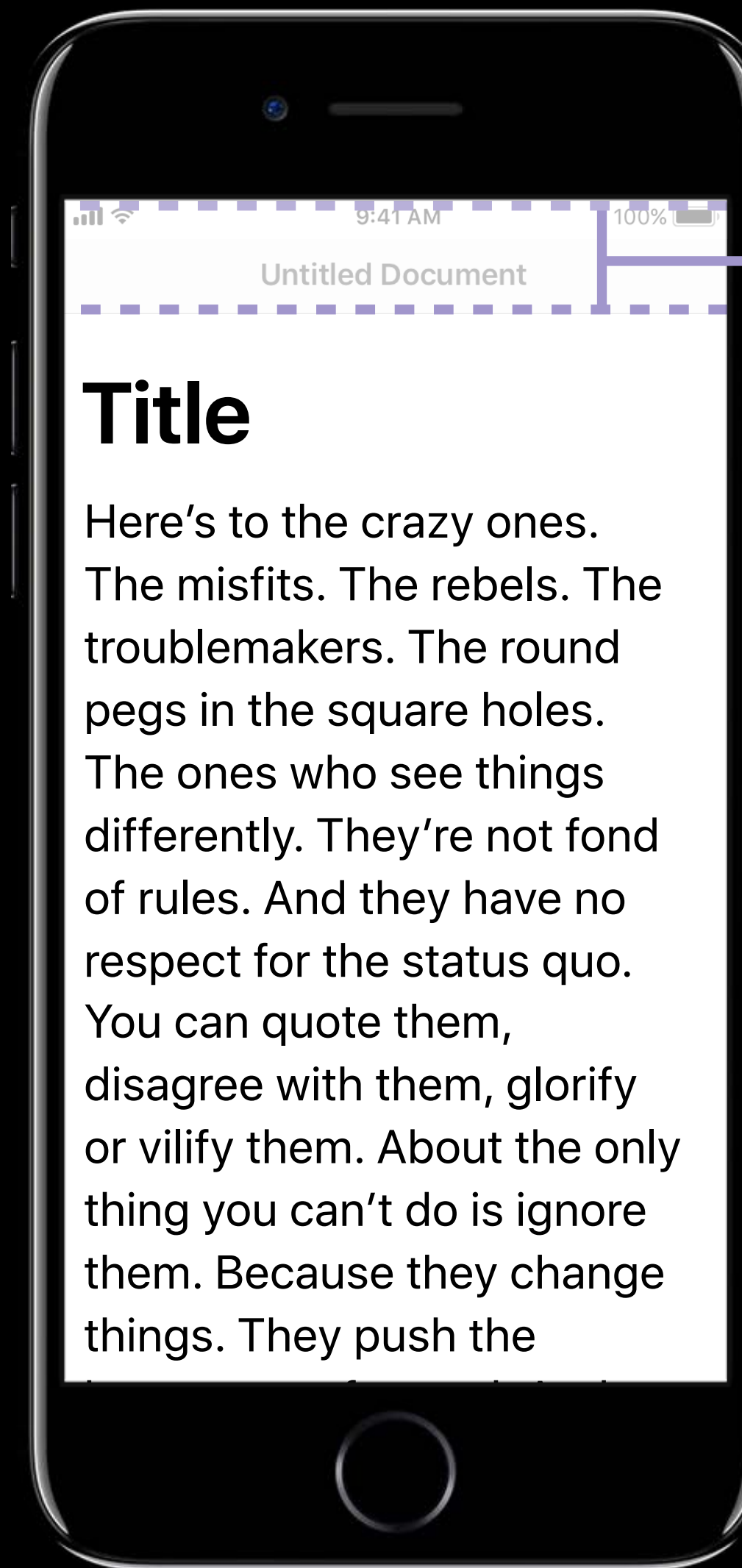




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scroll view



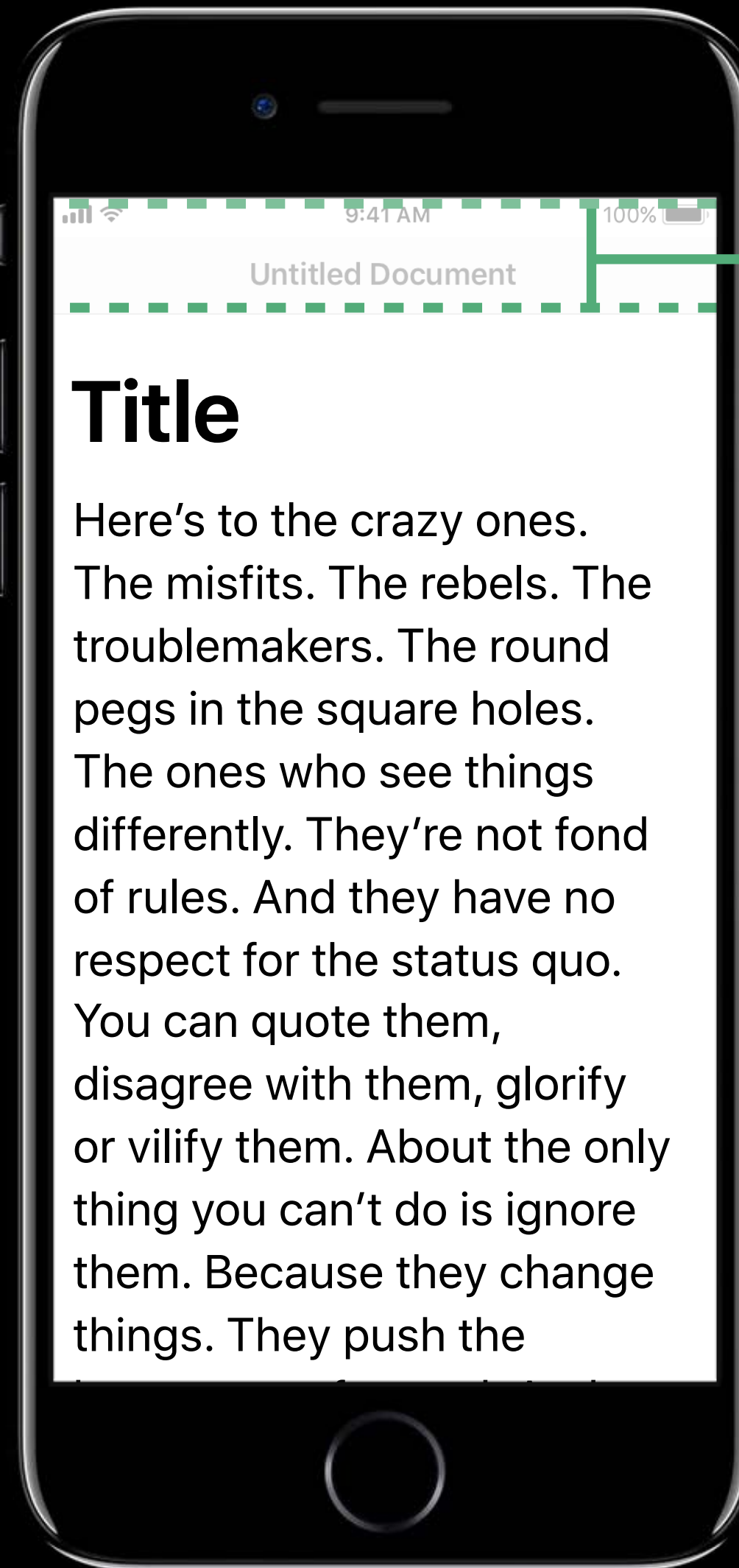
`contentInset.top`

Title

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NEW

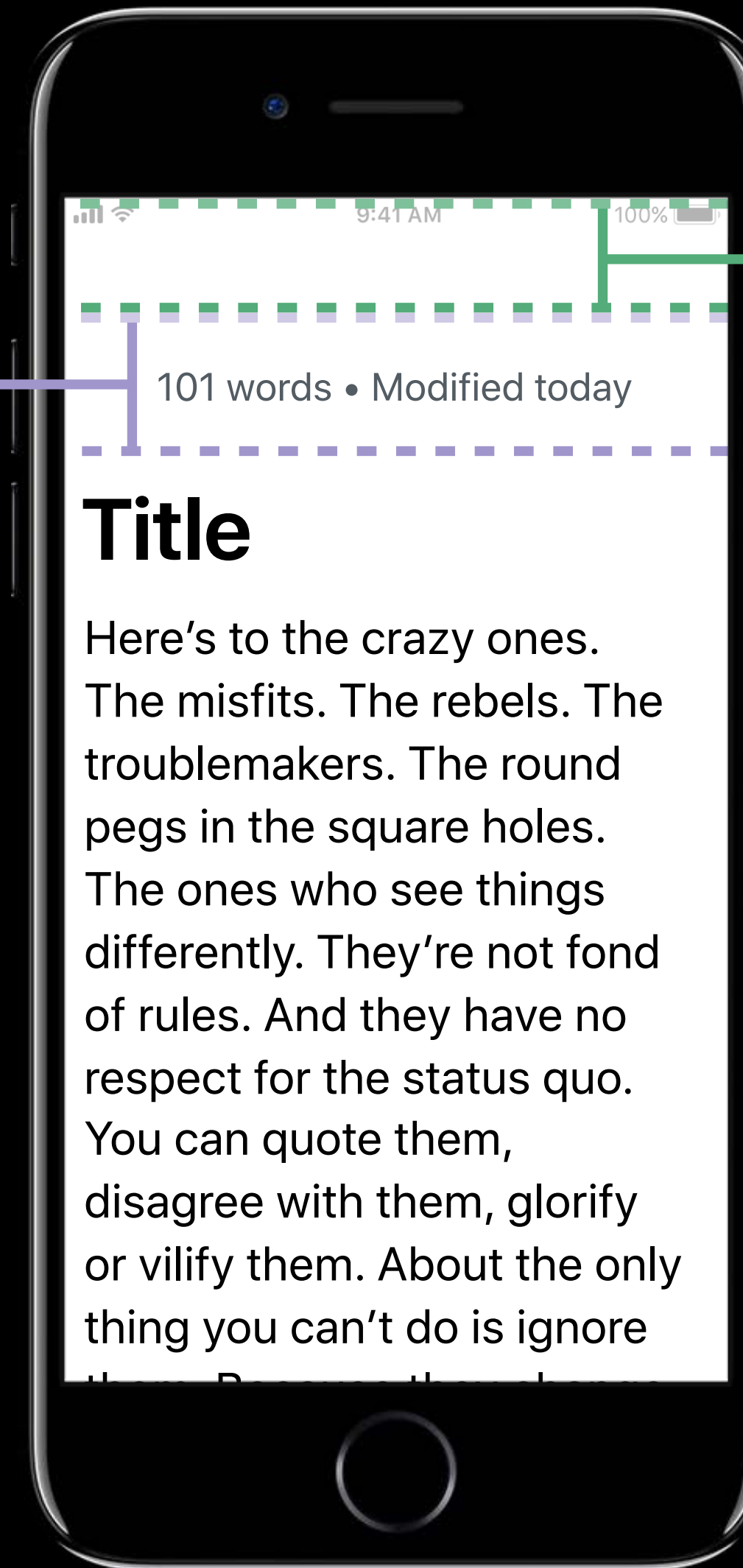
`adjustedContentInset.top`

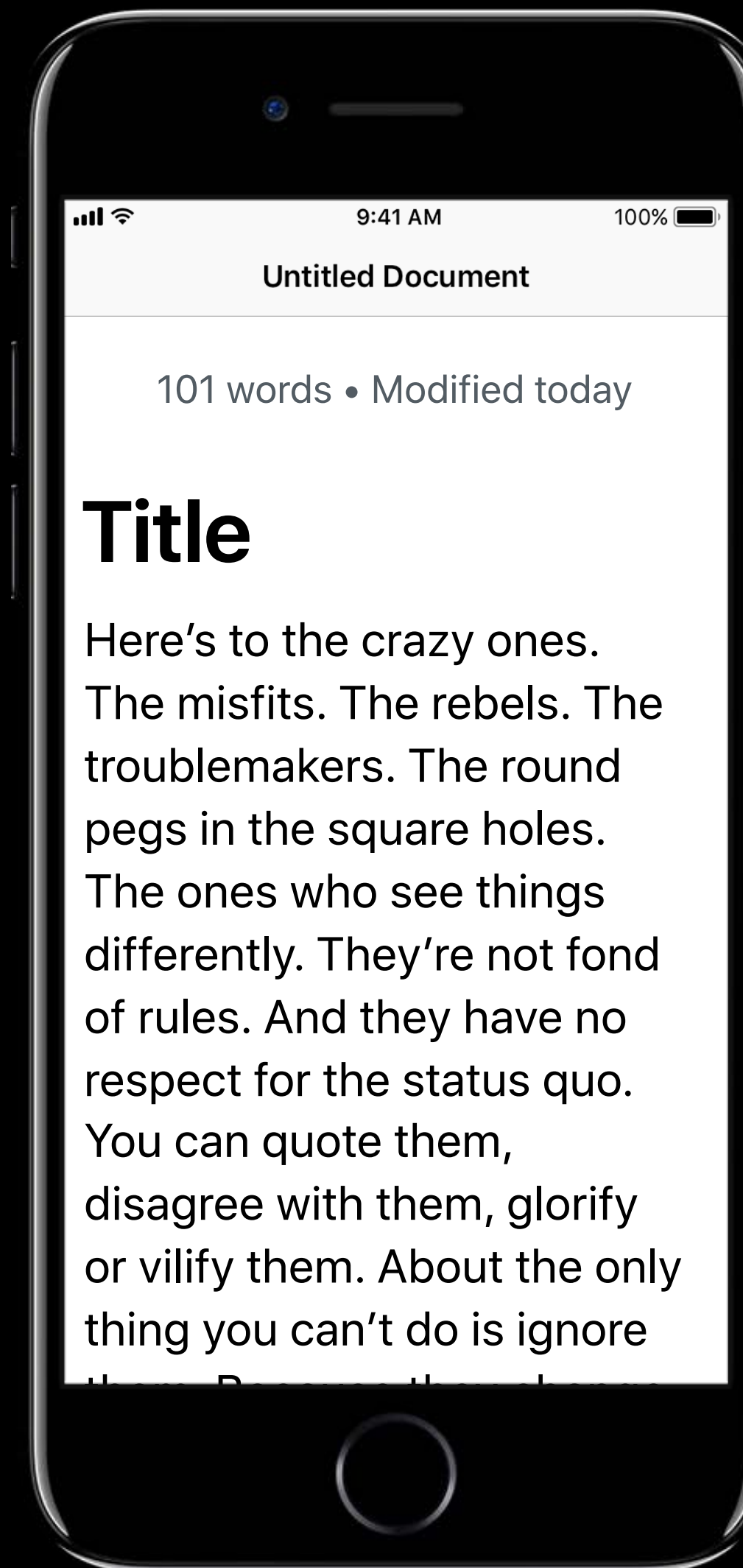


NEW

`contentInset.top`

`adjustedContentInset.top`





NEW

101 words • Modified today

Title

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frameLayoutGuide

NEW

Page 1

101 words • Modified today

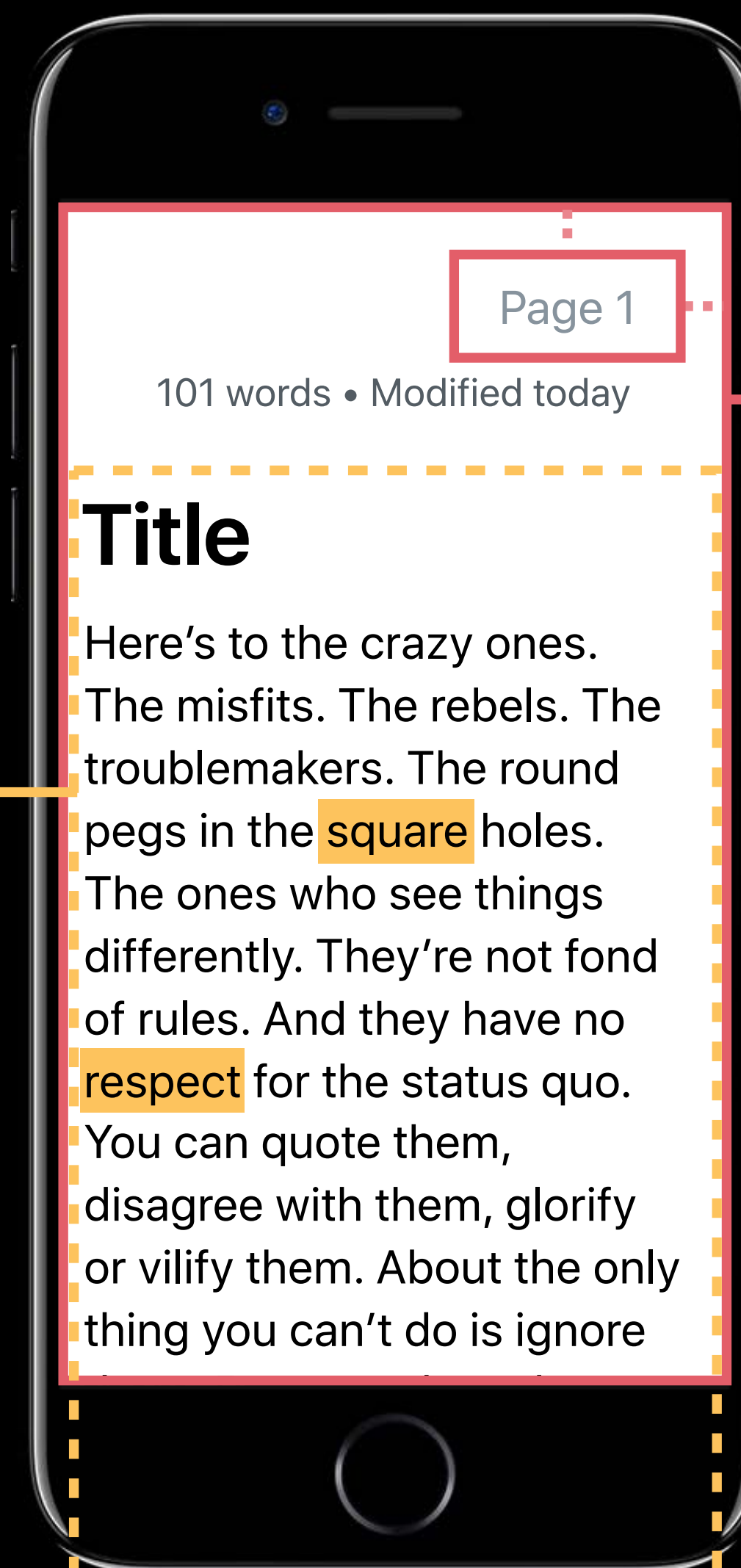
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frameLayoutGuide

NEW

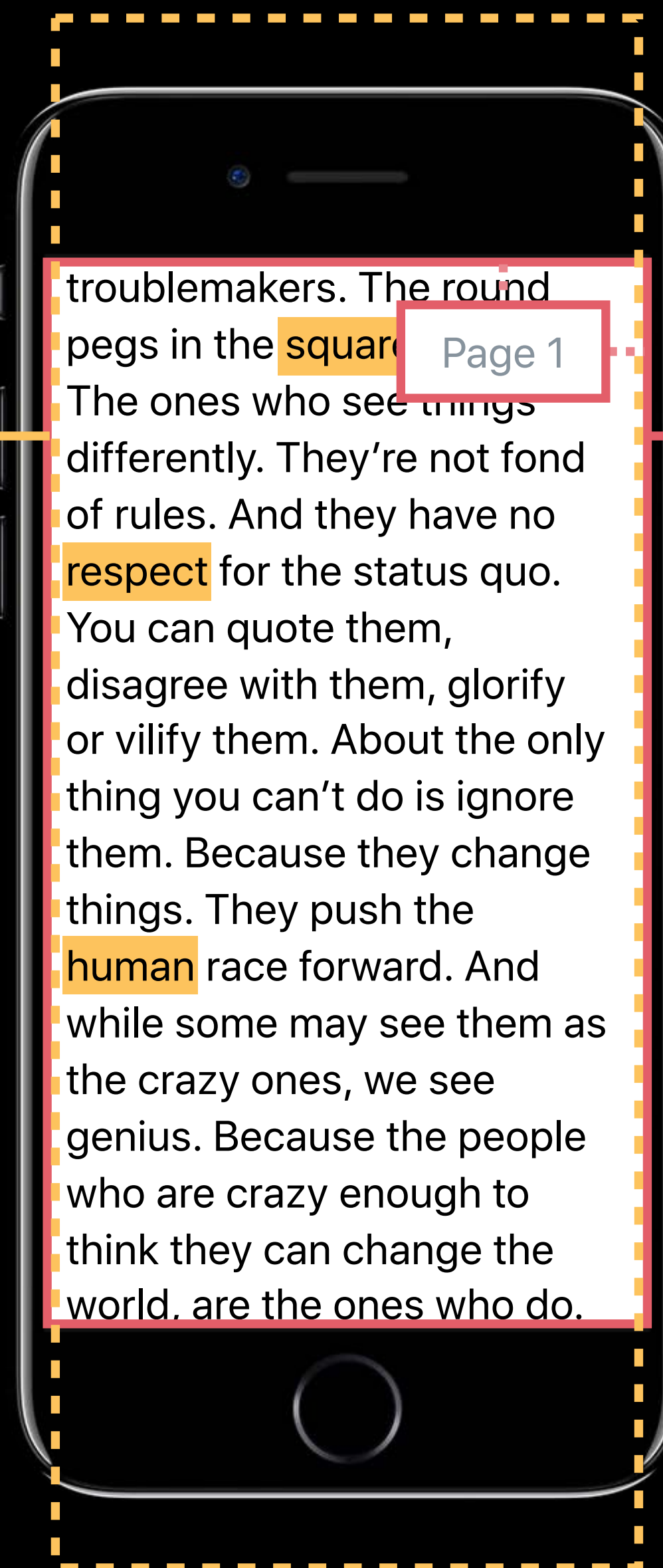
contentLayoutGuide



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  
}
```

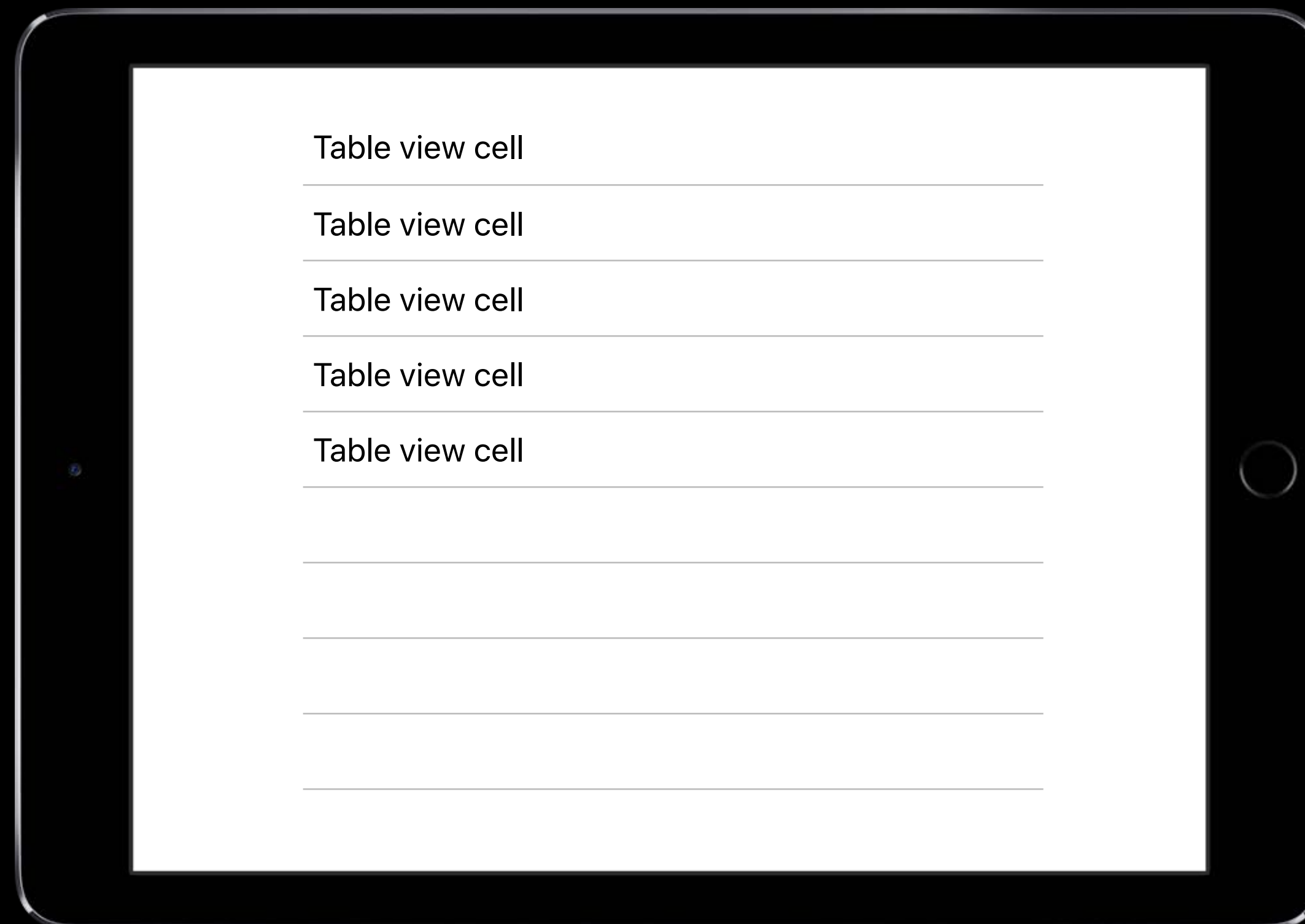


Table view cell

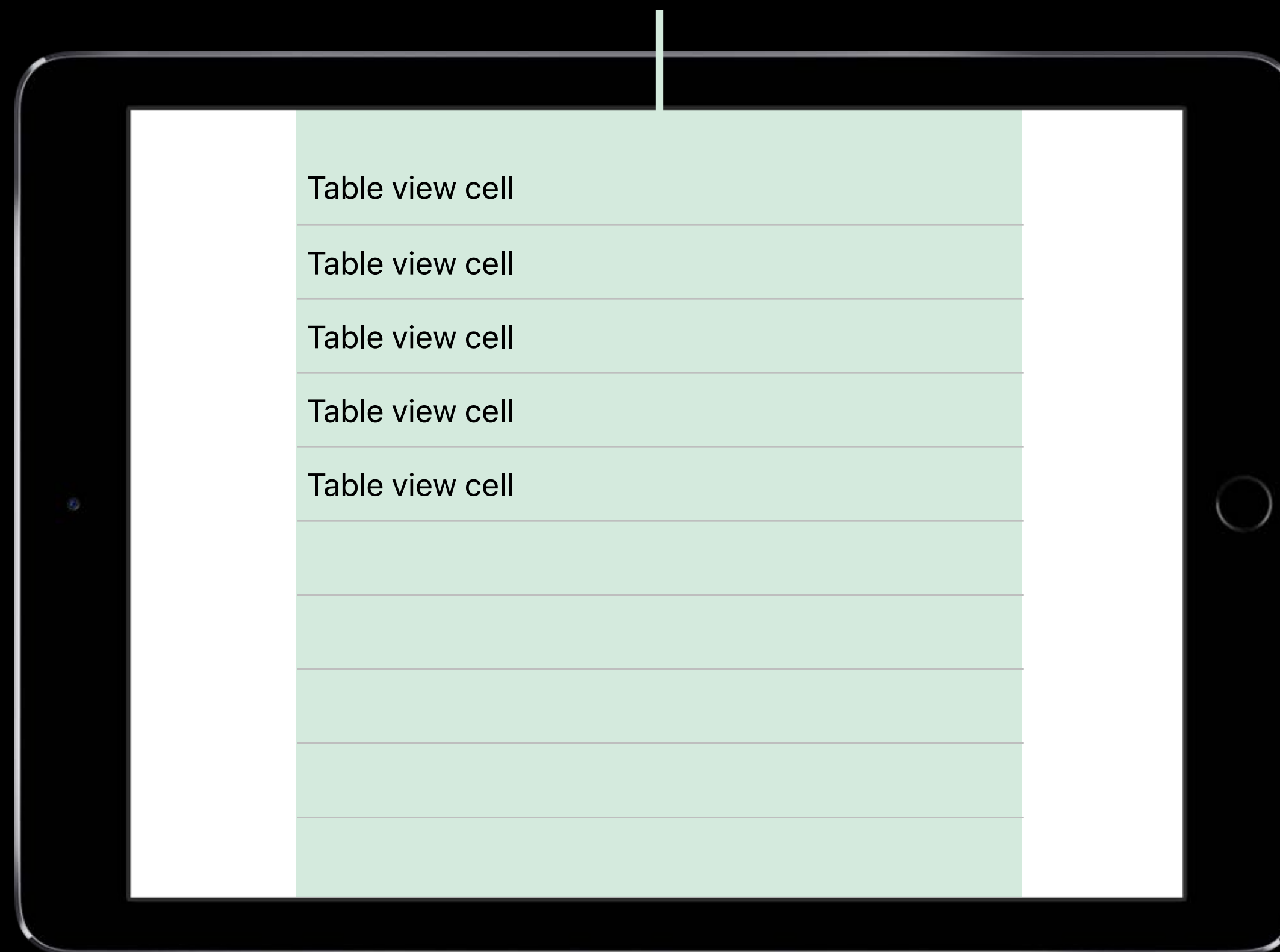
Table view cell

Table view cell

Table view cell

Table view cell

readable content guide



separatorInset



```
separatorInset.left = 30
```

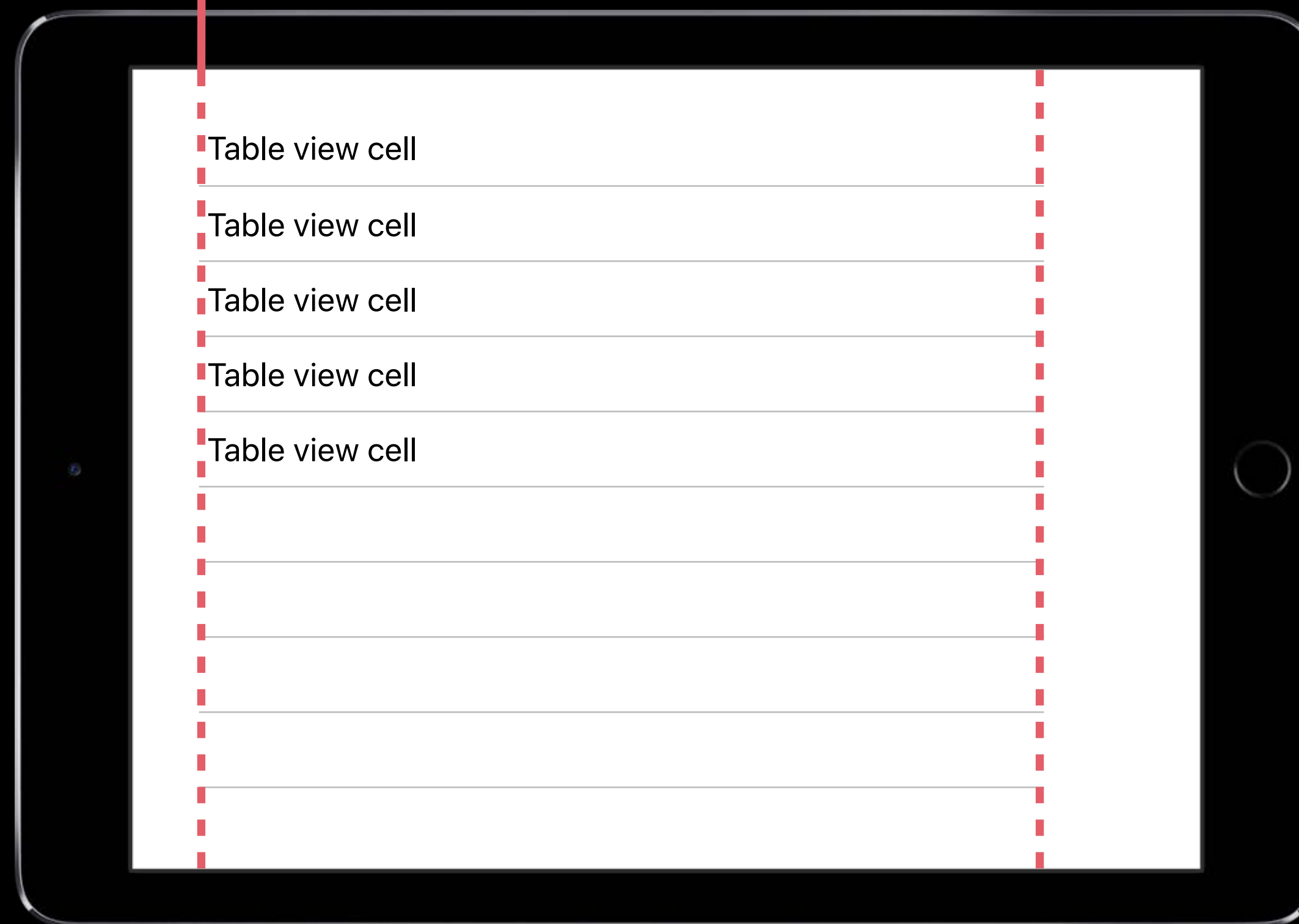


```
separatorInset.left = 30
```



NEW

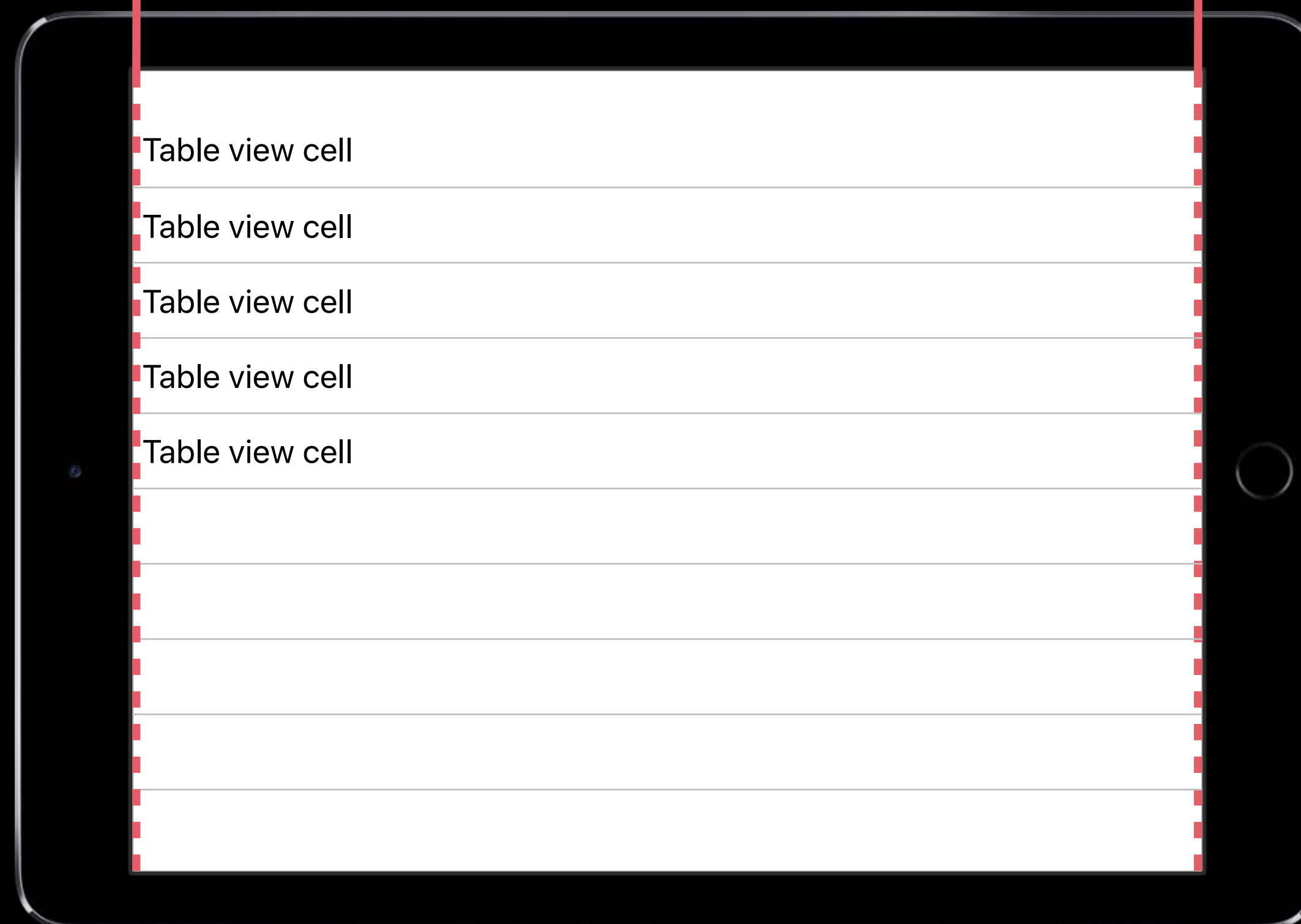
```
.left = 30
```



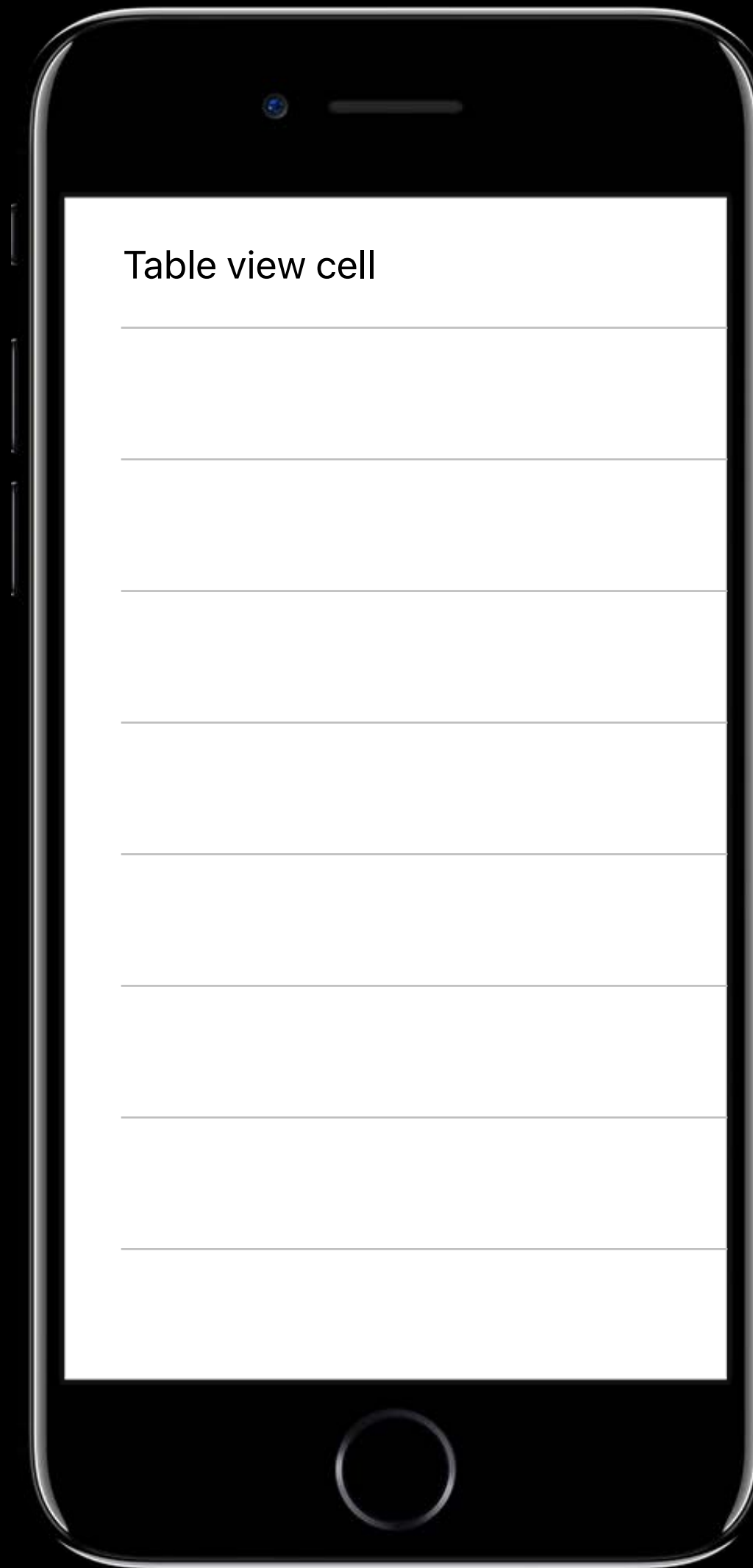
NEW

```
.left = 0
```

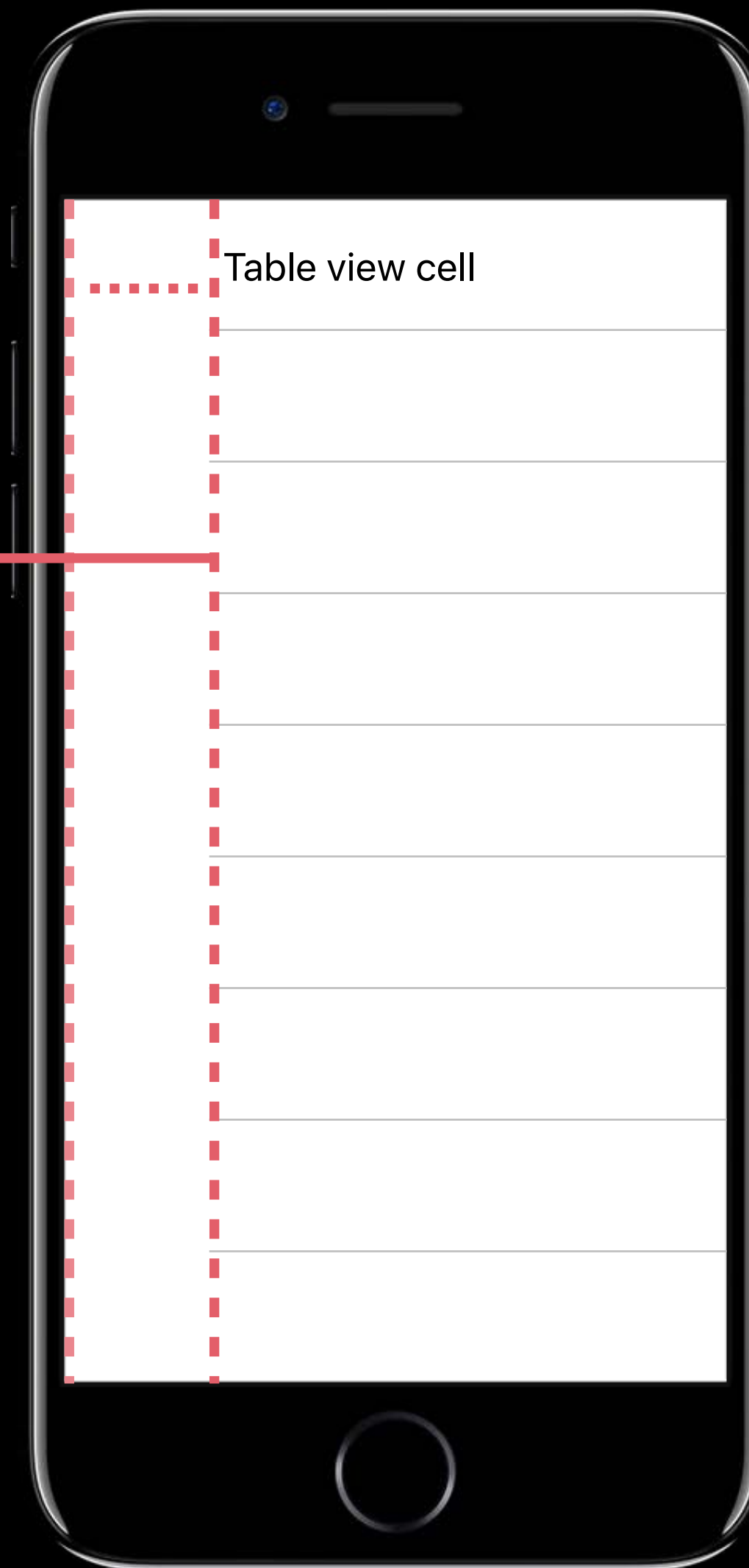
```
.right = 0
```





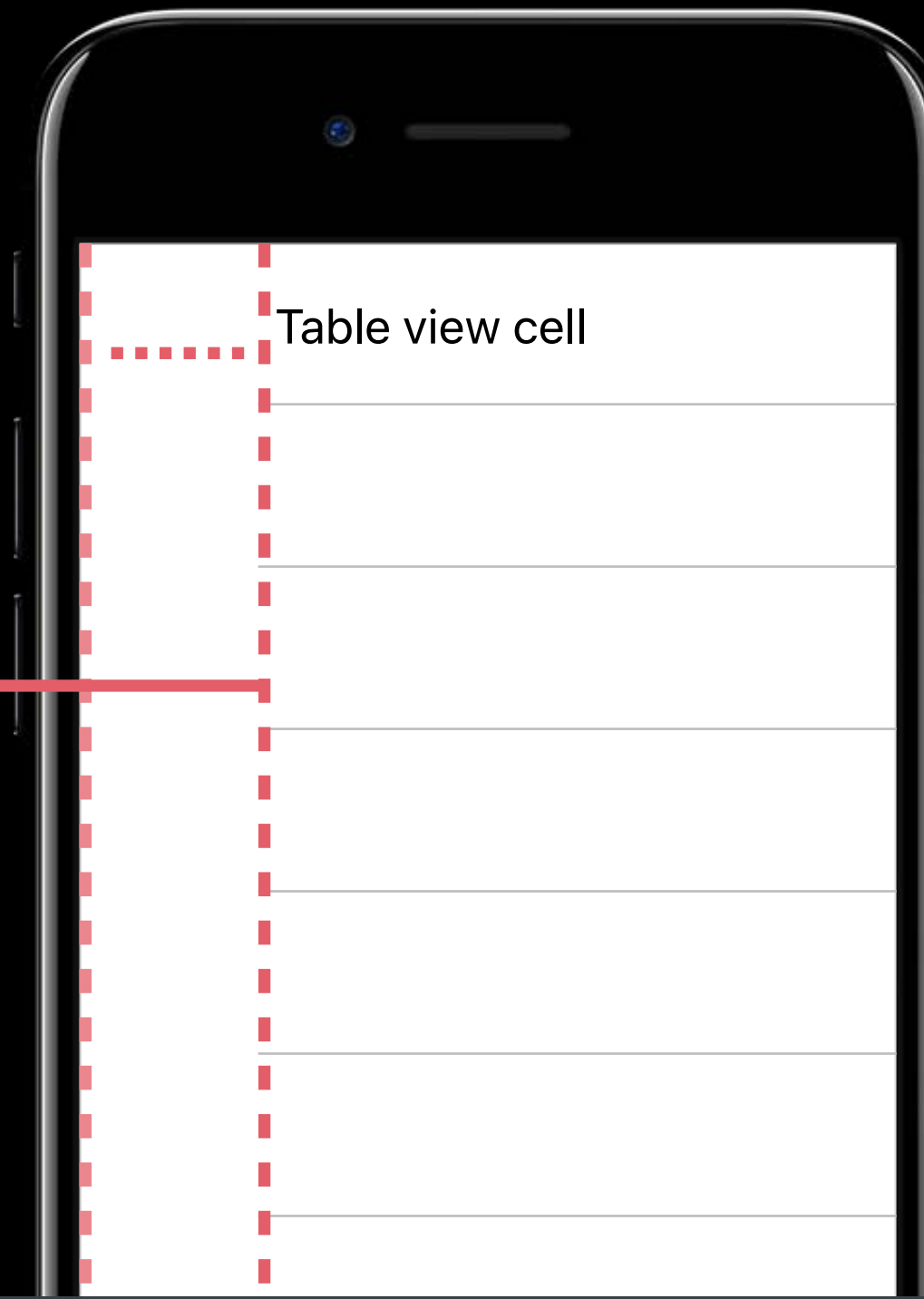


```
separatorInset.left = 60
```



NEW

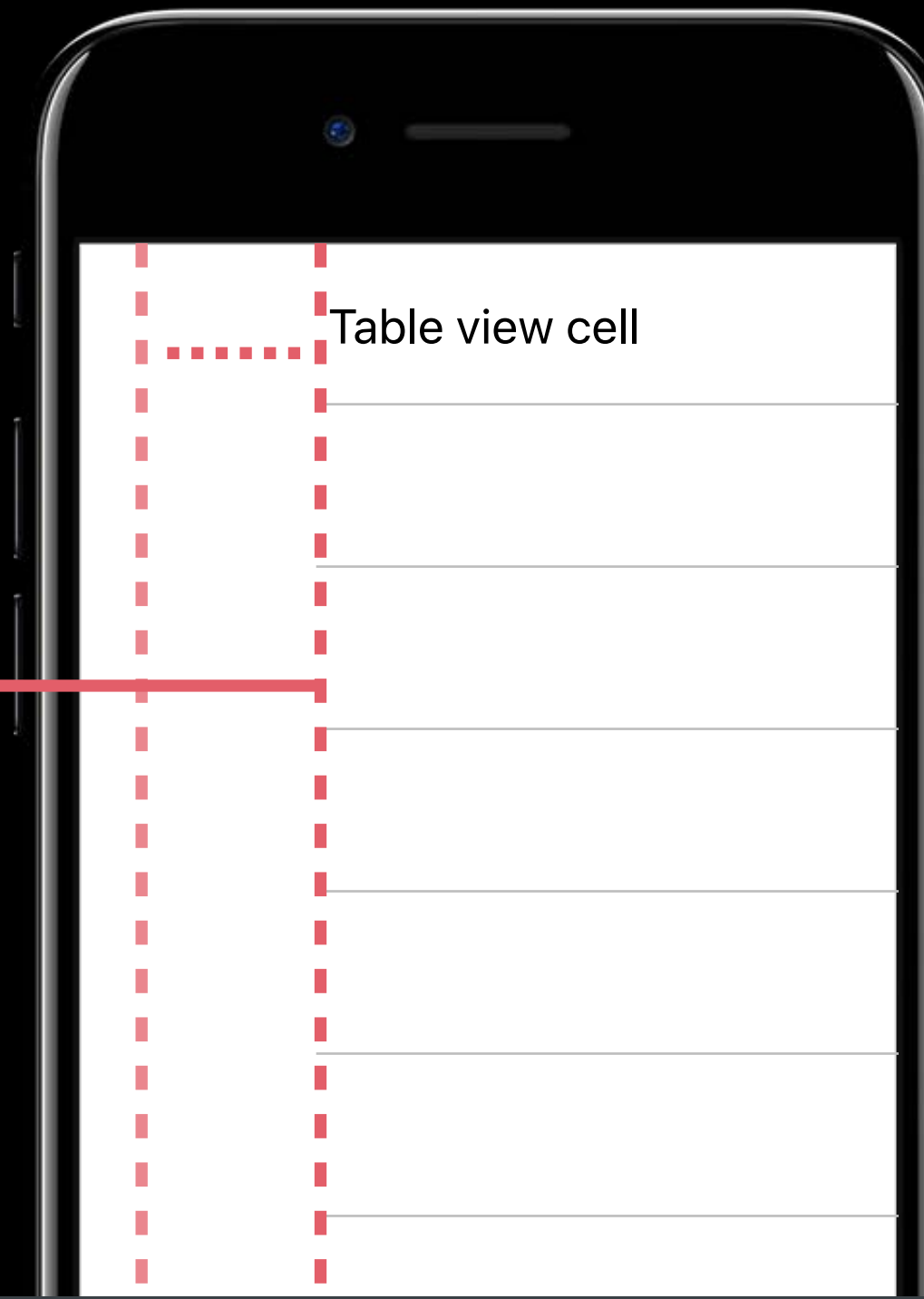
`separatorInset.left = 60`



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

NEW

`separatorInset.left = 60`



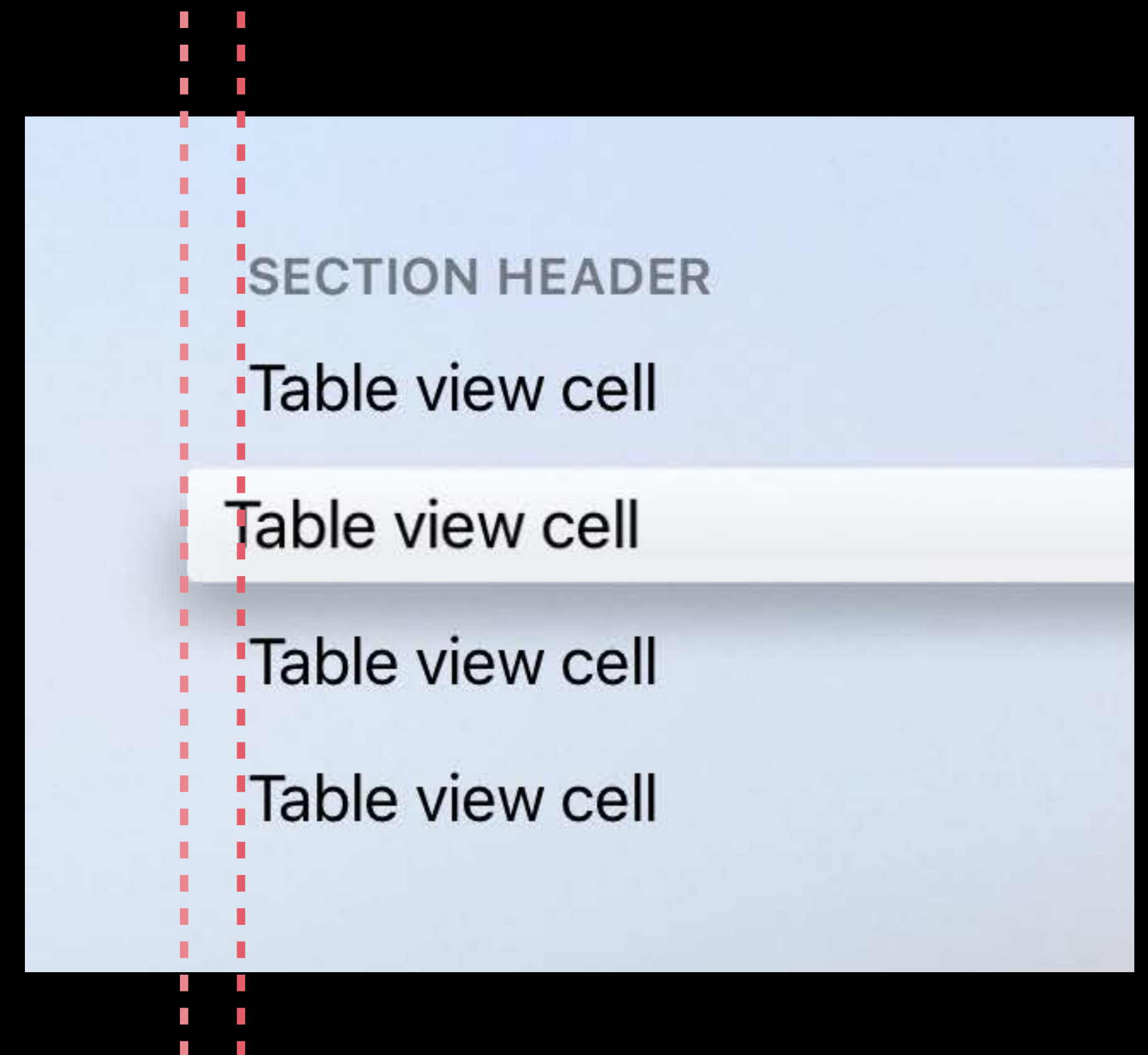
```
class MyViewController: UITableViewController {  
    override func viewDidLoad() {  
        tableView.separatorInsetReference = .fromAutomaticInsets  
    }  
}
```

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

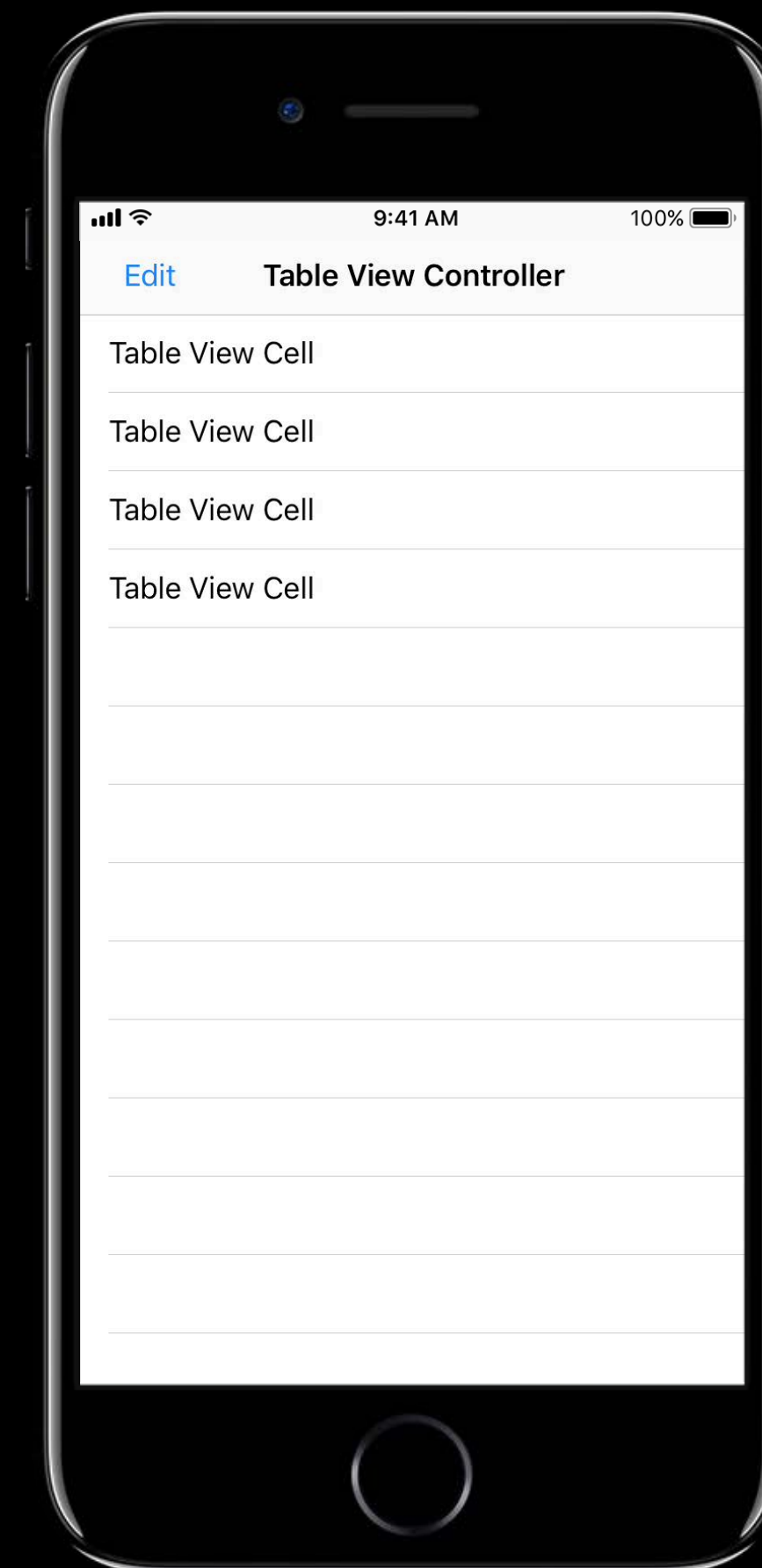
NEW

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

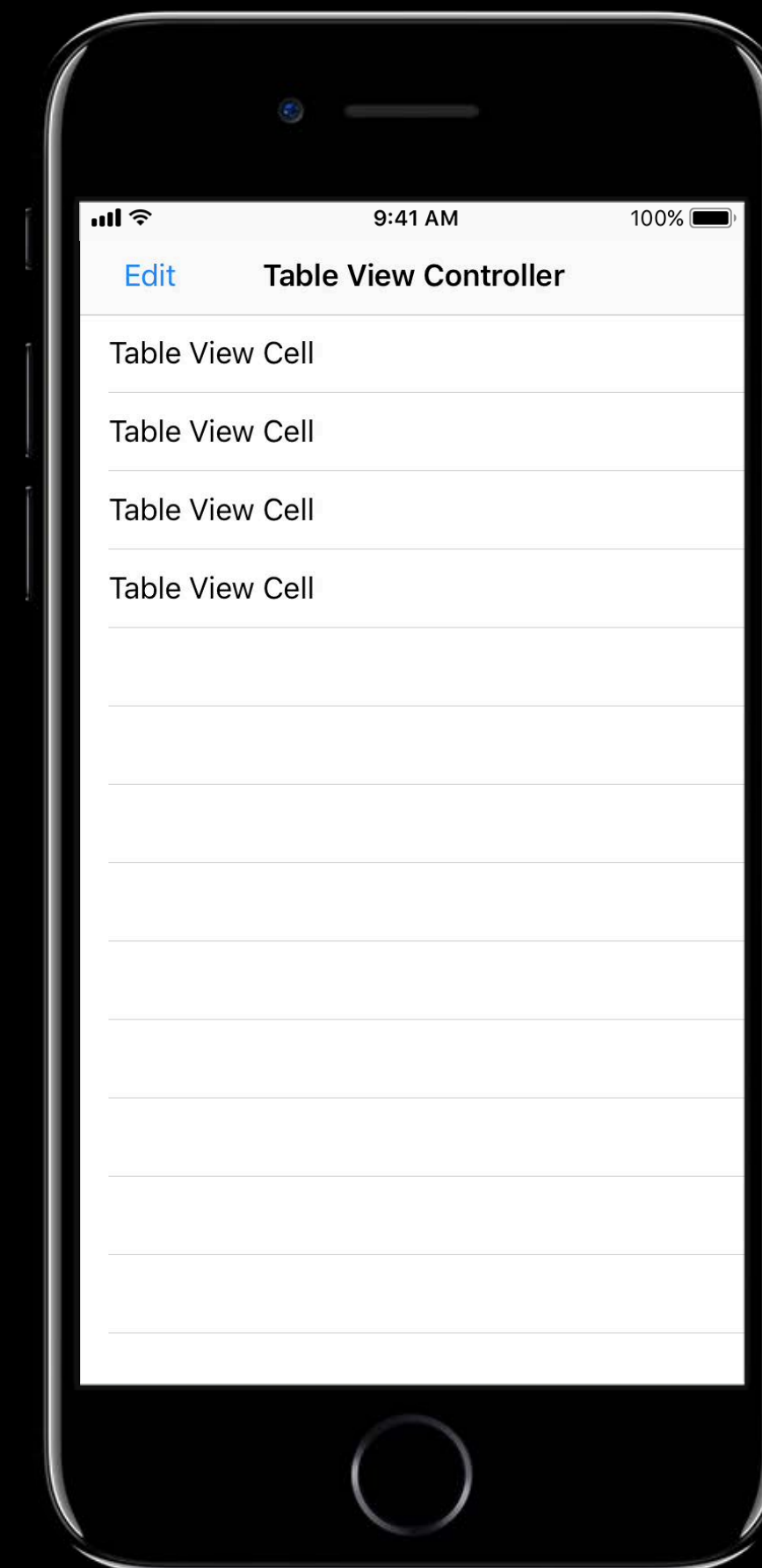
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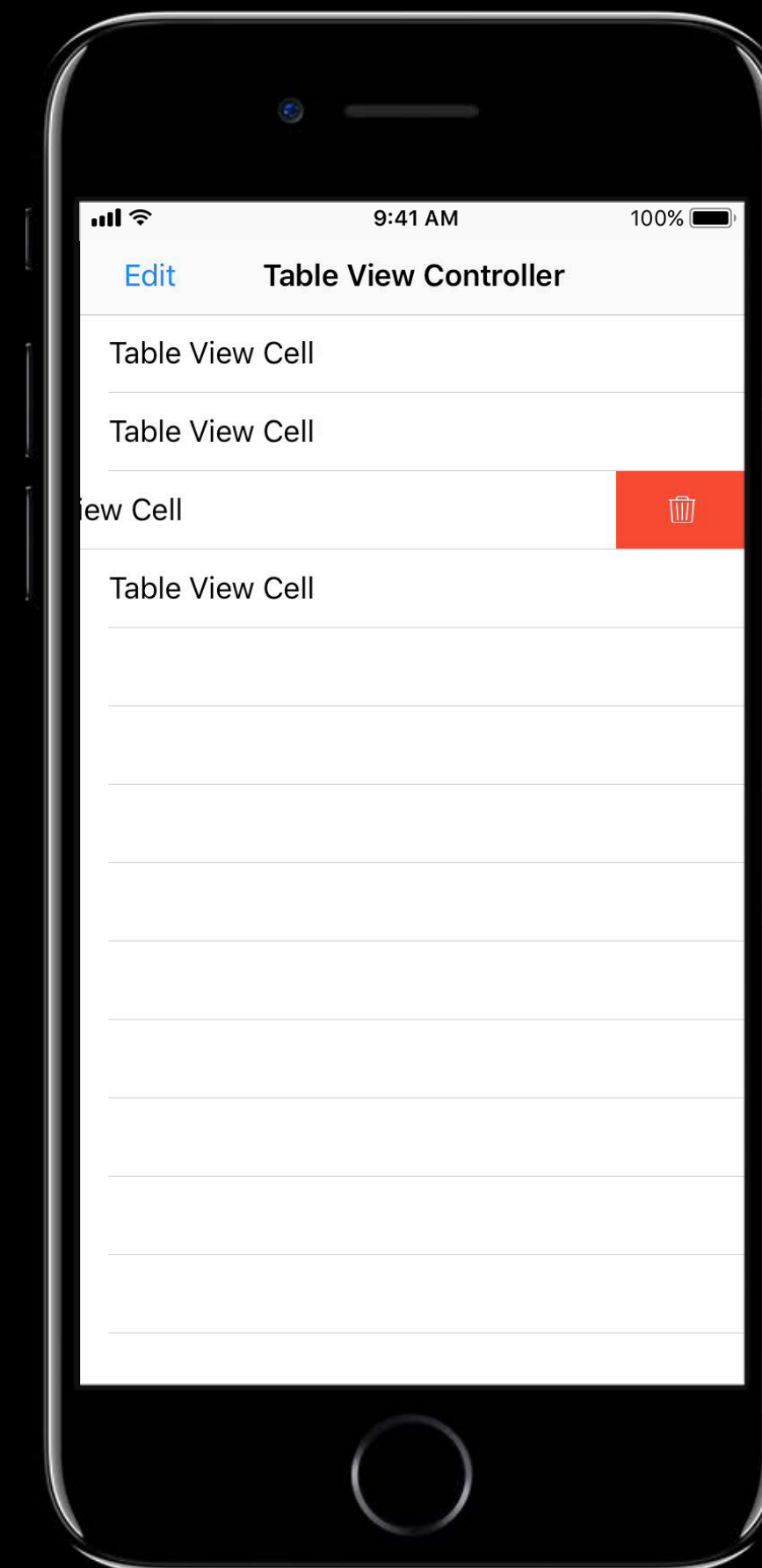
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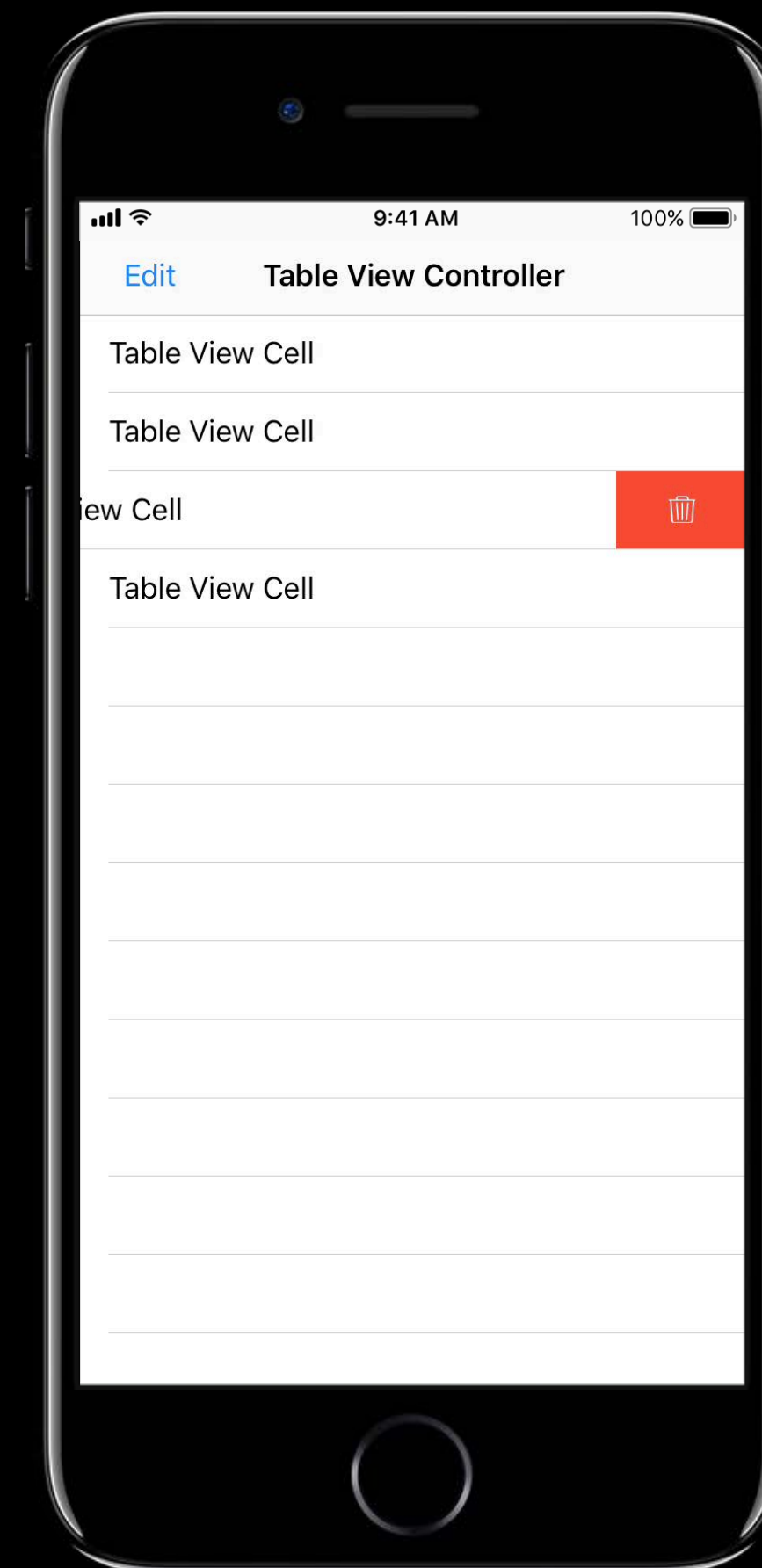
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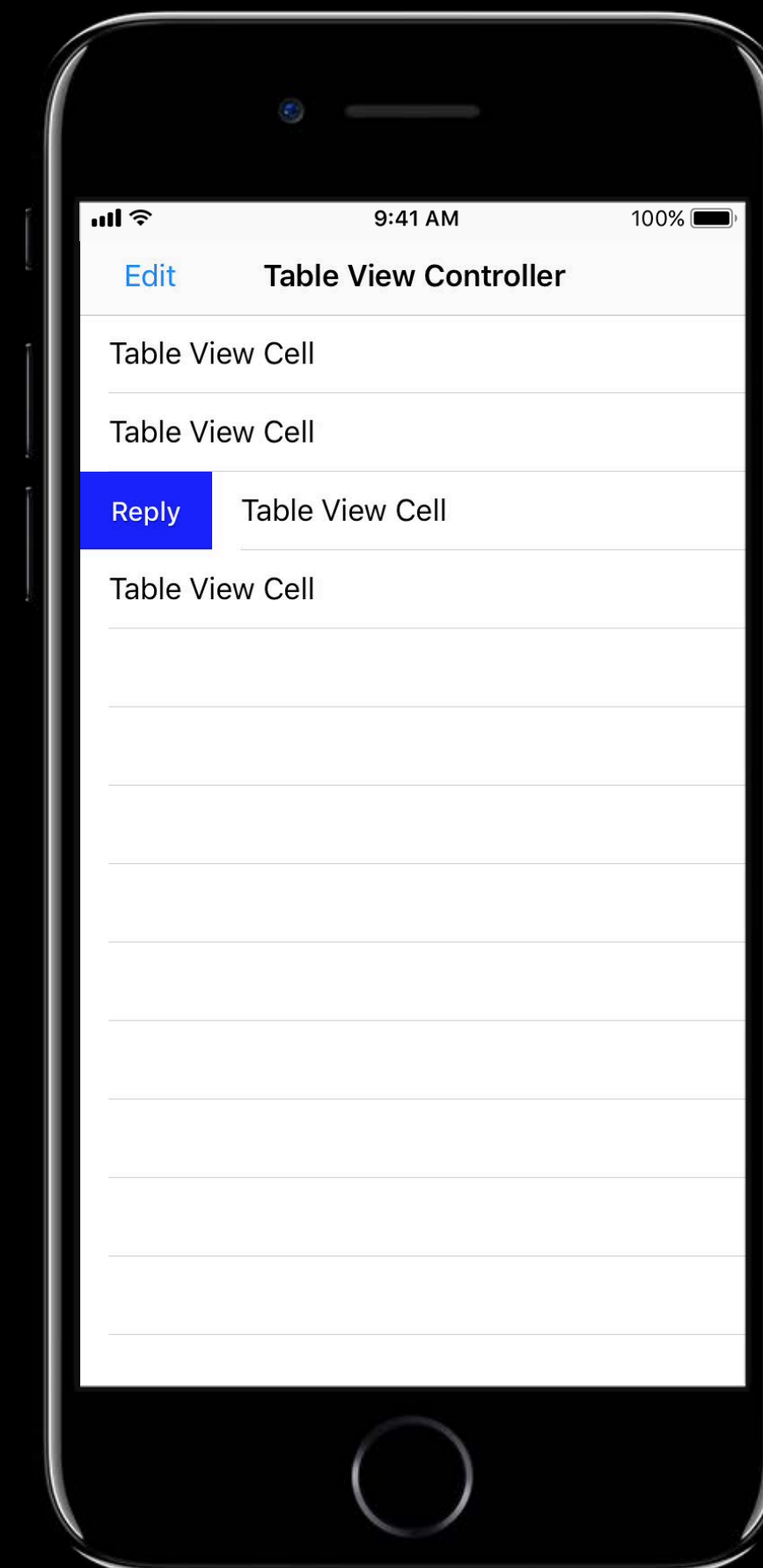
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Swipe Actions

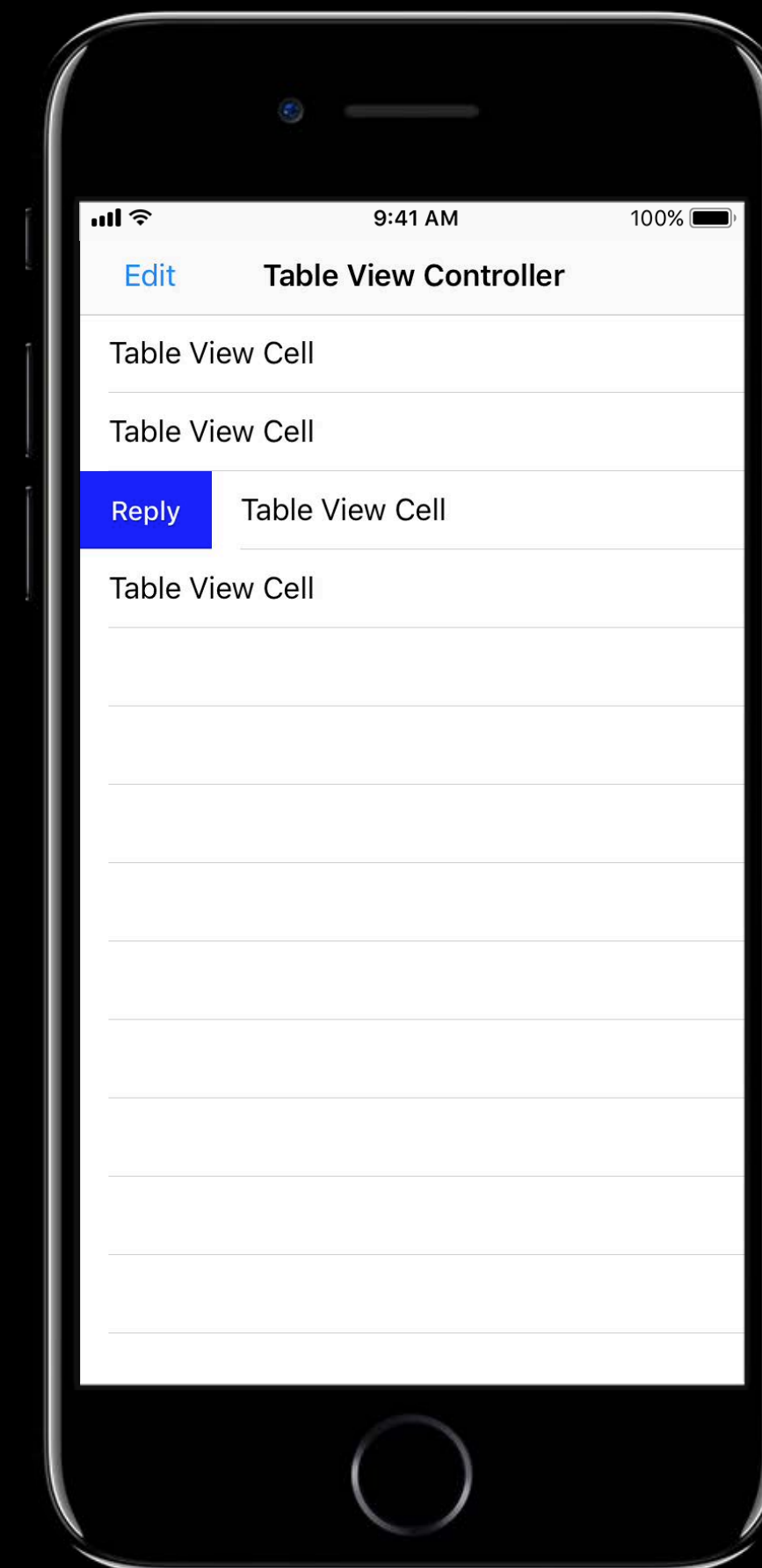
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Demo

Raj Ramamurthy, iOS System Experience

Summary

Large navigation titles

New search experience

Layout margins

Safe area

Scroll views

Table views

Summary

Large navigation titles

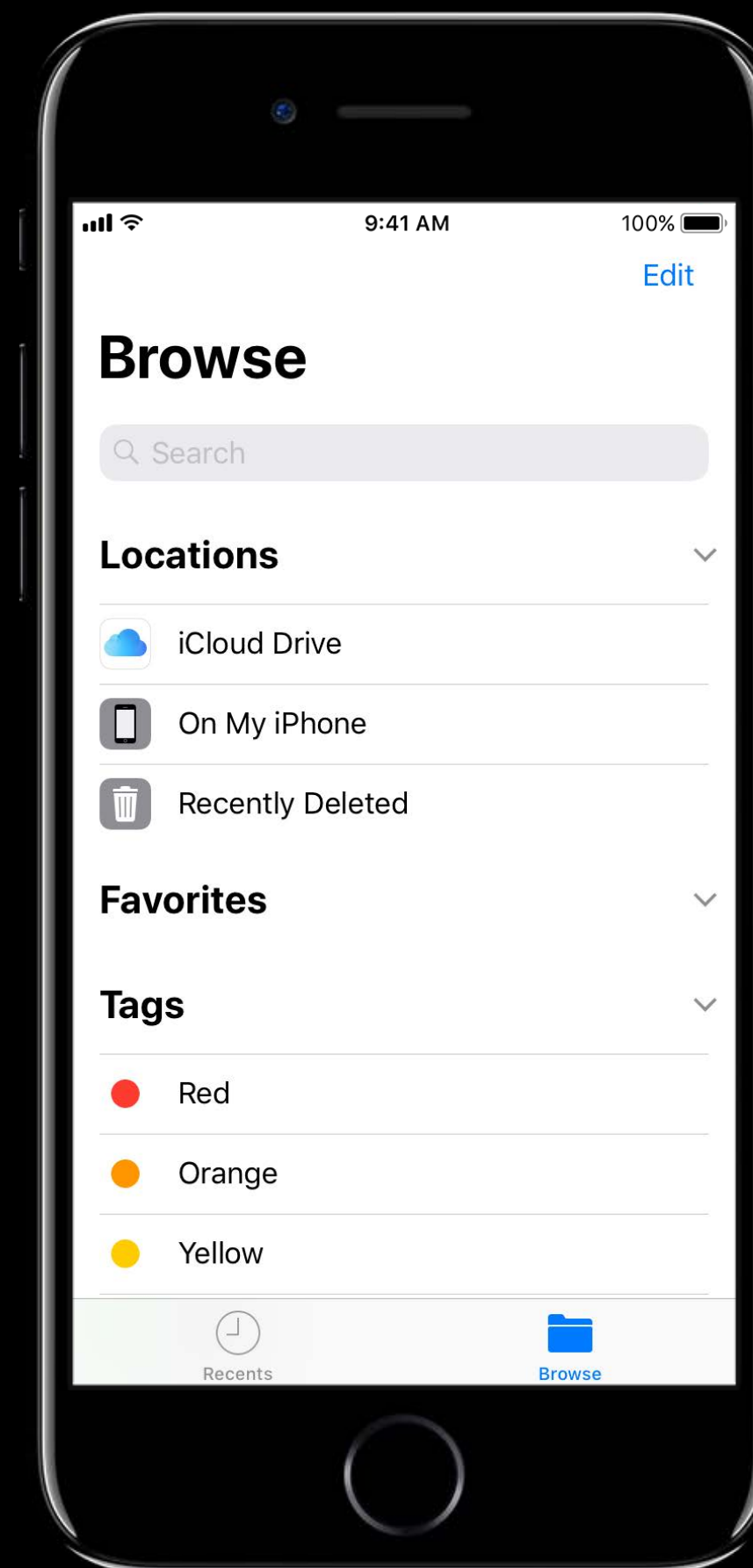
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Summary

Large navigation titles

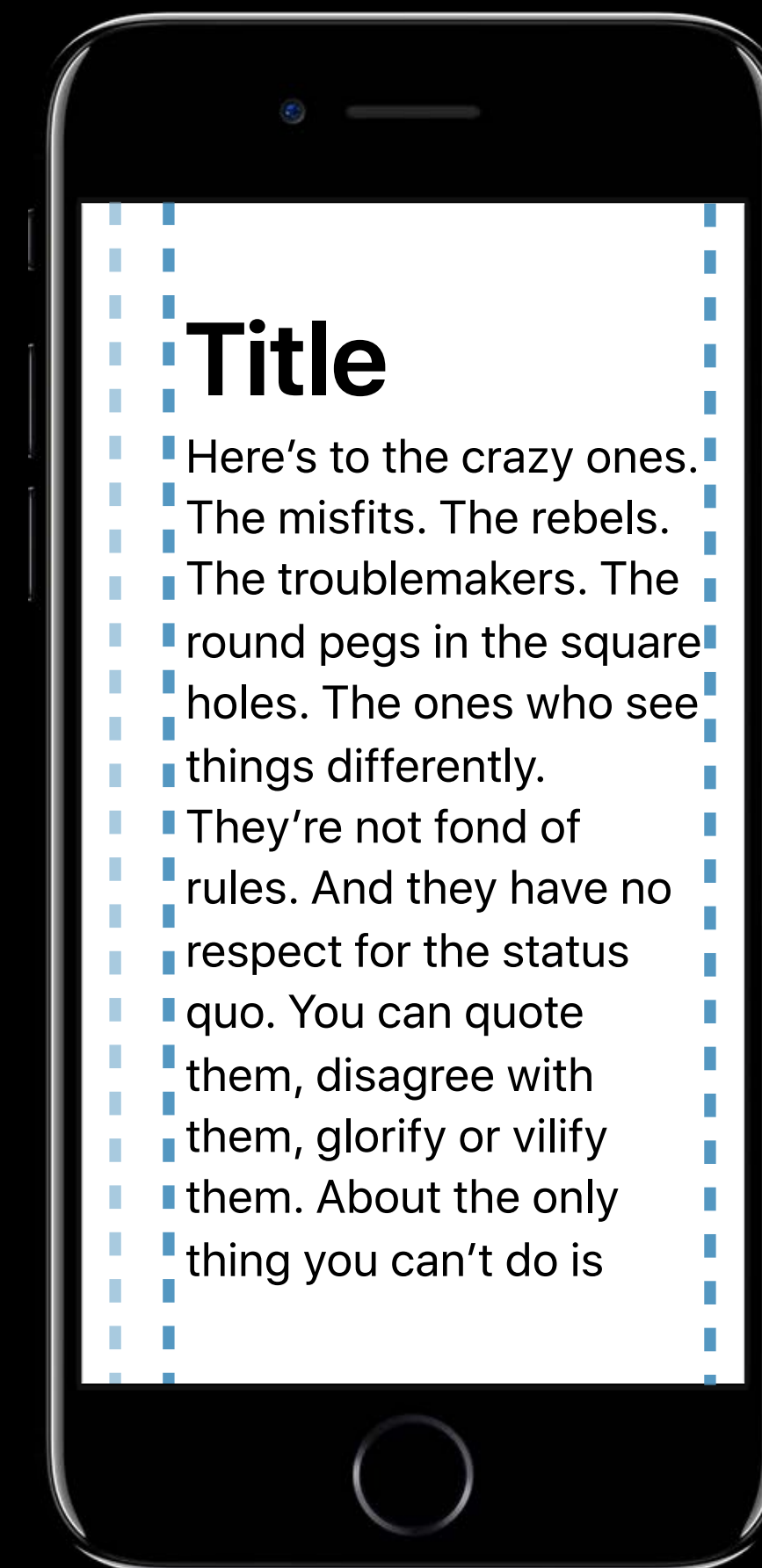
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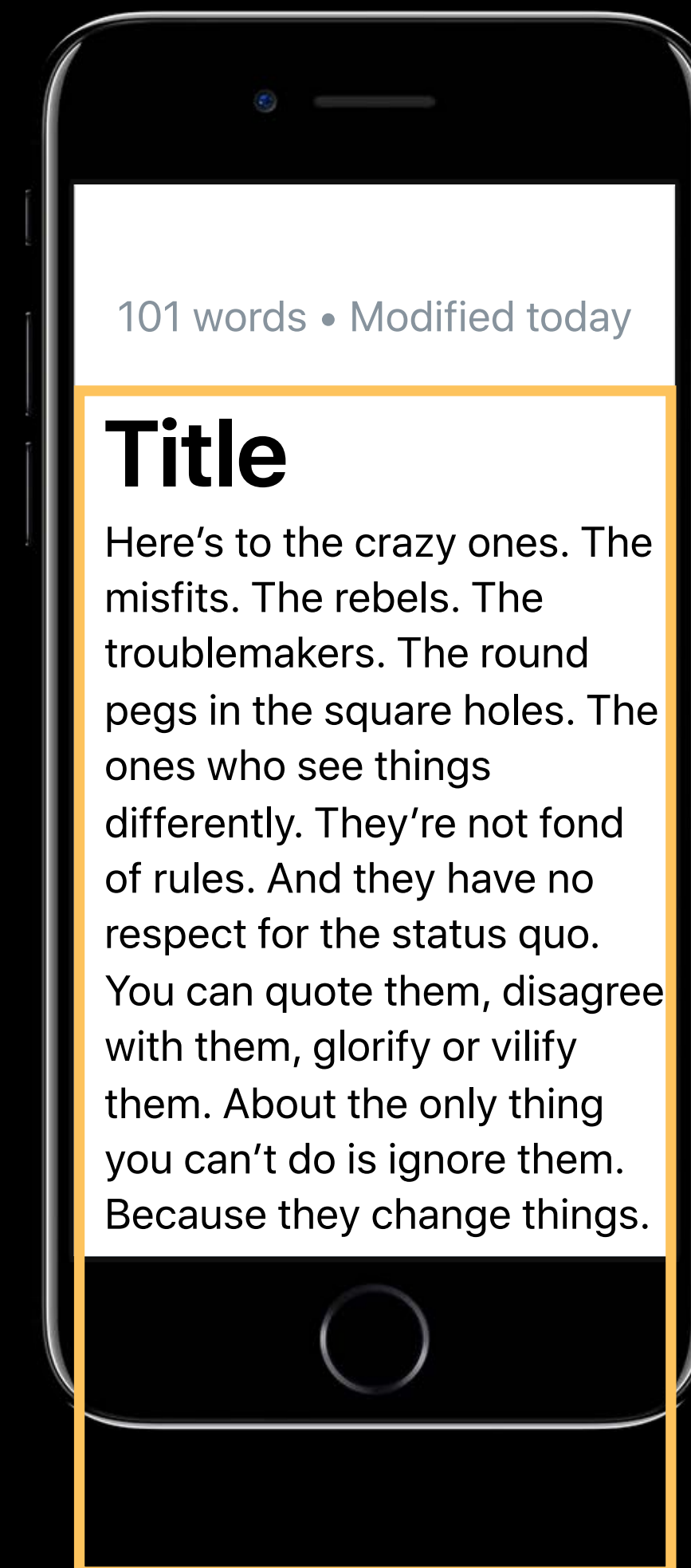
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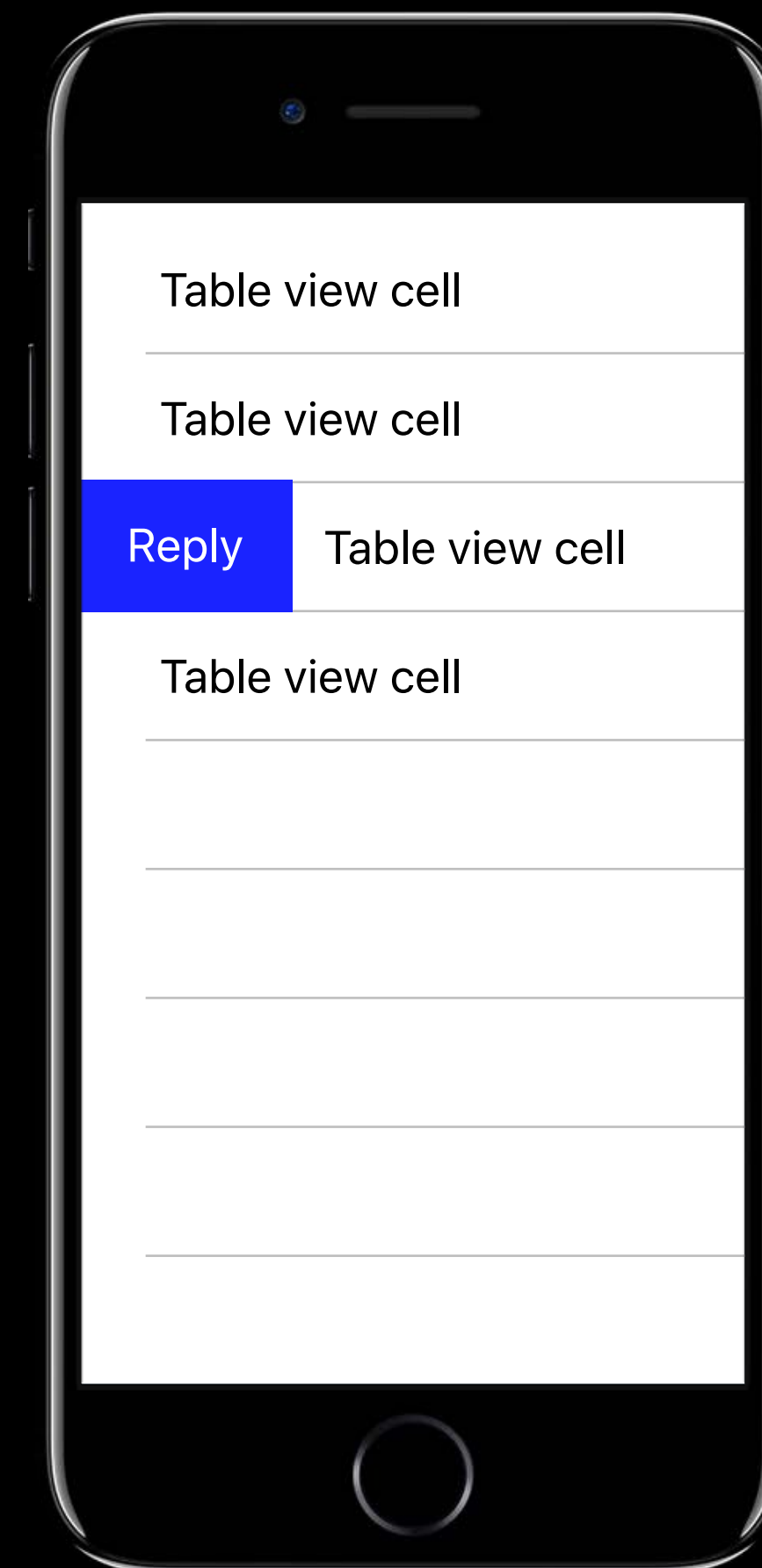
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More Information

<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

