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Hilton **Pintor**

Desenvolvedor (iOS/tvOS/watchOS)

hiltonpintor@gmail.com

citi

// Aula 05

// Recapitulando

// Delegate

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// Delegate

1. Definição do protocolo
2. Implementar protocolo em uma classe
3. adicionar propriedade delegate
4. chamar métodos do delegate

// delegate

```
import UIKit

class ViewController: UIViewController {
    @IBOutlet weak var colorTextField: UITextField!
    @IBOutlet weak var colorButton: UIButton!

    @IBAction func tapColorButton(_ sender: Any) {
        // …
}
```

```
// delegate

    extension ViewController: UITextFieldDelegate {



}
```

// delegate

```
extension ViewController: UITextFieldDelegate {
    func textField(_ textField: UITextField,
                   shouldChangeCharactersIn range: NSRange,
                   replacementString string: String) -> Bool {

        let text = textField.text!

        let swiftRange = Range(range, in: text)!
        let newText = text.replacingCharacters(in: swiftRange, with: string)

        if newText != "" {
            self.colorButton.isEnabled = true
        } else {
            self.colorButton.isEnabled = false
        }


        return true
} }
```

```
// delegate

class ViewController: UIViewController {
    @IBOutlet weak var colorTextField: UITextField!

    override func viewDidLoad() {
        super.viewDidLoad()


    }
}
```

```
// delegate

class ViewController: UIViewController {
    @IBOutlet weak var colorTextField: UITextField!

    override func viewDidLoad() {
        super.viewDidLoad()

        self.colorTextField.delegate = self
    }
}
```

// delegate

1. UITextFieldDelegate
2. ViewController: UITextFieldDelegate
3. self.colorTextField.delegate = self
4. chamar métodos do delegate (responsabilidade do Text Field)

// delegate

```
public protocol UITextFieldDelegate : NSObjectProtocol {


    @available(iOS 2.0, *)
    optional public func textFieldShouldBeginEditing(_ textField: UITextField) -> Bool // return NO to disallow editing.

    @available(iOS 2.0, *)
    optional public func textFieldDidBeginEditing(_ textField: UITextField) // became first responder

    @available(iOS 2.0, *)
    optional public func textFieldShouldEndEditing(_ textField: UITextField) -> Bool // return YES to allow editing to stop and to resign first responder status. NO to disallow the editing session to end

    @available(iOS 2.0, *)
    optional public func textFieldDidEndEditing(_ textField: UITextField) // may be called if forced even if shouldEndEditing returns NO (e.g. view removed from window) or endEditing:YES called

    @available(iOS 10.0, *)
    optional public func textFieldDidEndEditing(_ textField: UITextField, reason: UITextFieldDidEndEditingReason) // if implemented, called in place of textFieldDidEndEditing:

// ...
}
```

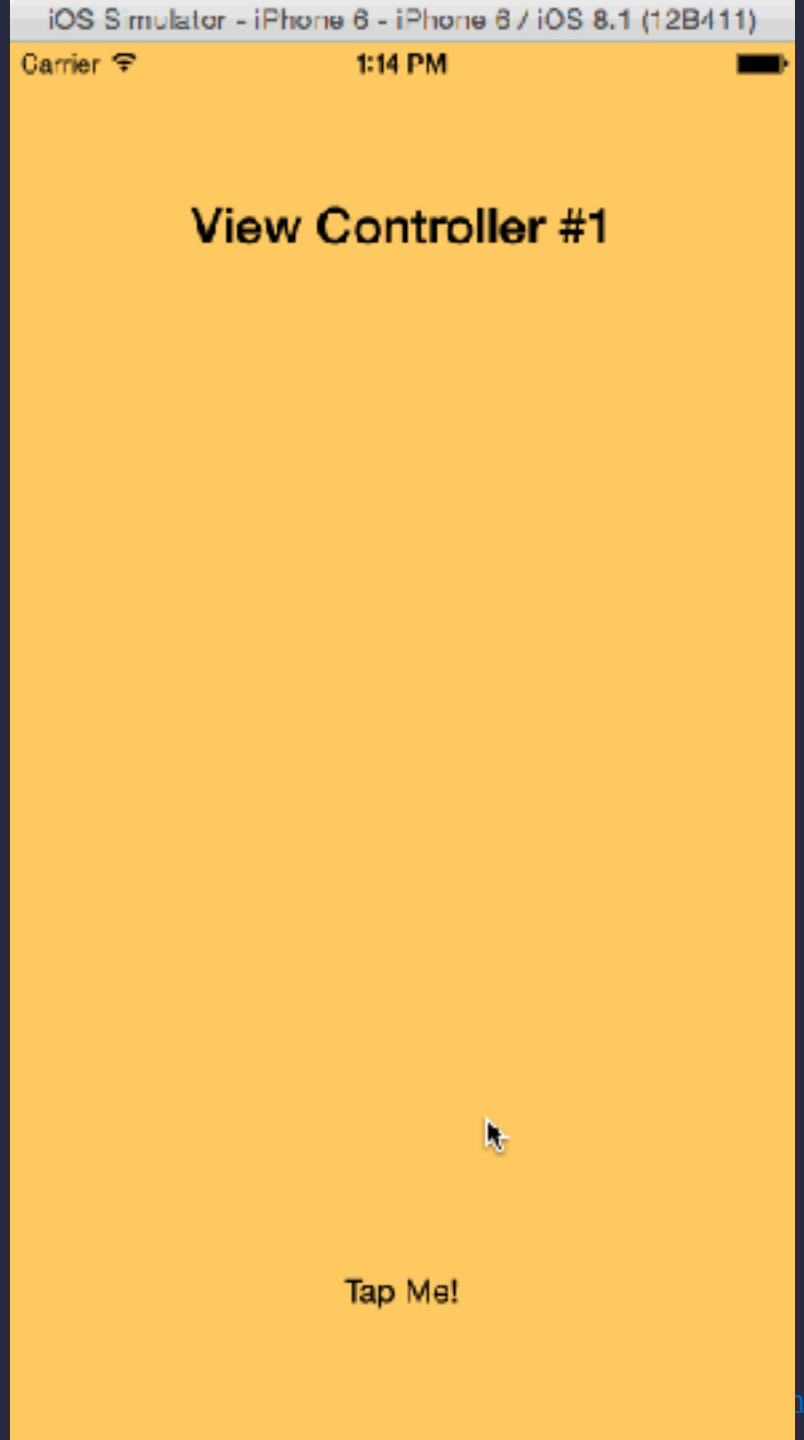
// Navegação

// navegação

Trocar de tela

Trocar de View

Trocar de View Controller

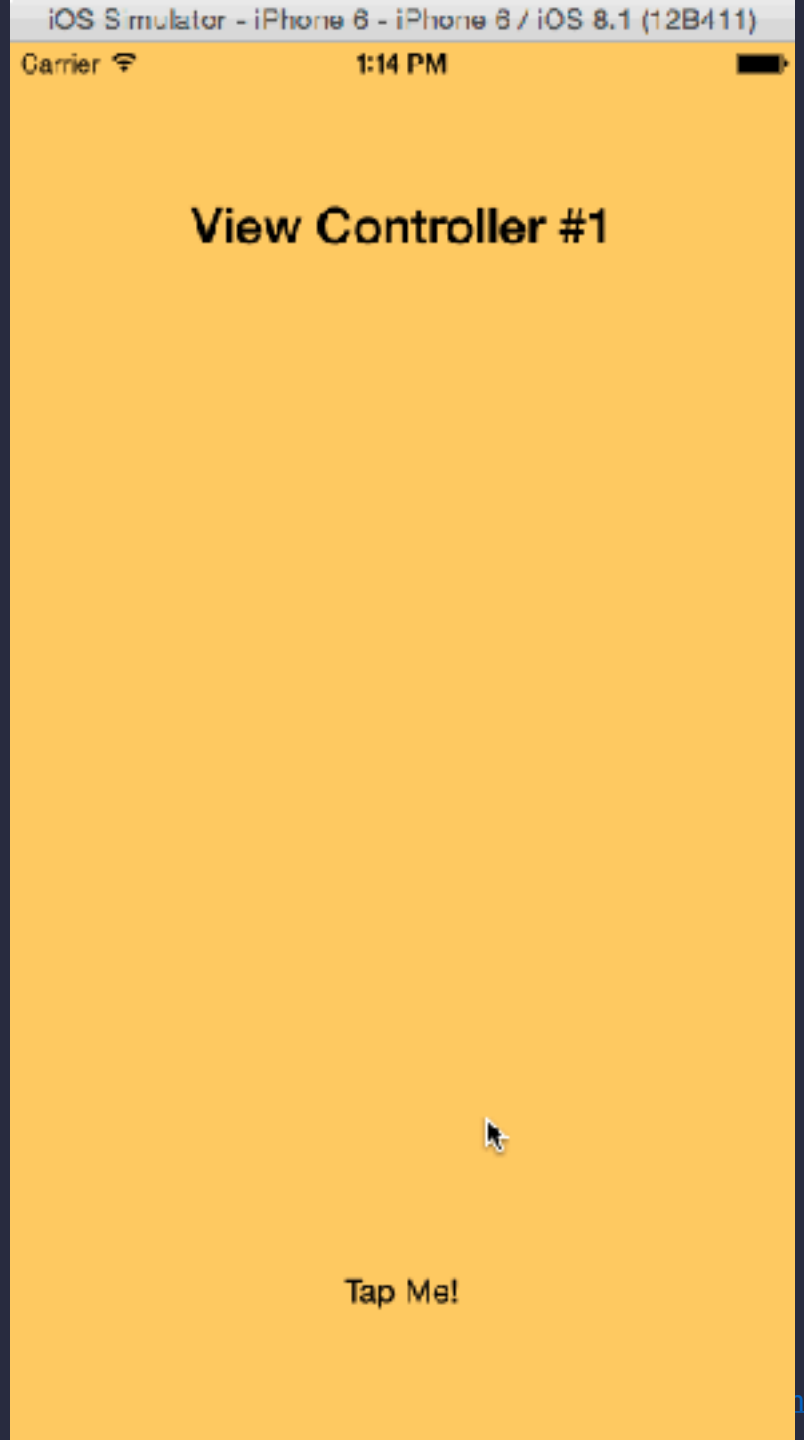


// navegação

Trocar de tela

Trocar de View

Trocar de View Controller

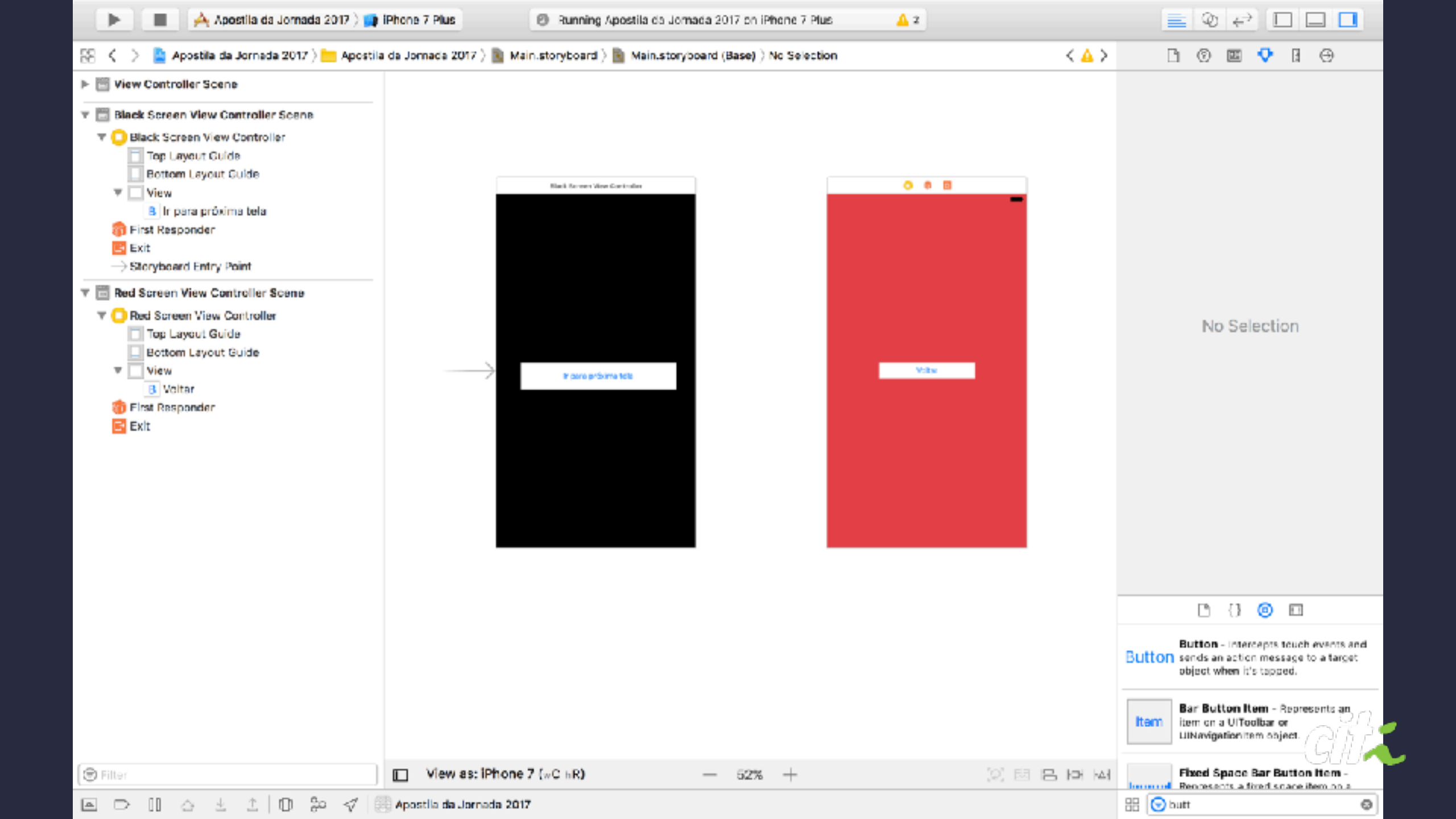


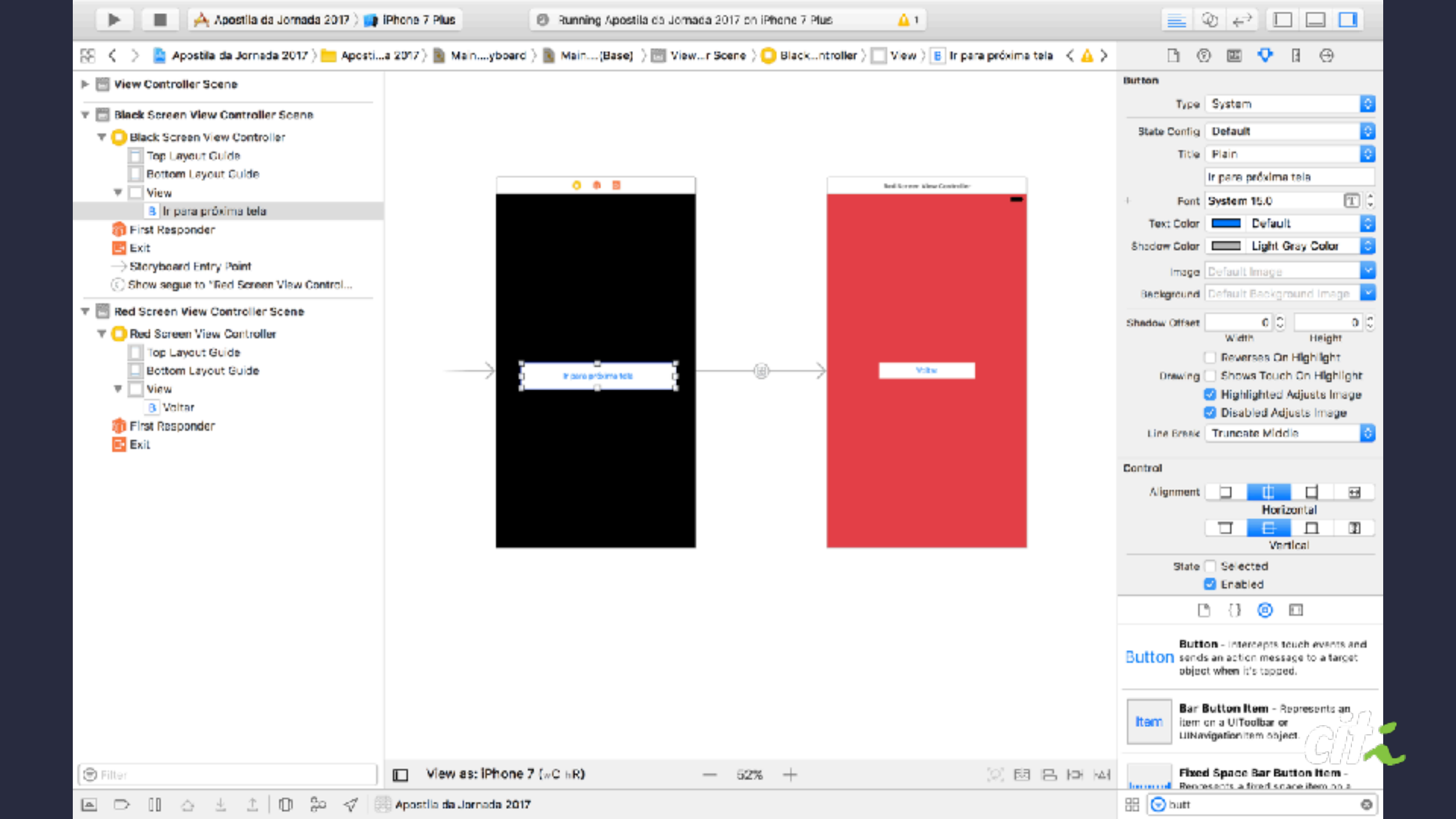
// Segues

// Segues

- Definem o fluxo de **navegação** do app
- **Transição** entre ViewControllers do StoryBoard
- **Início**: button, table row, or gesture recognizer
- **Destino**: ViewController a ser mostrado

https://goo.gl/bRnvzY


Apostila da Jornada 2017 〉 iPhone 7 Plus
Running Apostila da Jornada 2017 on iPhone 7 Plus
Apostila da Jornada 2017 〉 Apostila da Jornada 2017 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 No Selection
View Controller Scene
Black Screen View Controller Scene
Black Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
Ir para próxima tela
First Responder
Exit
Storyboard Entry Point
Red Screen View Controller Scene
Red Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
Voltar
First Responder
Exit
Ir para próxima tela
Voltar
No Selection
Button
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item -
View as: iPhone 7 (wC hR)
52%
Apostila da Jornada 2017
butt


Apostila da Jornada 2017
iPhone 7 Plus
Running Apostila da Jornada 2017 on iPhone 7 Plus
View Controller Scene
Black Screen View Controller Scene
Black Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
Ir para próxima tela
First Responder
Exit
Storyboard Entry Point
Red Screen View Controller Scene
Red Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
Voltar
First Responder
Exit
Button
Type System
State Config Default
Title Plain
Ir para próxima tela
Font System 15.0
Text Color Default
Shadow Color Light Gray Color
Image Default Image
Background Default Background Image
Shadow Offset Width Height
Reverses On Highlight
Drawing Shows Touch On Highlight
Highlighted Adjusts Image
Disabled Adjusts Image
Line Break Truncate Middle
Control
Alignment
Horizontal
Vertical
State Selected
Enabled
Button
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item -
View as: iPhone 7 (wC hR)
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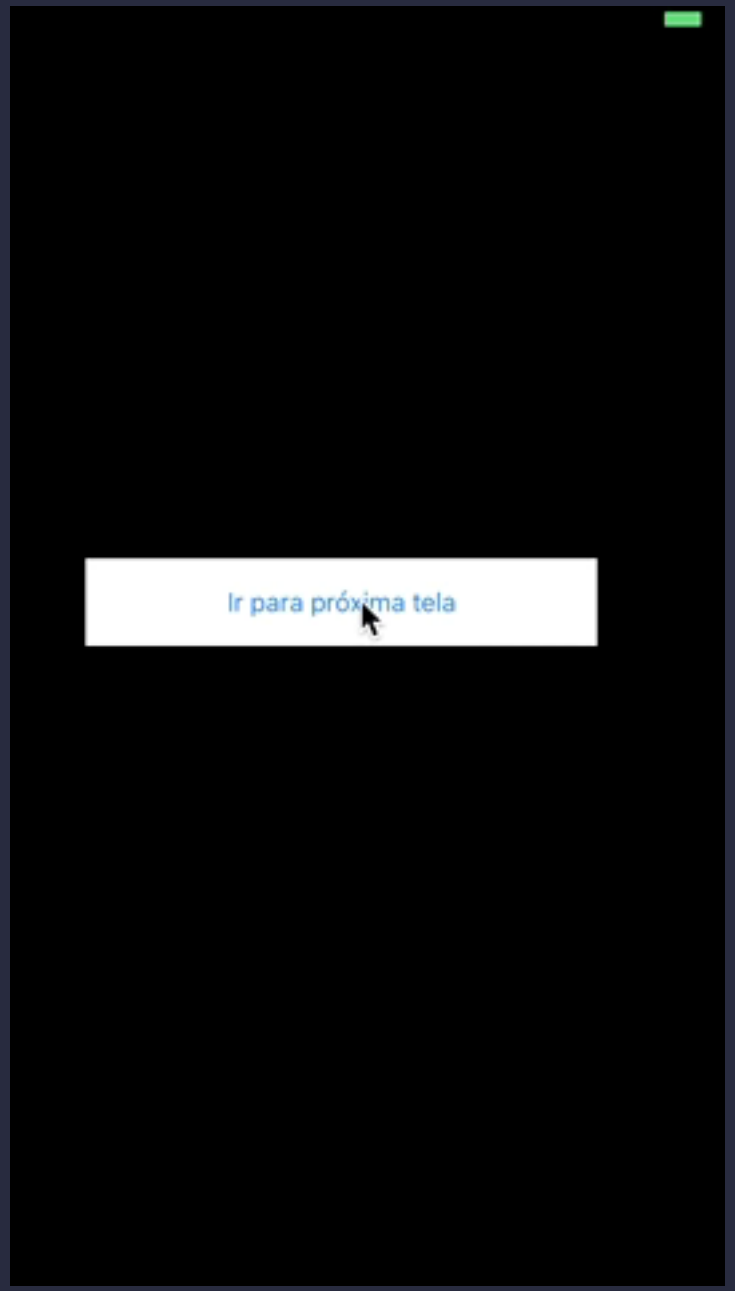
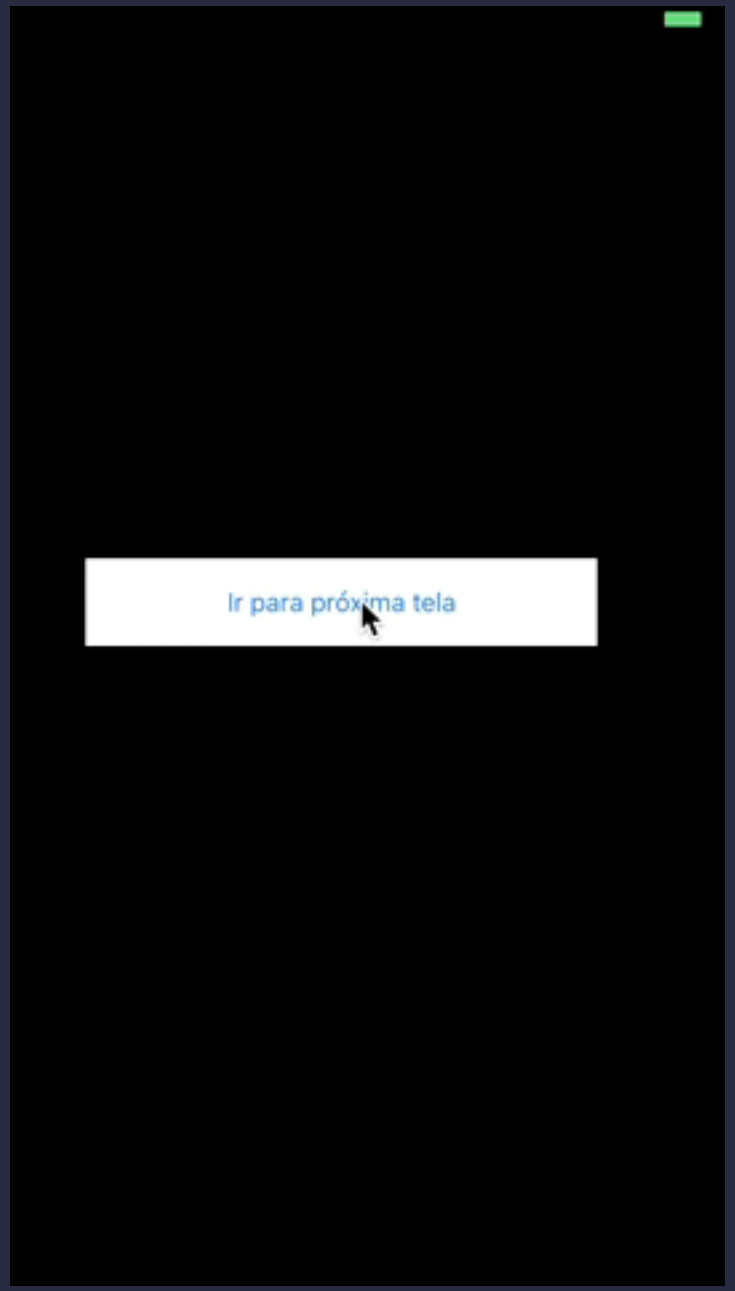
// Segues

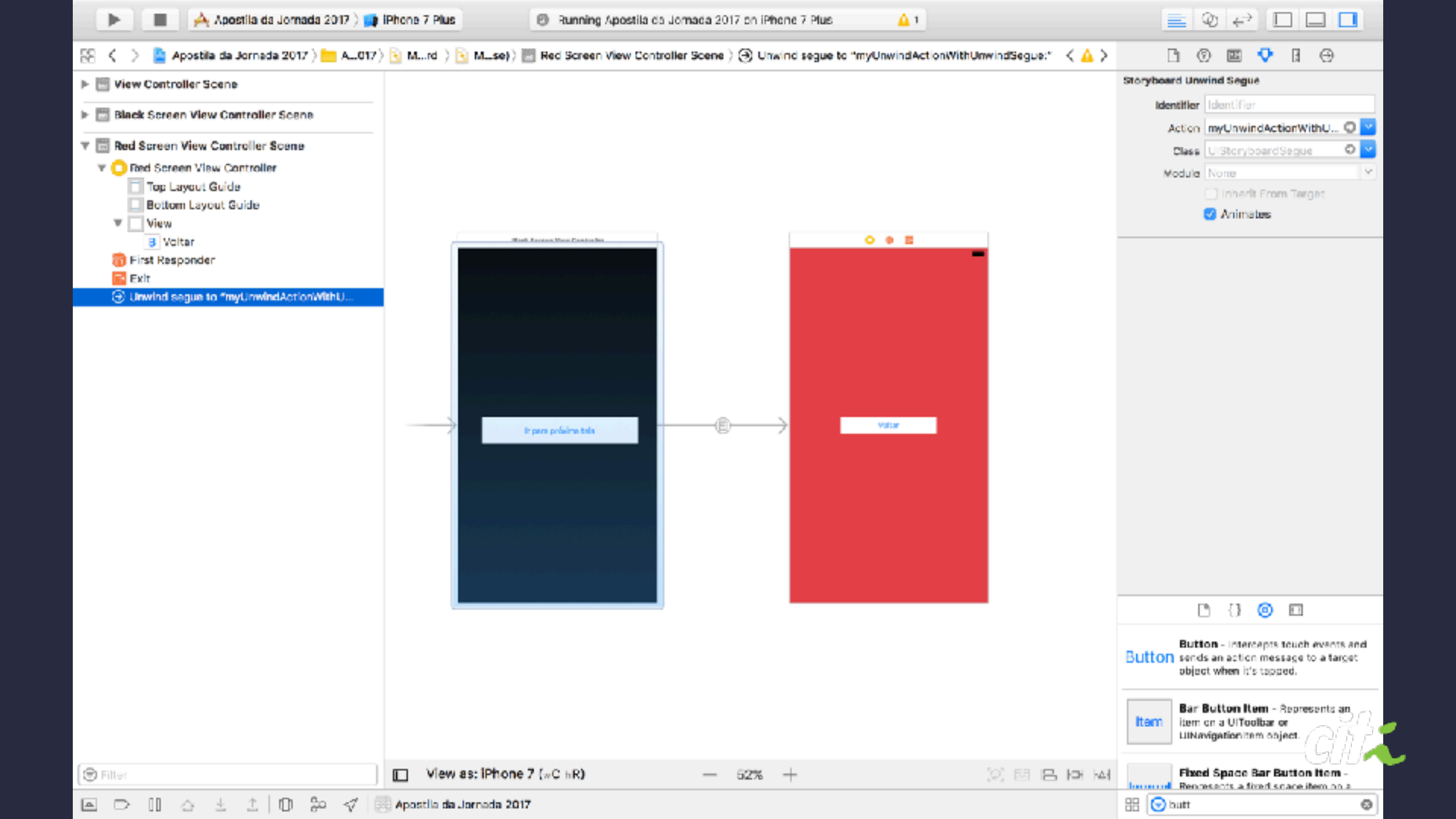
- Apresentação Modal



// Segues

- Apresentação Modal

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Running Apostila da Jornada 2017 on iPhone 7 Plus
Apostila da Jornada 2017 〉 A...017 〉 M...rd 〉 M...se) 〉 Red Screen View Controller Scene 〉 Unwind segue to "myUnwindAct onWithUnwindSegue:"
View Controller Scene
Black Screen View Controller Scene
Red Screen View Controller Scene
Red Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
Voltar
First Responder
Exit
Unwind segue to "myUnwindActionWithU...
Ir para próxima tela
Voltar
Storyboard Unwind Segue
Identifier
Action
myUnwindActionWithU...
Class
UIStoryboardSegue
Module
None
Inherit From Target
Animates
Button
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item -
View as: iPhone 7 (wC hR)
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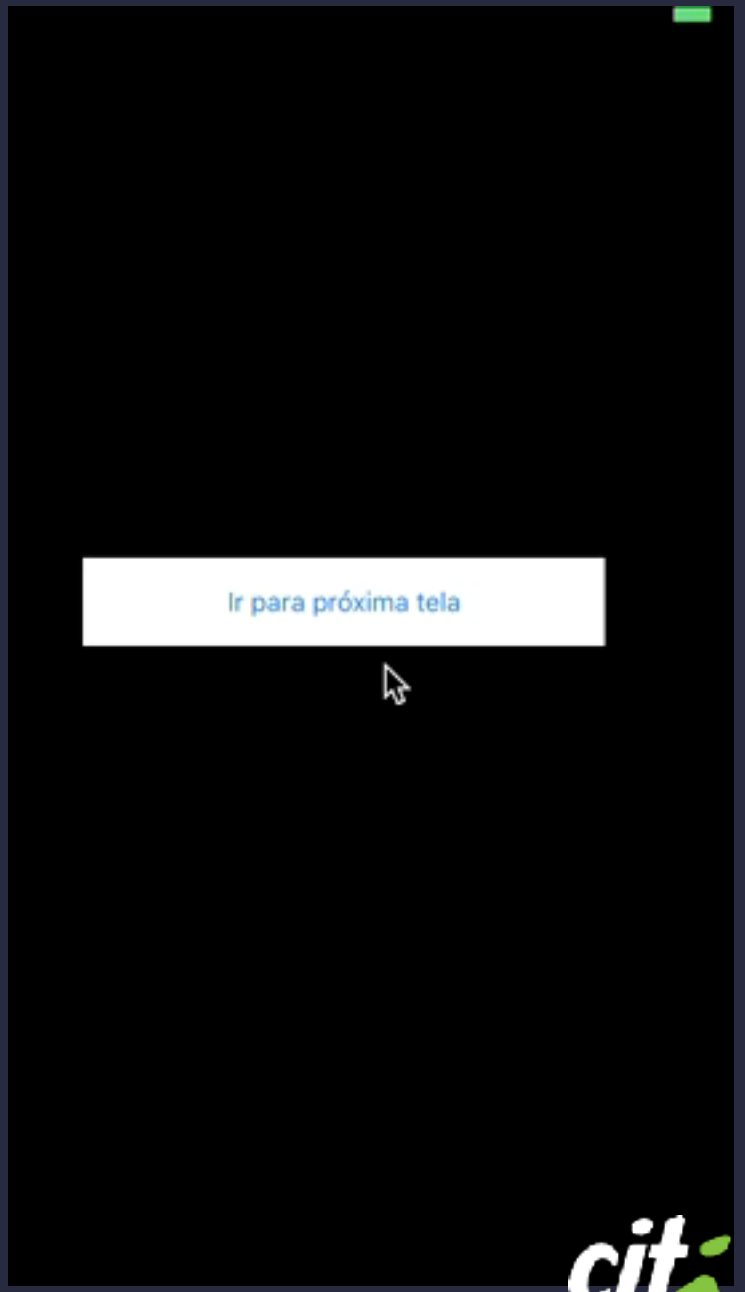
// Segues

- Unwind

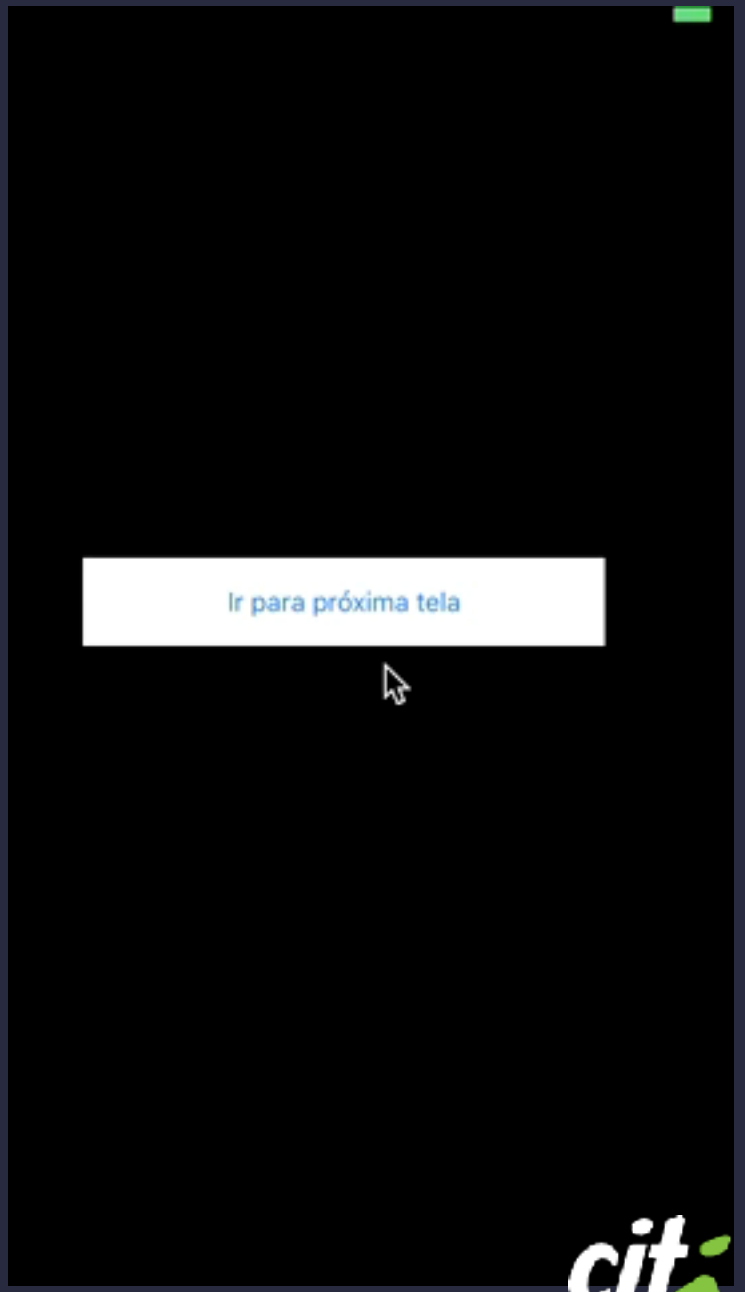
```
@IBAction func myUnwindAction(unwindSegue: UIStoryboardSegue)
```



// Segues

- Unwind

```
@IBAction func myUnwindAction(unwindSegue: UIStoryboardSegue)
```



// Chamando por Código

// Segues programáticas

Às vezes é necessário **chamar** uma segue pelo código

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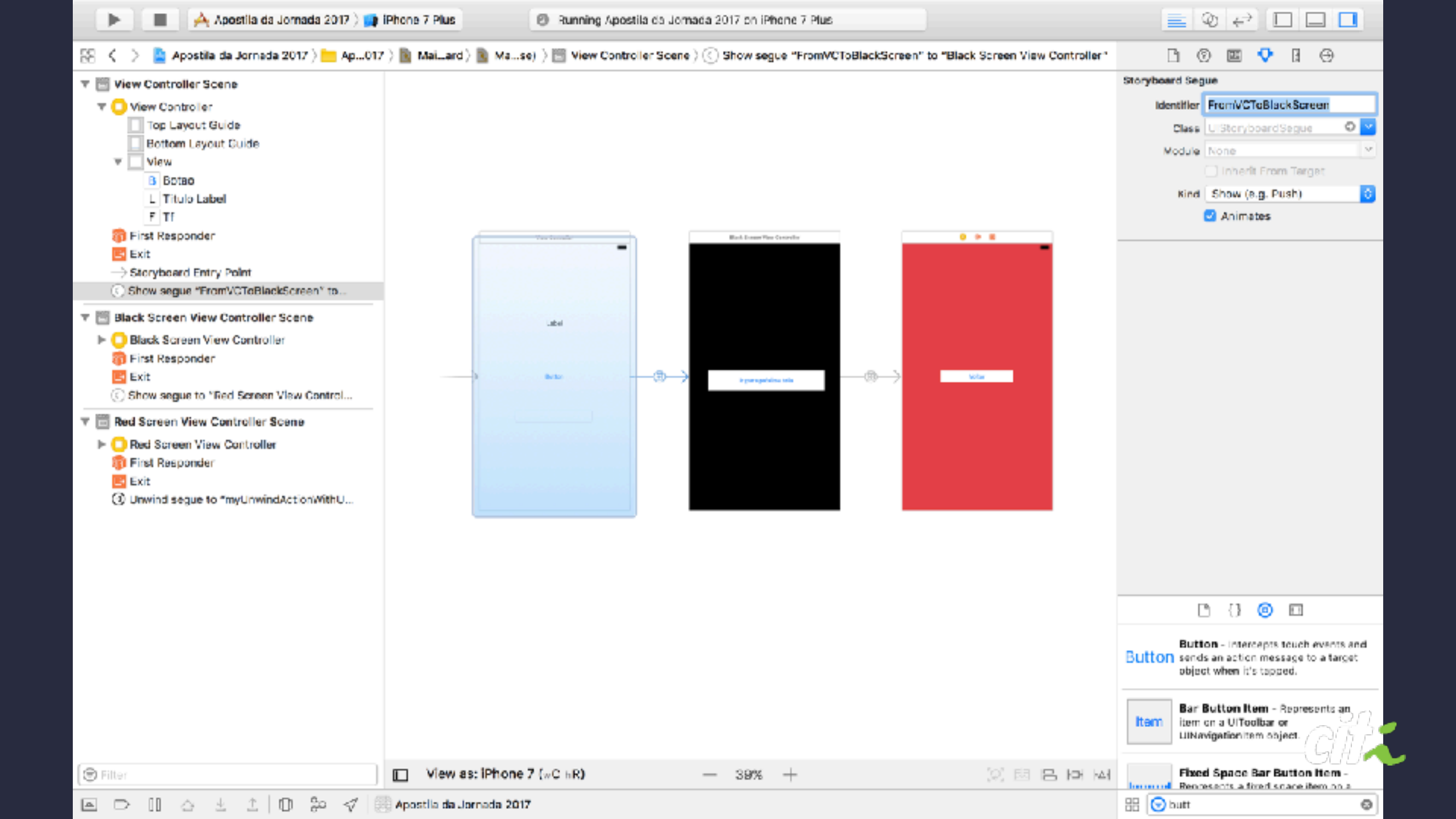
Apostila da Jornada 2017 › iPhone 7 Plus
Running Apostila da Jornada 2017 on iPhone 7 Plus
Apostila da Jornada 2017 › Ap...017 › Mai...ard › Ma...se) › View Controller Scene › Show segue "FromVCToBlackScreen" to "Black Screen View Controller"
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
Botao
Titulo Label
Tf
First Responder
Exit
Storyboard Entry Point
Show segue "FromVCToBlackScreen" to...
Black Screen View Controller Scene
Black Screen View Controller
First Responder
Exit
Show segue to "Red Screen View Control...
Red Screen View Controller Scene
Red Screen View Controller
First Responder
Exit
Unwind segue to "myUnwindActionWithU...
Label
Button
Storyboard Segue
Identifier FromVCToBlackScreen
Class UIStoryboardSegue
Module None
Inherit From Target
Kind Show (e.g. Push)
Animates
Button Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item -
View as: iPhone 7 (wC hR)
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Apostila da Jornada 2017
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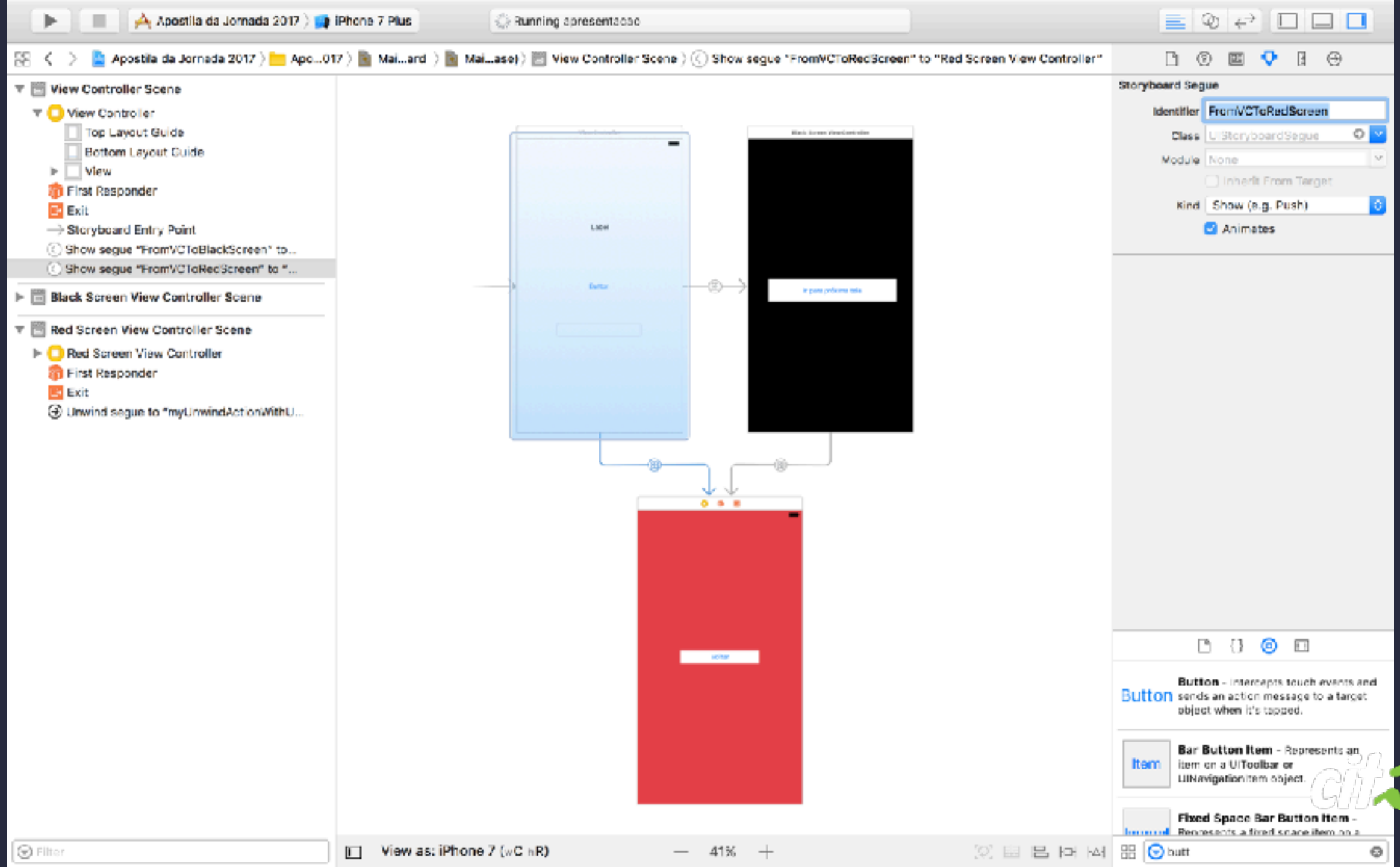
Apostila da Jornada 2017
iPhone 7 Plus
Running apresentacao
Apostila da Jornada 2017
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View Controller Scene
Show segue "FromVCToRecScreen" to "Red Screen View Controller"
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
Storyboard Entry Point
Show segue "FromVCToBlackScreen" to...
Show segue "FromVCToRecScreen" to "...
Black Screen View Controller Scene
Red Screen View Controller Scene
Red Screen View Controller
First Responder
Exit
Unwind segue to "myUnwindActionWithU...
Storyboard Segue
Identifier
FromVCToRedScreen
Class
UIStoryboardSegue
Module
None
Inherit From Target
Kind
Show (e.g. Push)
Animates
Button
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item -
View as: iPhone 7 (wC hR)
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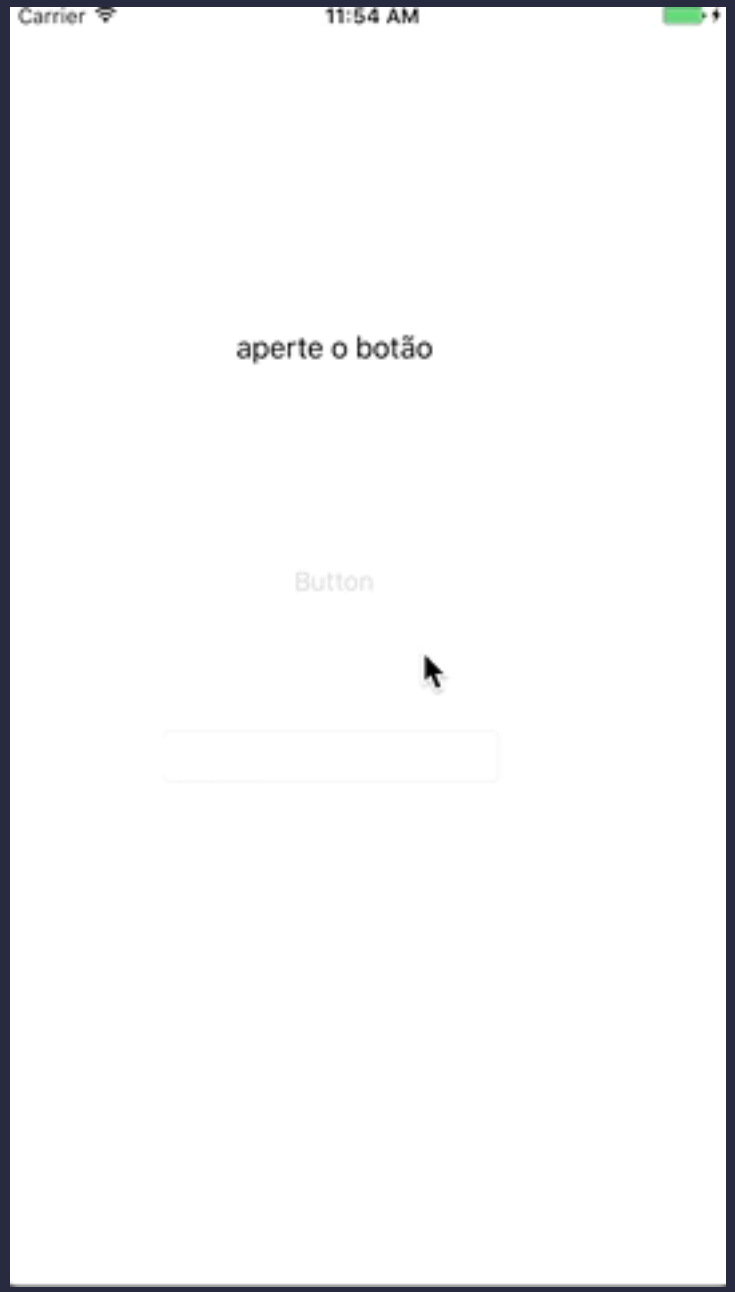
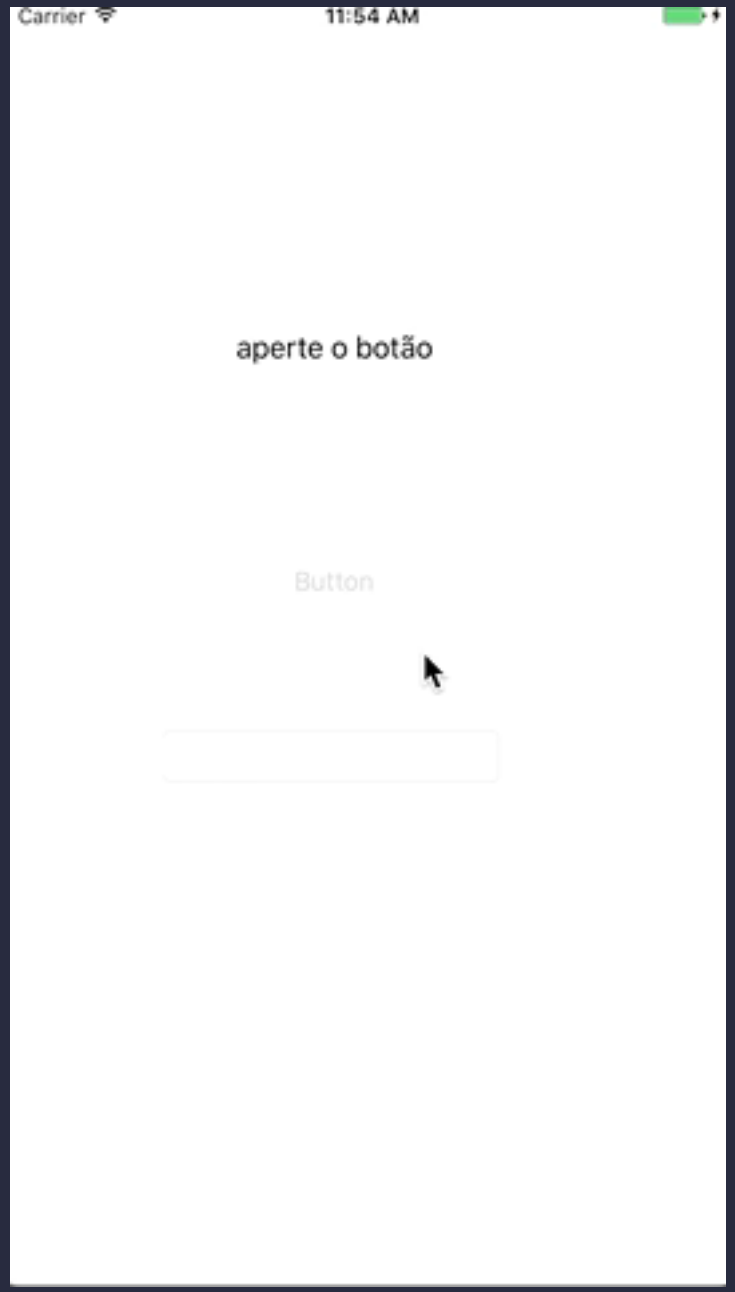
butt

// chamando segue



// chamando segue



// chamando segue

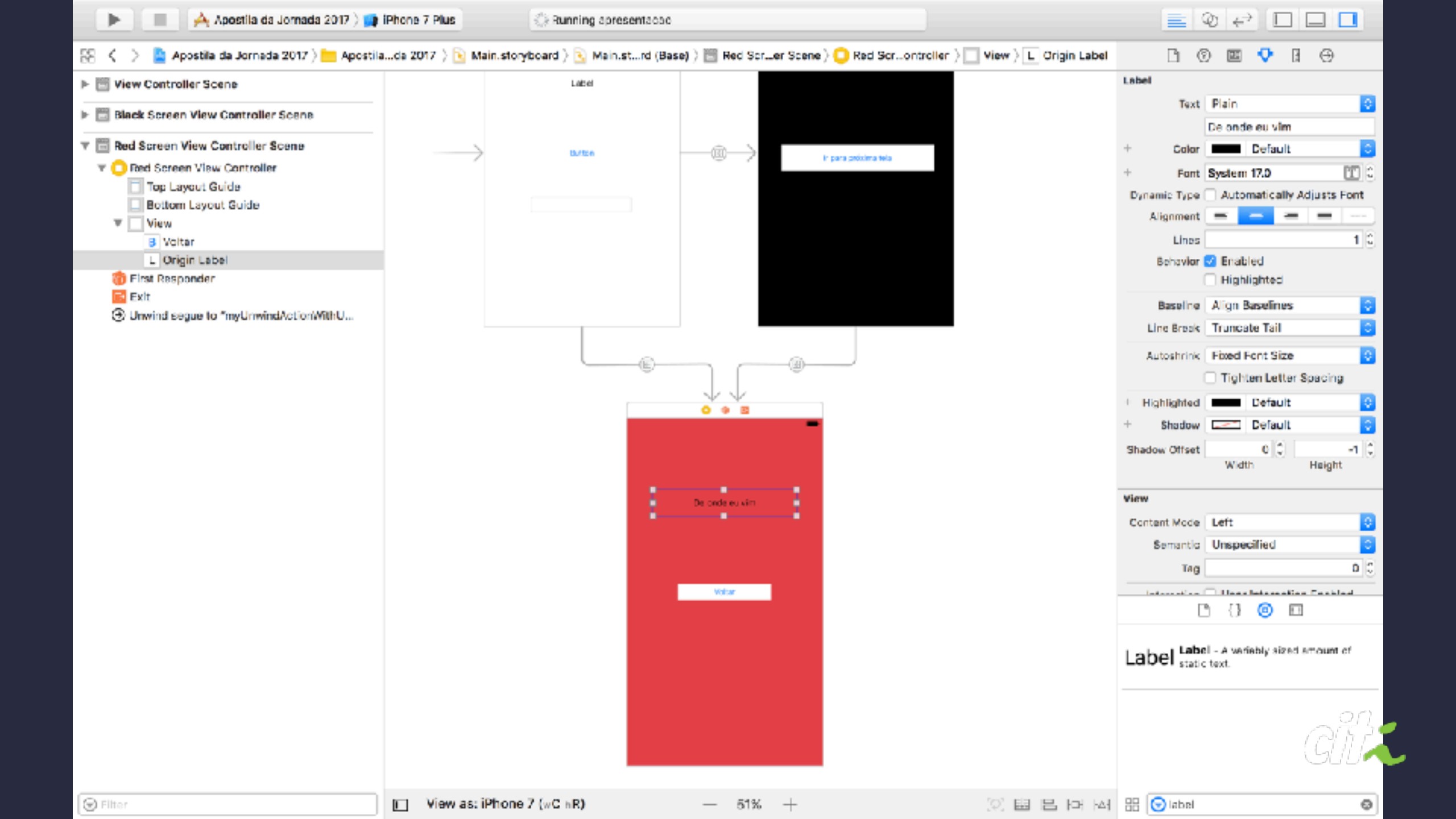
```
if tituloLabel.text == "Black" {
    self.performSegue(withIdentifier: "FromVCToBlackScreen", sender: self)

} else if tituloLabel.text == "Red"{
    self.performSegue(withIdentifier: "FromVCToRedScreen", sender: self)
}
```

// Passando Dados

// passando dados

- Se precisarmos passar informações entre view controllers
- Podemos passá-las pela segue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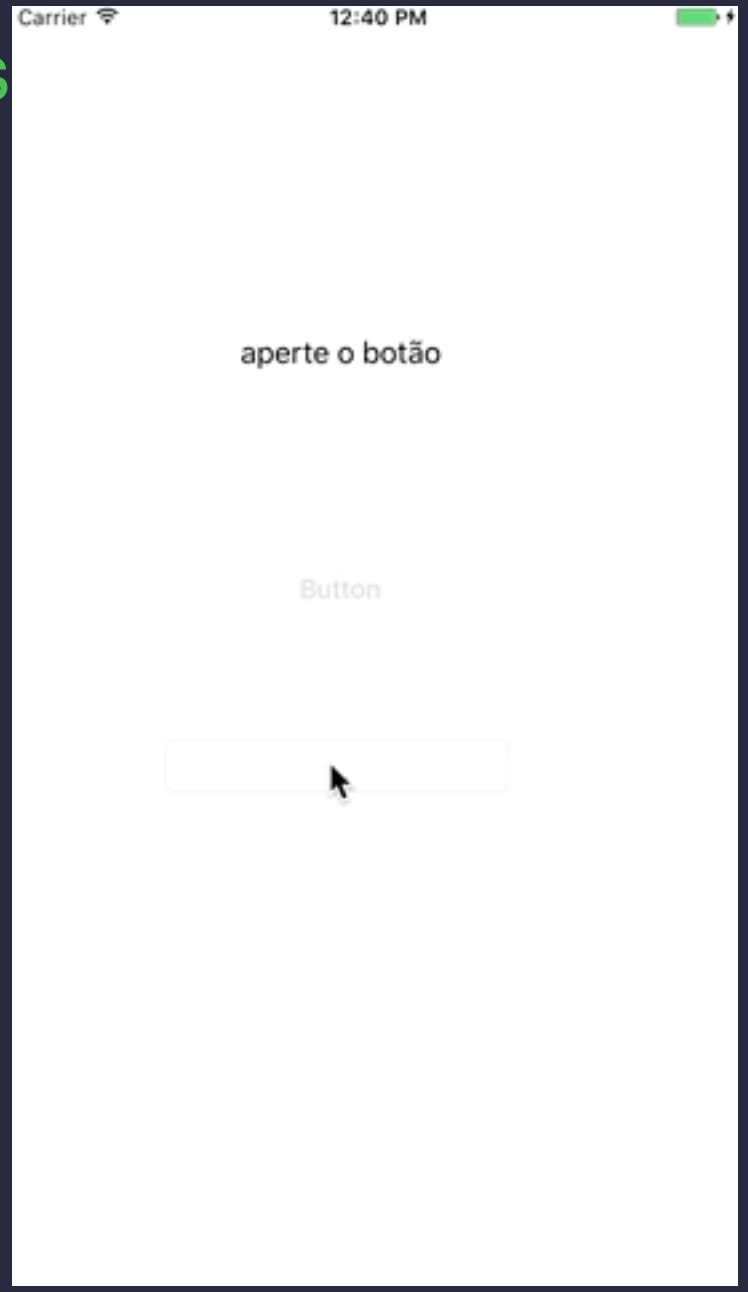
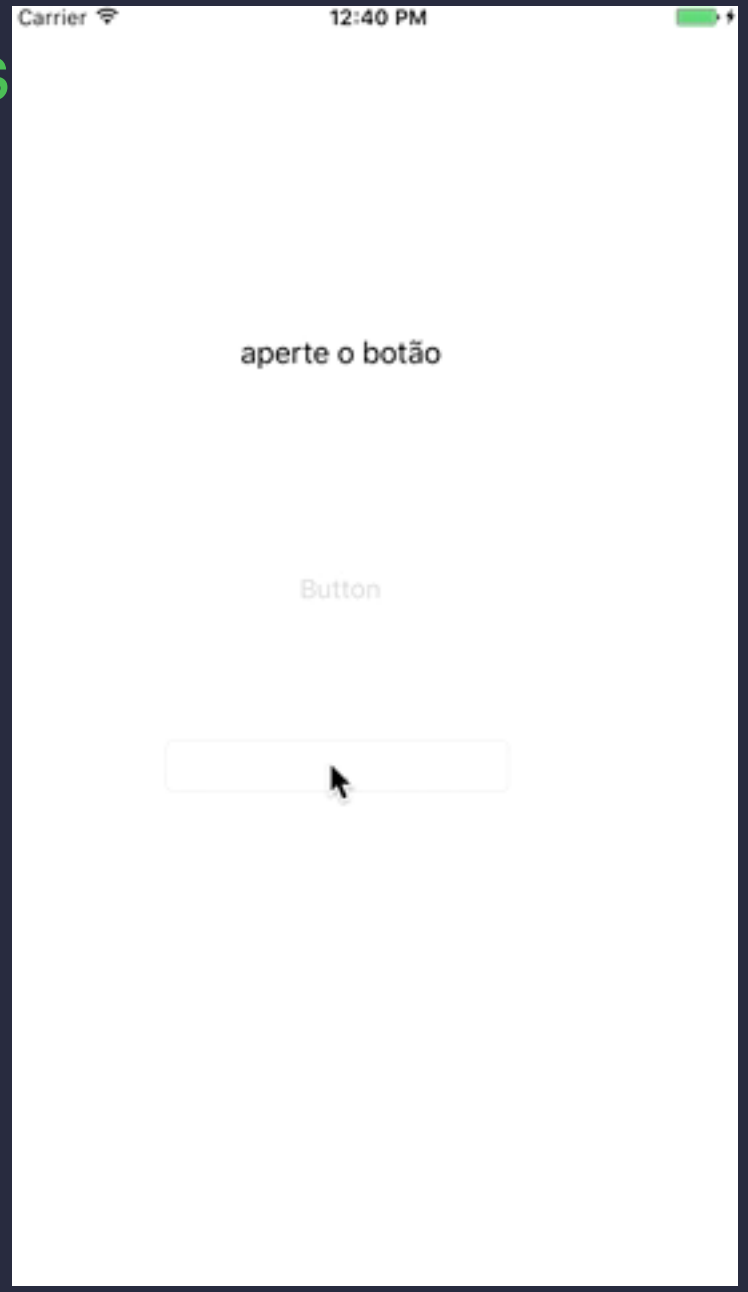
Main.storyboard
Main.st...rd (Base)
Red Scr...er Scene
Red Scr...ontroller
View
Origin Label
View Controller Scene
Black Screen View Controller Scene
Red Screen View Controller Scene
Red Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
Voltar
Origin Label
First Responder
Exit
Label
Button
Ir para proxima tela
De onde eu vim
Voltar
Label
Text
Plain
De onde eu vim
Color
Default
Font
System 17.0
Dynamic Type
Automatically Adjusts Font
Alignment
Lines
1
Behavior
Enabled
Highlighted
Baseline
Align Baselines
Line Break
Truncate Tail
Autoshrink
Fixed Font Size
Tighten Letter Spacing
Highlighted
Default
Shadow
Default
Shadow Offset
0
-1
Width
Height
View
Content Mode
Left
Semantic
Unspecified
Tag
0
Label
Label - A variably sized amount of static text.
View as: iPhone 7 (wC hR)
51%
label

// pass


Carrier
12:40 PM
aperte o botão
Button


Carrier
12:42 PM
aperte o botão
Button

// pass


Carrier
12:40 PM
aperte o botão
Button


Carrier
12:42 PM
aperte o botão
Button

// passando dados

```
class RedScreenViewController: UIViewController {
    var recievedData: String?

    @IBOutlet weak var originLabel: UILabel!

    override func viewDidLoad() {
        super.viewDidLoad()

        self.originLabel.text = self.recievedData

    }
}
```

// passando dados

No ViewController:

```
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if let redVC = segue.destination as? RedScreenViewController {
        redVC.recievedData = "Vim do VC"
    }
}
```

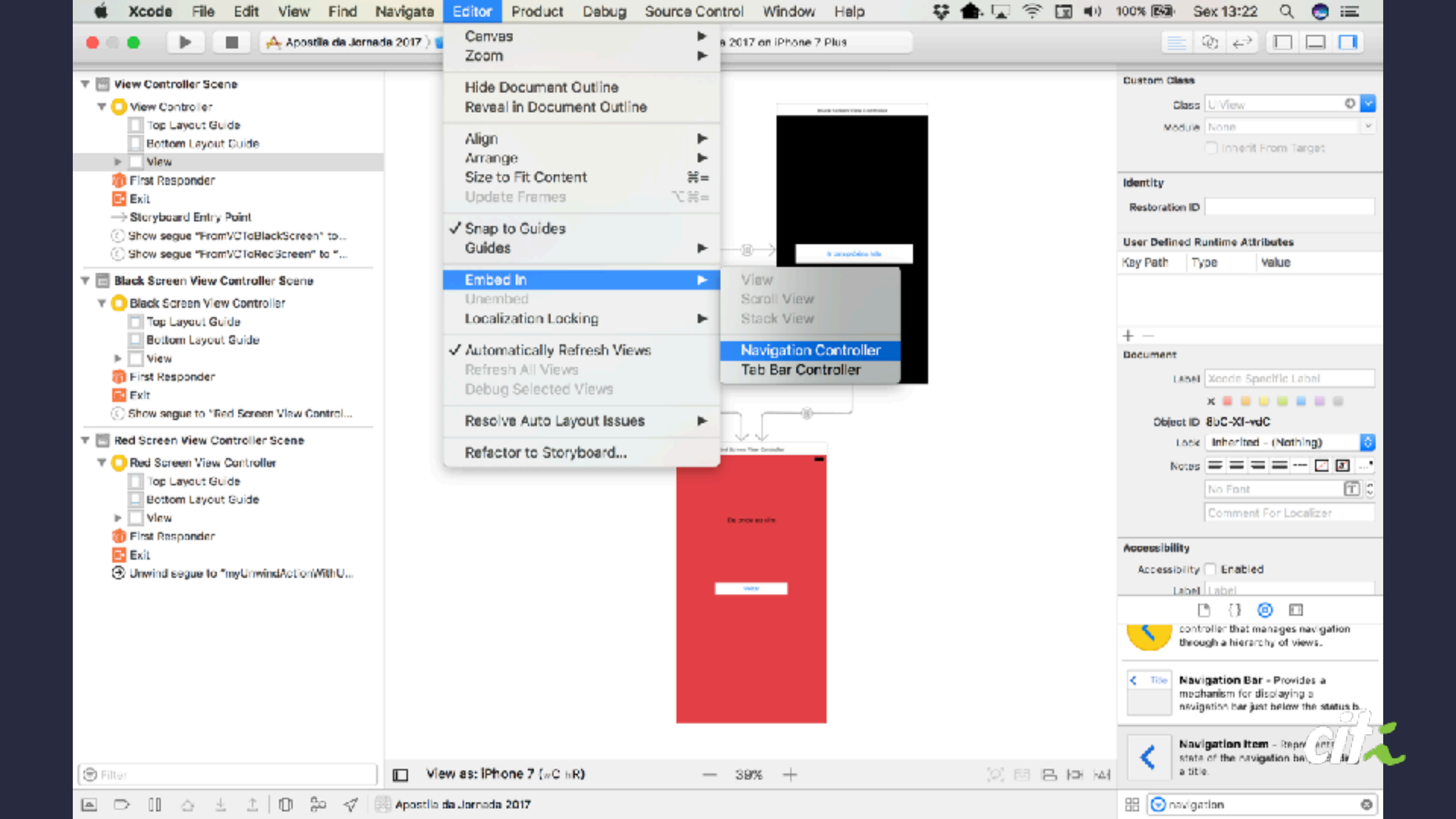
No BlackScreenViewController:

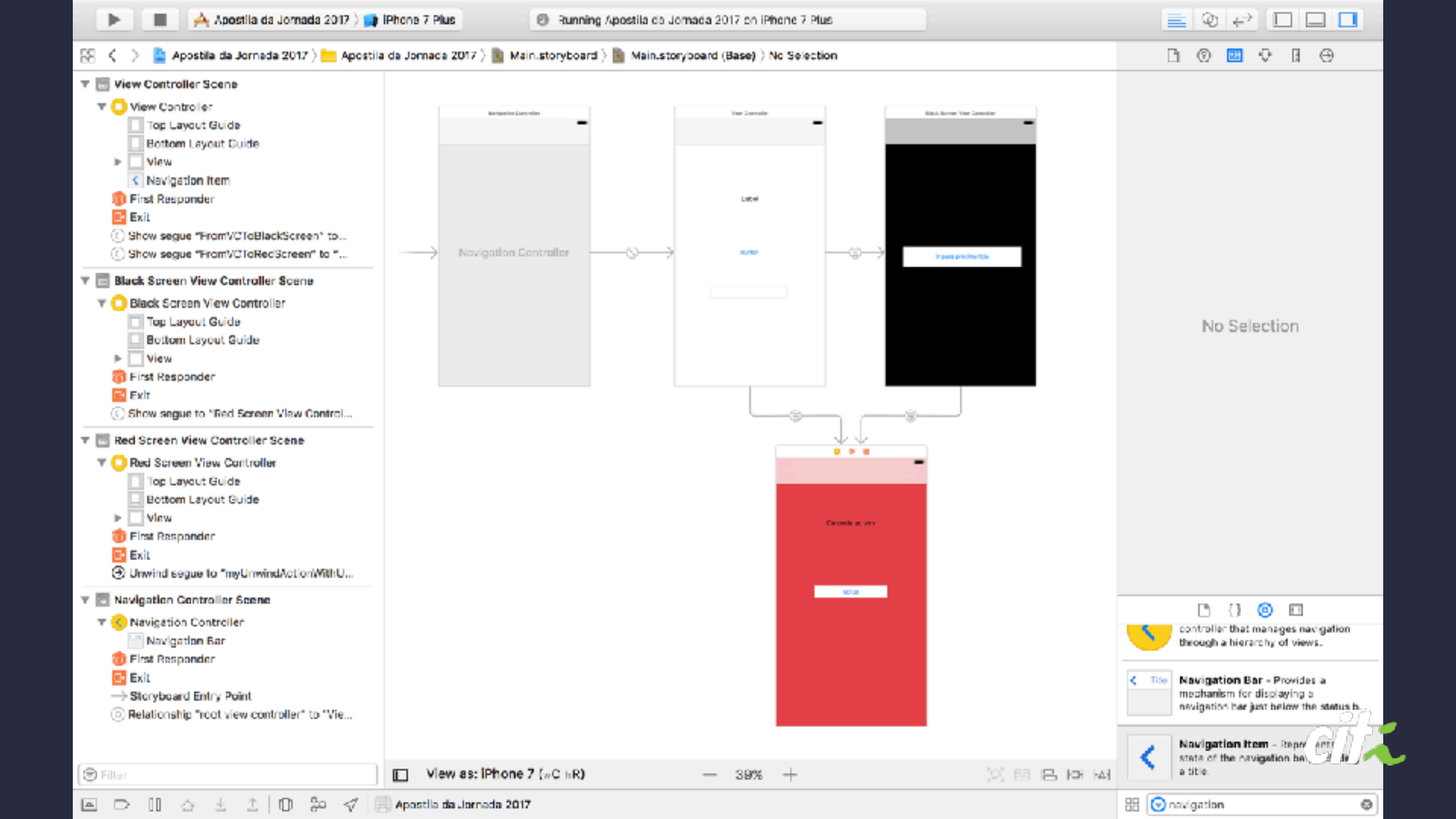
```
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if let redVC = segue.destination as? RedScreenViewController {
        redVC.recievedData = "Vim do BlackVC"
    }
}
```

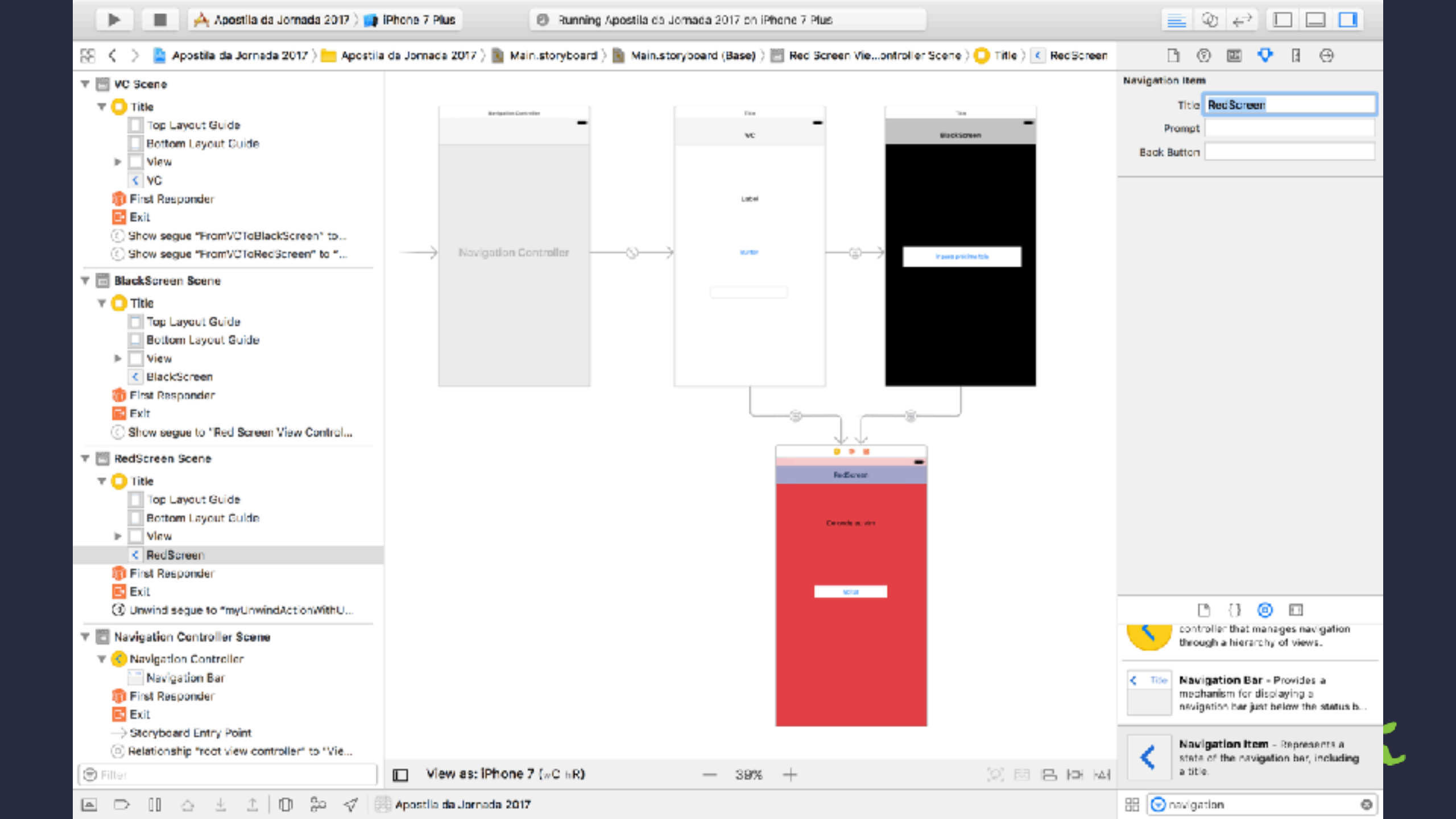
// Navigation Controller

github.com/codepath/ios_guides/wiki/Navigation-Controller

github.com/codepath/ios_guides/wiki/Navigation-Controller

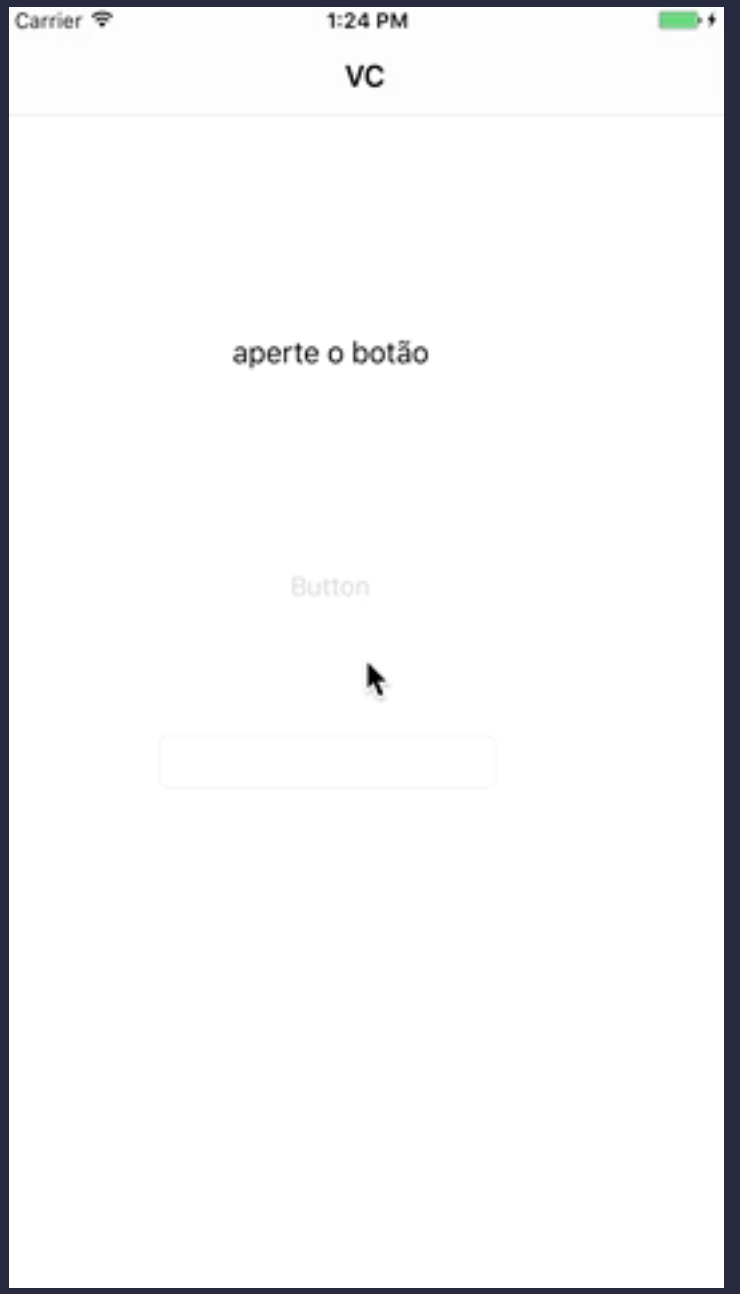

Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
Canvas
Zoom
Hide Document Outline
Reveal in Document Outline
Align
Arrange
Size to Fit Content
Update Frames
Snap to Guides
Guides
Embed In
Unembed
Localization Locking
Automatically Refresh Views
Refresh All Views
Debug Selected Views
Resolve Auto Layout Issues
Refactor to Storyboard...
View
Scroll View
Stack View
Navigation Controller
Tab Bar Controller
View Controller Scene
Black Screen View Controller Scene
Red Screen View Controller Scene
Custom Class
Identity
User Defined Runtime Attributes
Document
Accessibility
View as: iPhone 7 (wC hR)
38%


Apostila da Jornada 2017 〉 iPhone 7 Plus
Running Apostila da Jornada 2017 on iPhone 7 Plus
Apostila da Jornada 2017 〉 Apostila da Jornada 2017 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 No Selection
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
First Responder
Exit
Show segue "FromVCToBlackScreen" to...
Show segue "FromVCToRecScreen" to "...
Black Screen View Controller Scene
Black Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
Show segue to "Red Screen View Control...
Red Screen View Controller Scene
Red Screen View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
Unwind segue to "myUnwindActionWithU...
Navigation Controller Scene
Navigation Controller
Navigation Bar
First Responder
Exit
Storyboard Entry Point
Relationship "root view controller" to "Vie...
Navigation Controller
Label
No Selection
controller that manages navigation through a hierarchy of views.
Navigation Bar - Provides a mechanism for displaying a
Navigation Item
View as: iPhone 7 (wC hR)
38%
Apostila da Jornada 2017
navigation


Apostila da Jornada 2017 〉 iPhone 7 Plus
Running Apostila da Jornada 2017 on iPhone 7 Plus
Apostila da Jornada 2017 〉 Apostila da Jornada 2017 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 Red Screen Vie...ontroller Scene 〉 Title 〉 RedScreen
VC Scene
Title
Top Layout Guide
Bottom Layout Guide
View
VC
First Responder
Exit
Show segue "FromVCToBlackScreen" to...
Show segue "FromVCToRedScreen" to "...
BlackScreen Scene
Title
Top Layout Guide
Bottom Layout Guide
View
BlackScreen
First Responder
Exit
Show segue to "Red Screen View Control...
RedScreen Scene
Title
Top Layout Guide
Bottom Layout Guide
View
RedScreen
First Responder
Exit
Unwind segue to "myUnwindActionWithU...
Navigation Controller Scene
Navigation Controller
Navigation Bar
First Responder
Exit
Storyboard Entry Point
Relationship "root view controller" to "Vie...
Filter
Navigation Controller
VC
Label
BlackScreen
RedScreen
View as: iPhone 7 (wC hR)
38%
Navigation Item
Title
RedScreen
Prompt
Back Button
controller that manages navigation through a hierarchy of views.
Navigation Bar - Provides a mechanism for displaying a navigation bar just below the status b...
Navigation Item - Represents a state of the navigation bar, including a title.
navigation
Apostila da Jornada 2017

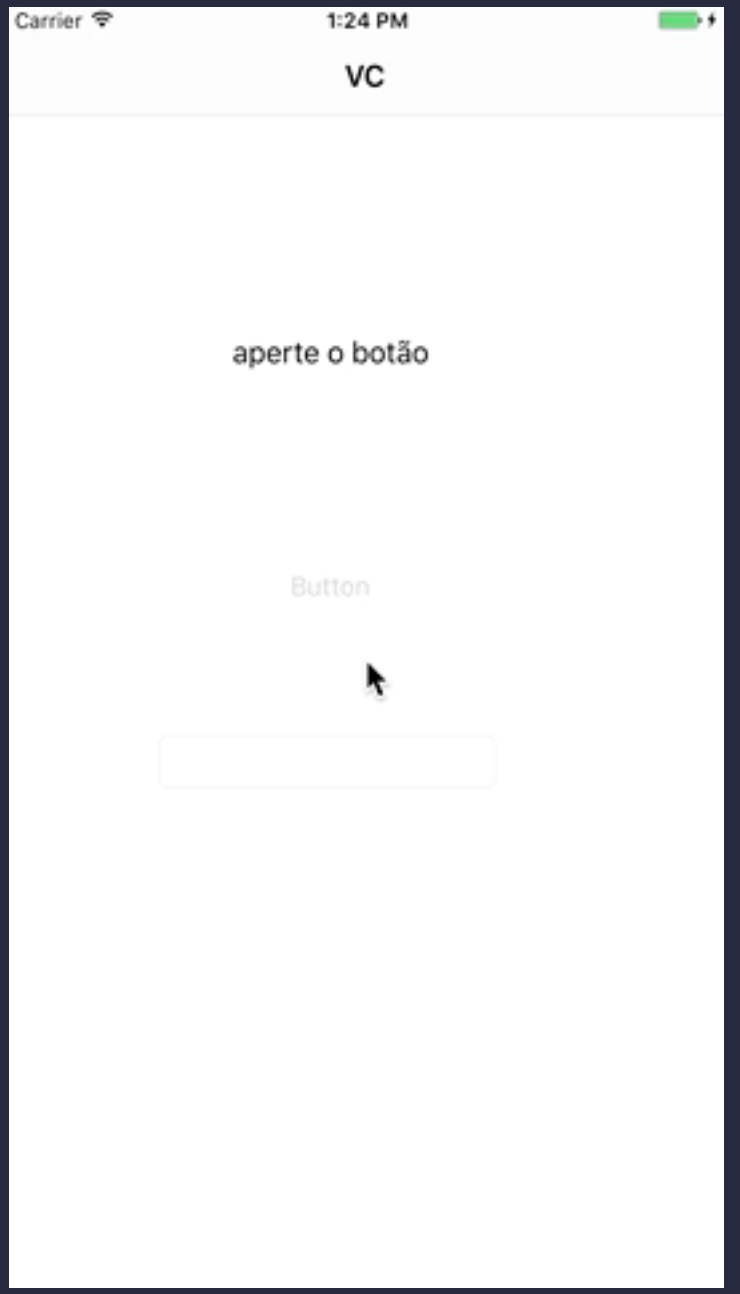
// Navigation controller

- UINavigationController
- Navegação hierárquica
- Pilha de VCs

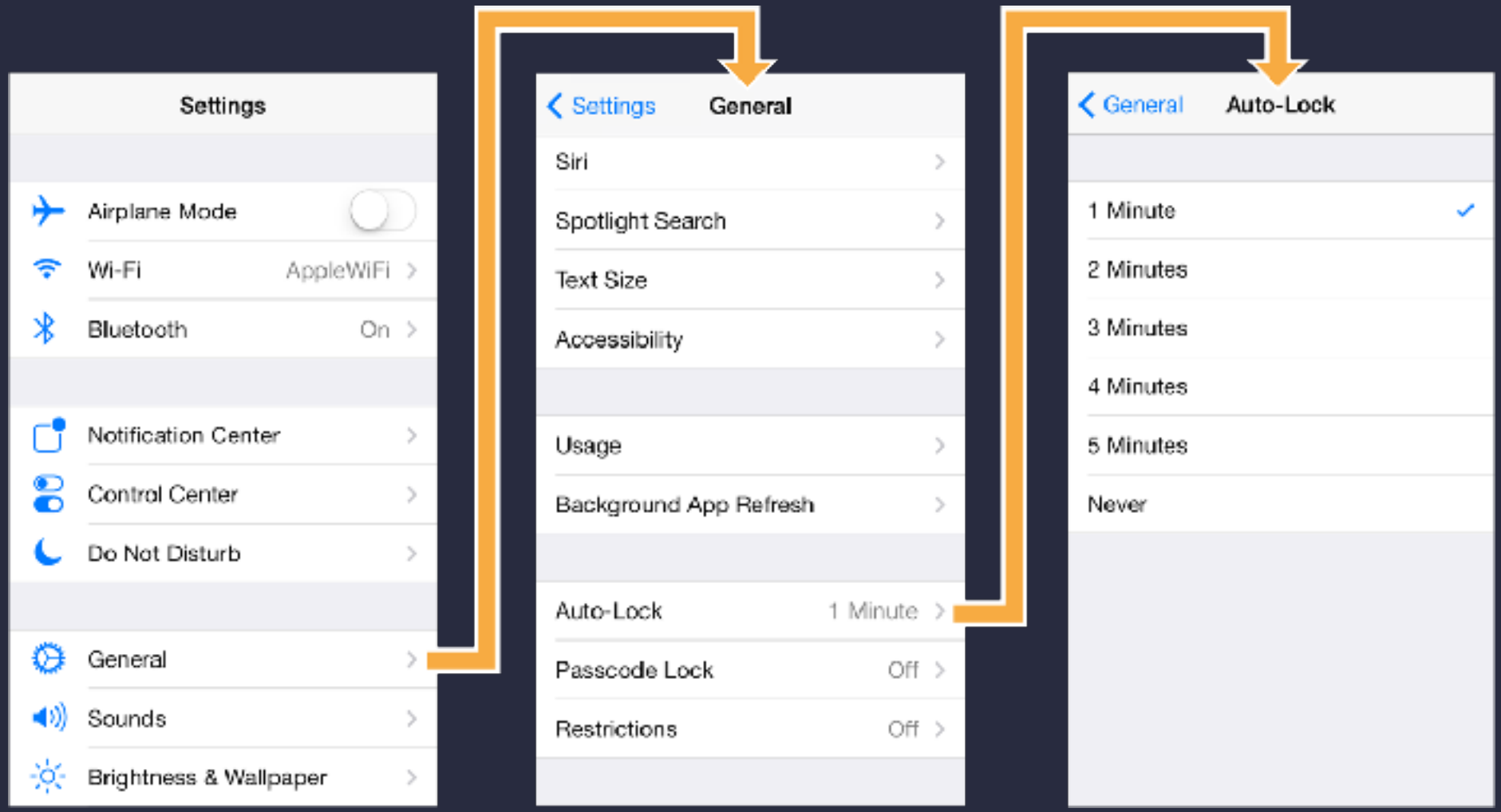


// Navigation controller

- UINavigationController
- Navegação hierárquica
- Pilha de VCs

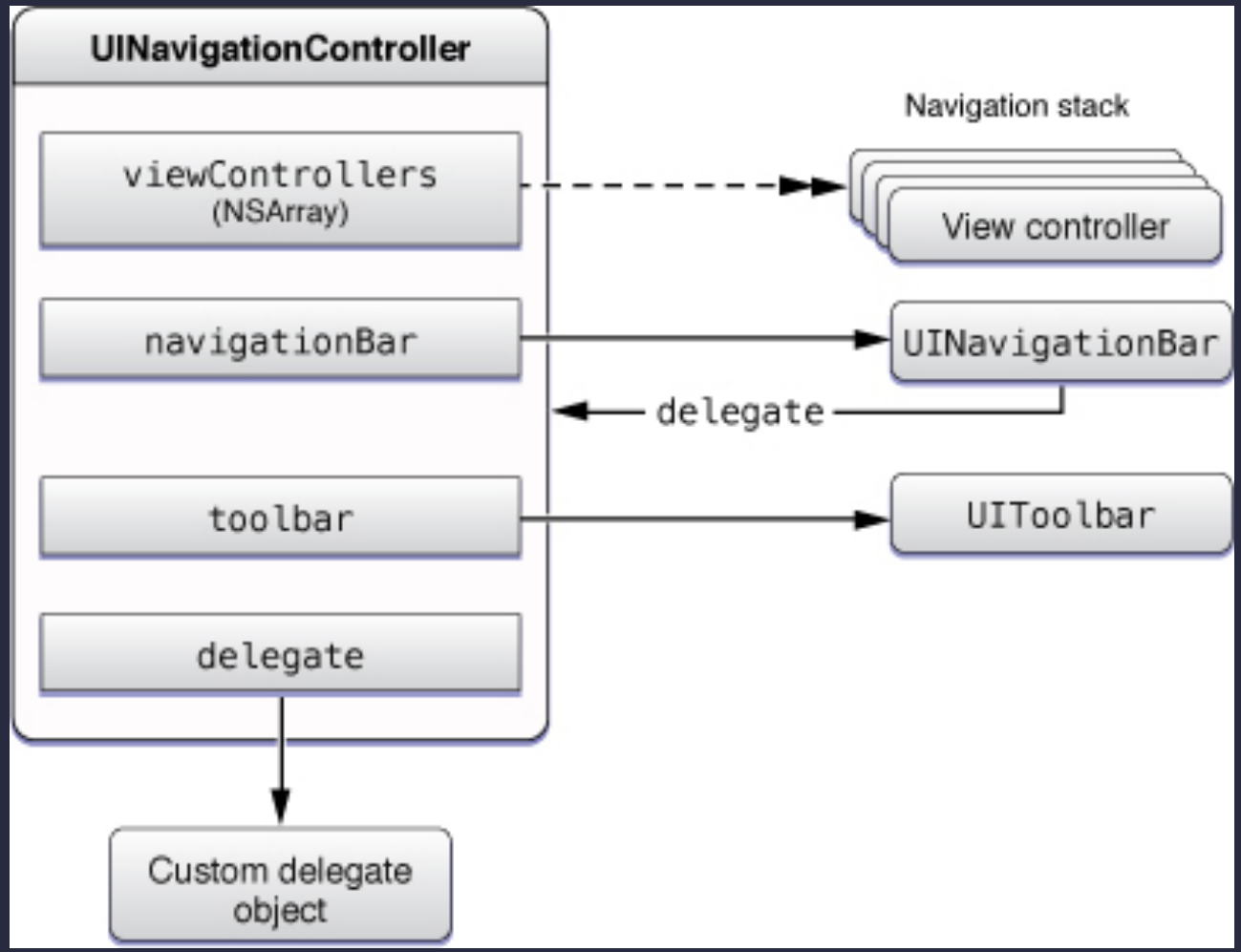


// Navigation controller



https://developer.apple.com/documentation/uikit/uinavigationcontroller

// Navigation controller

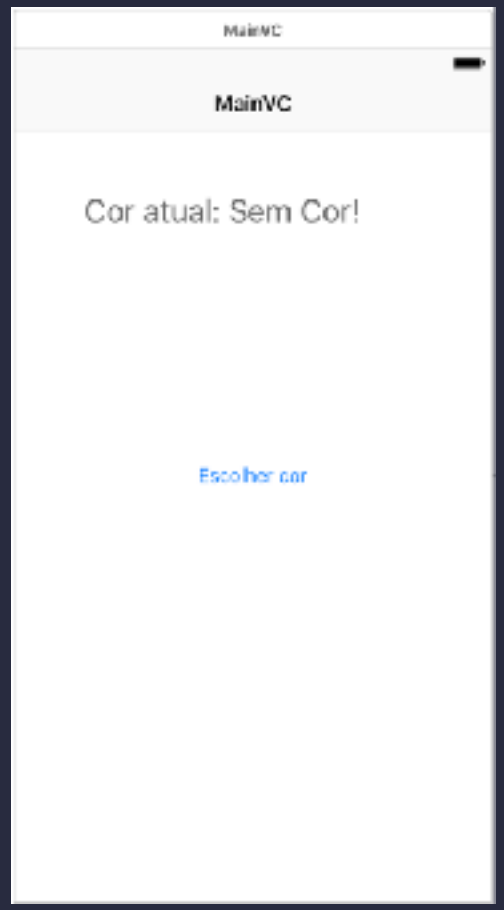


https://developer.apple.com/documentation/uikit/uinavigationcontroller

// Exercício

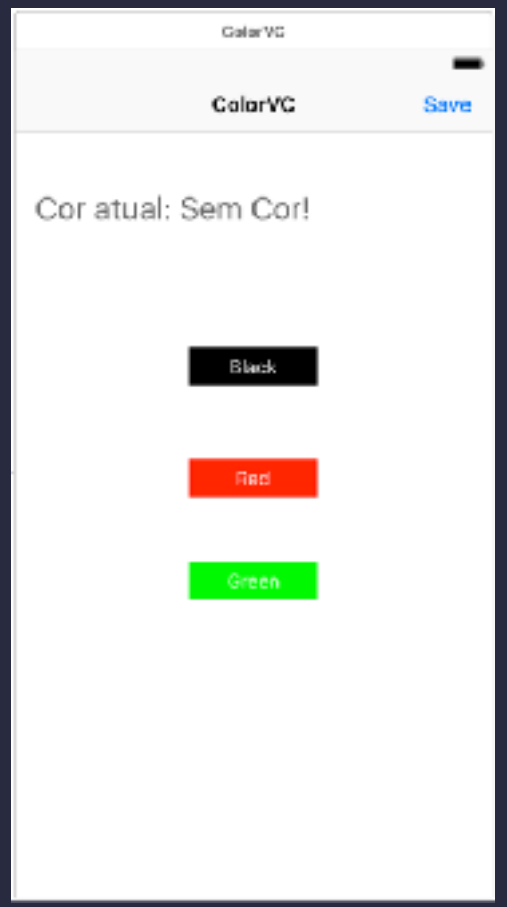
// Exercício 11-a

Navegação



Apertar em Escolher cor leva para ColorVC

O background de MainVC deve ser da cor escolhida, em ColorVC, e a label deve indicar o nome da cor.



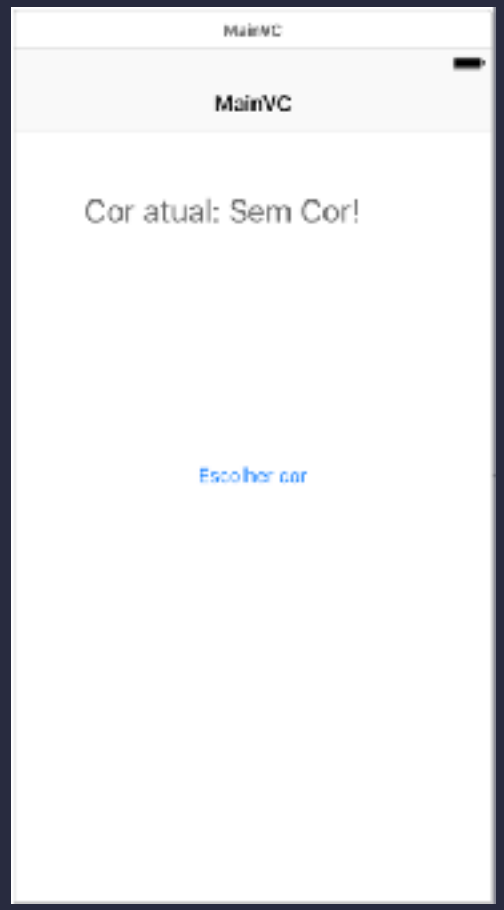
Apertar em um botão de cor muda o conteúdo da **label**.

Apertar em save retorna para o MainVC, passando a **cor** escolhida

adaptado de: https://goo.gl/Bxaeob

// Exercício 11-b

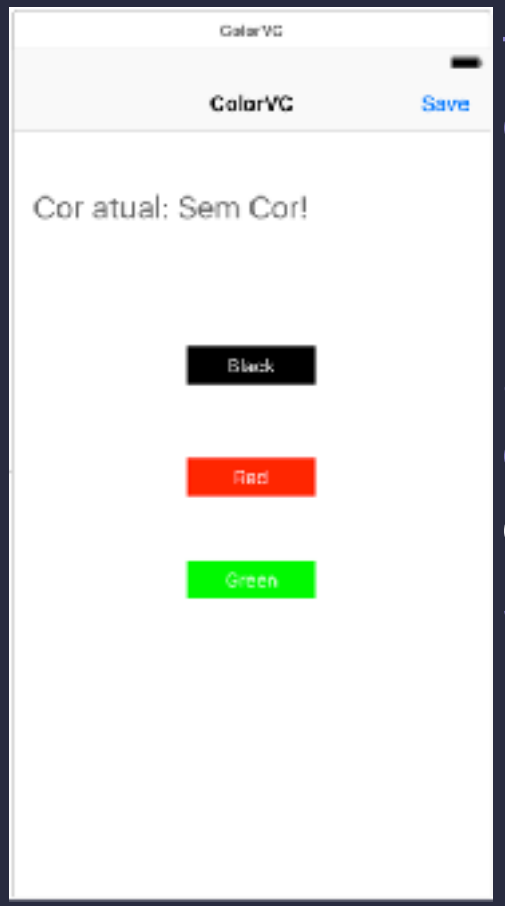
Navegação com Delegate



Implementa um protocolo ColorVCDelegate:

```
func chosen(color: UIColor,
 by colorVC: ColorViewController)
```

retira o ColorViewController da **pilha** de navegação e atualiza interface do MainViewController



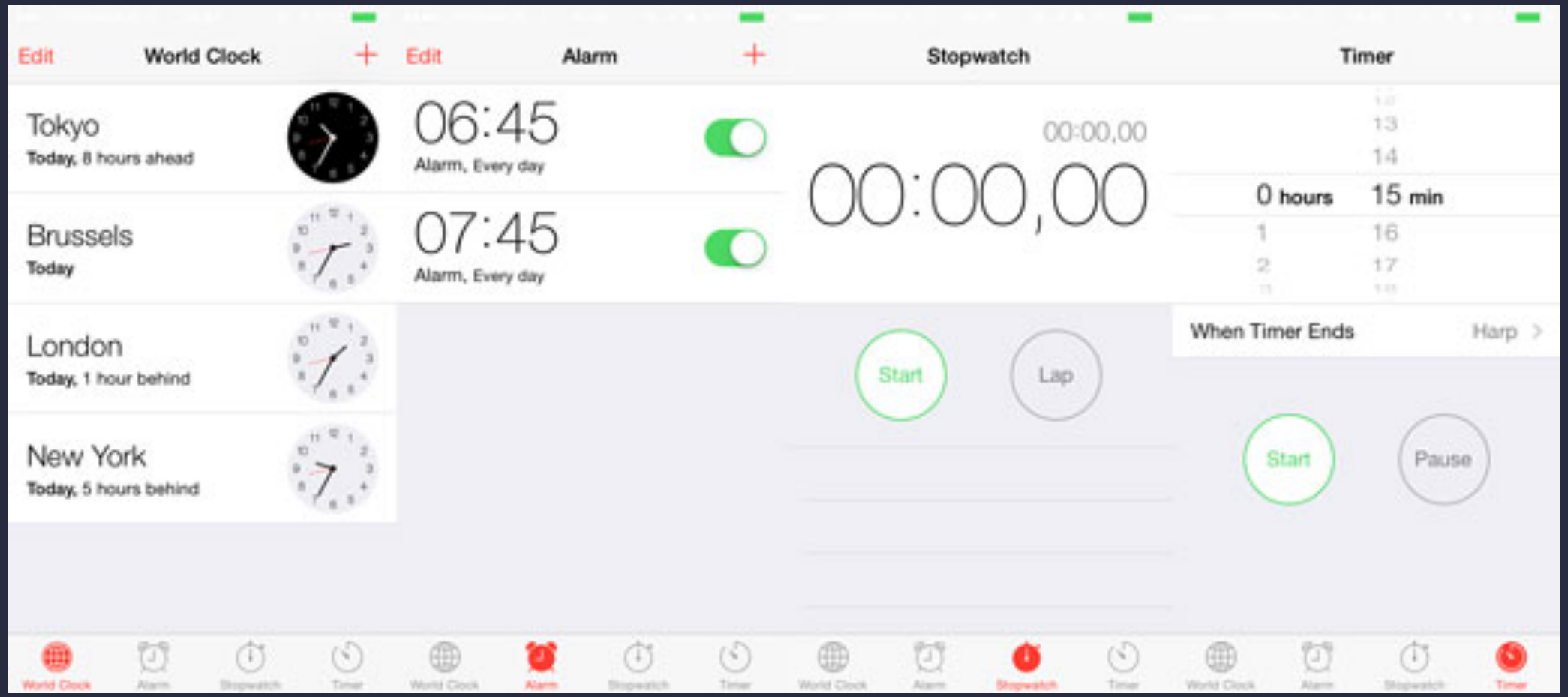
tem uma propriedade **delegate** do tipo ColorVCDelegate

ao apertar save, chama método chosen(color: by:) de seu **delegate**

adaptado de: https://goo.gl/Bxaeob

// Tab Bar

// tab bar



https://goo.gl/U9jLvQ

// tab bar

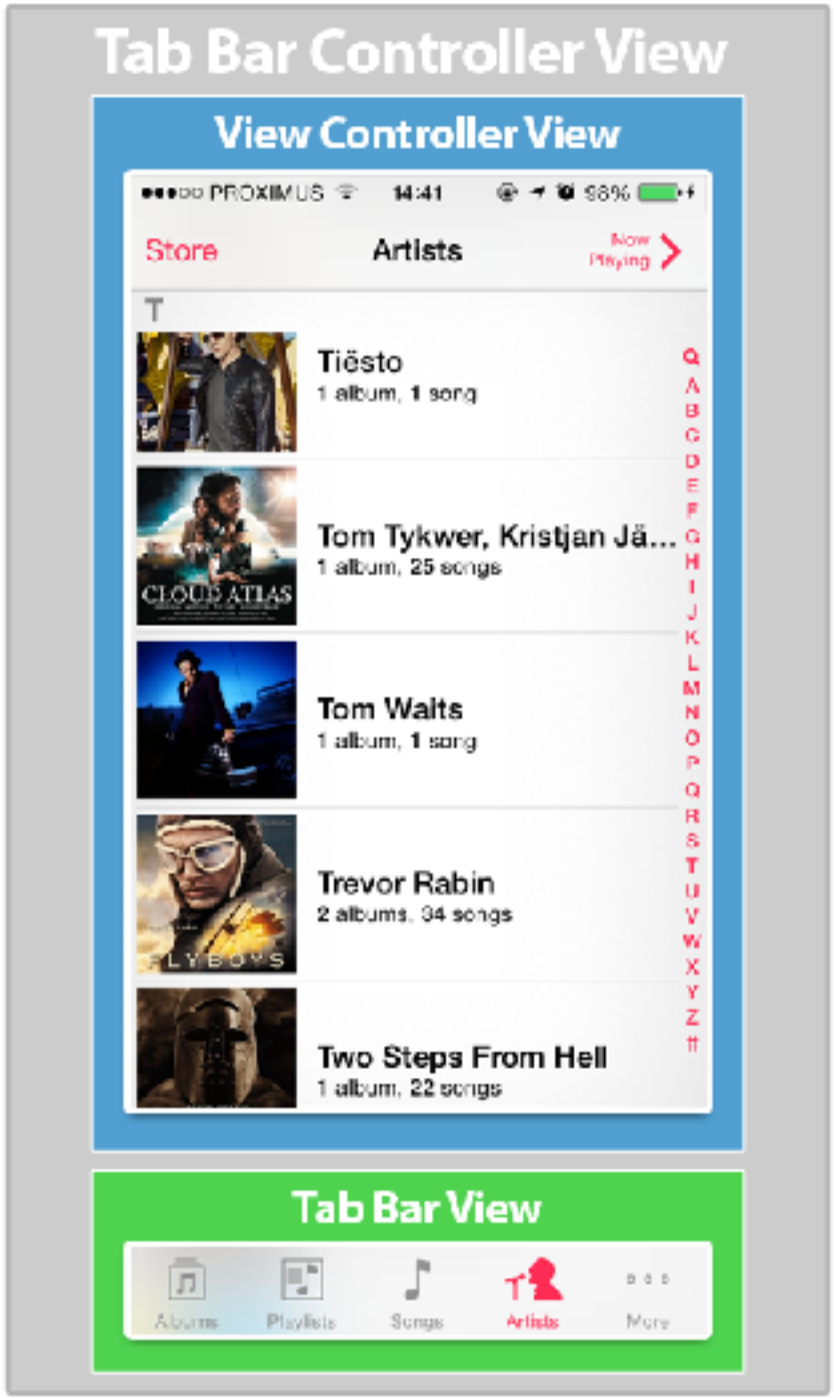
Gerencia navegação

View Controllers não relacionados

Tab bar vs Nav bar

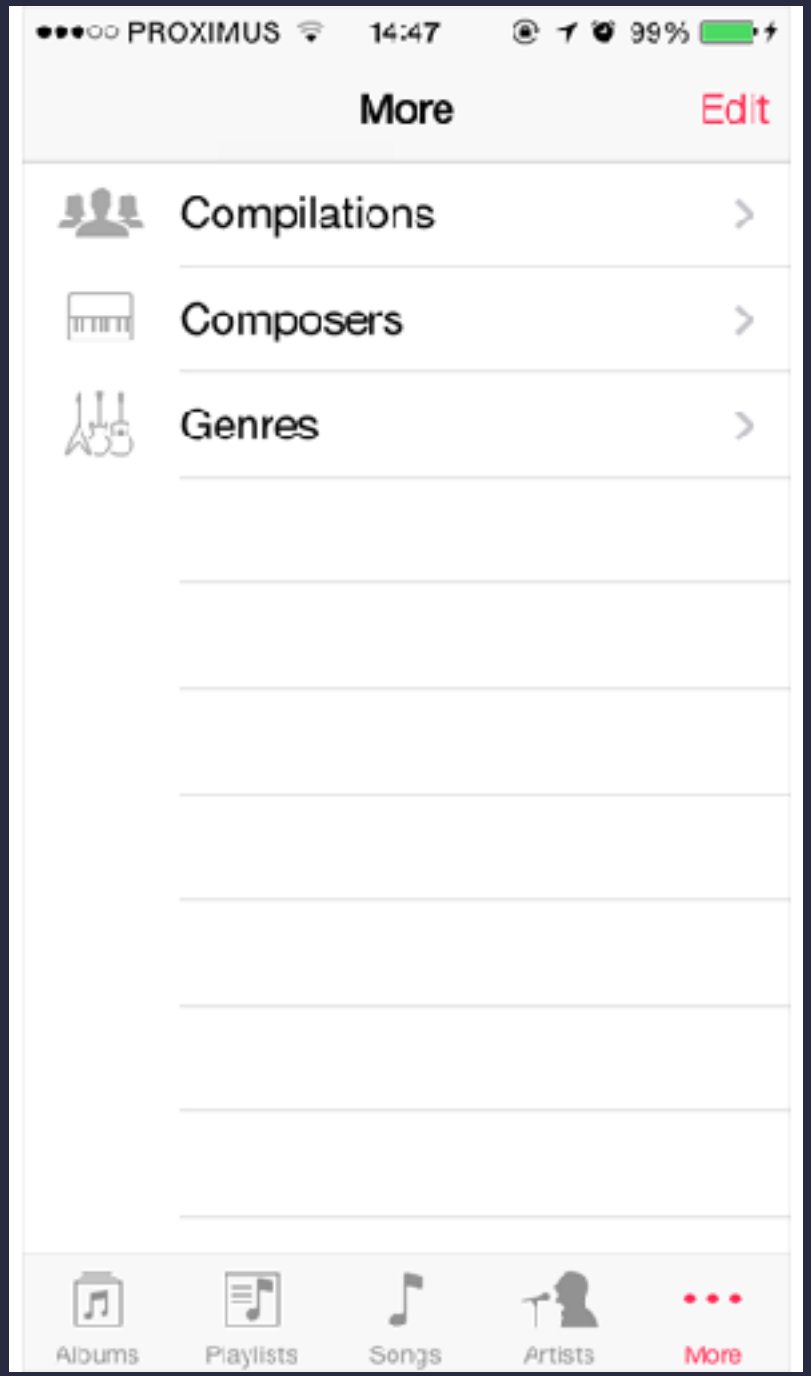
https://goo.gl/U9jLvQ

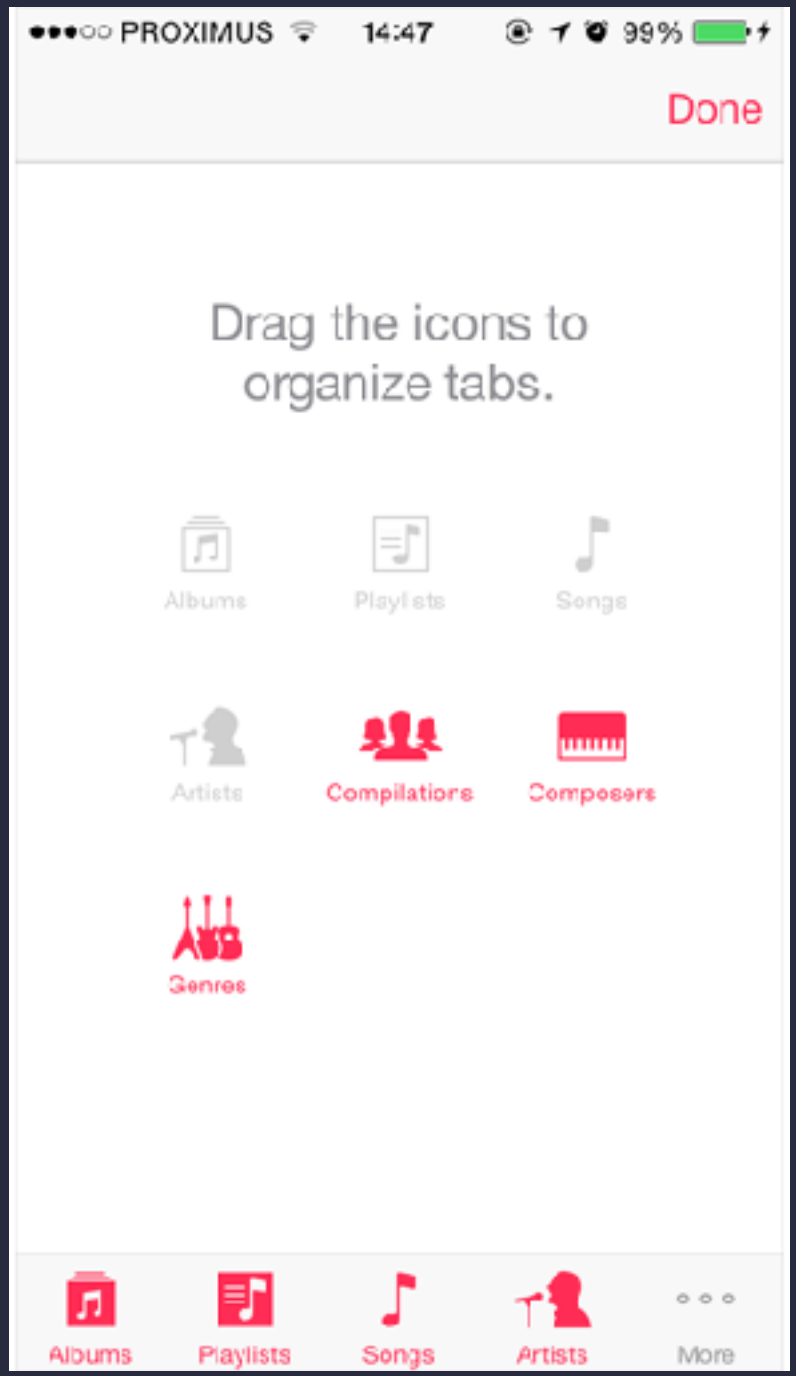
// tab bar



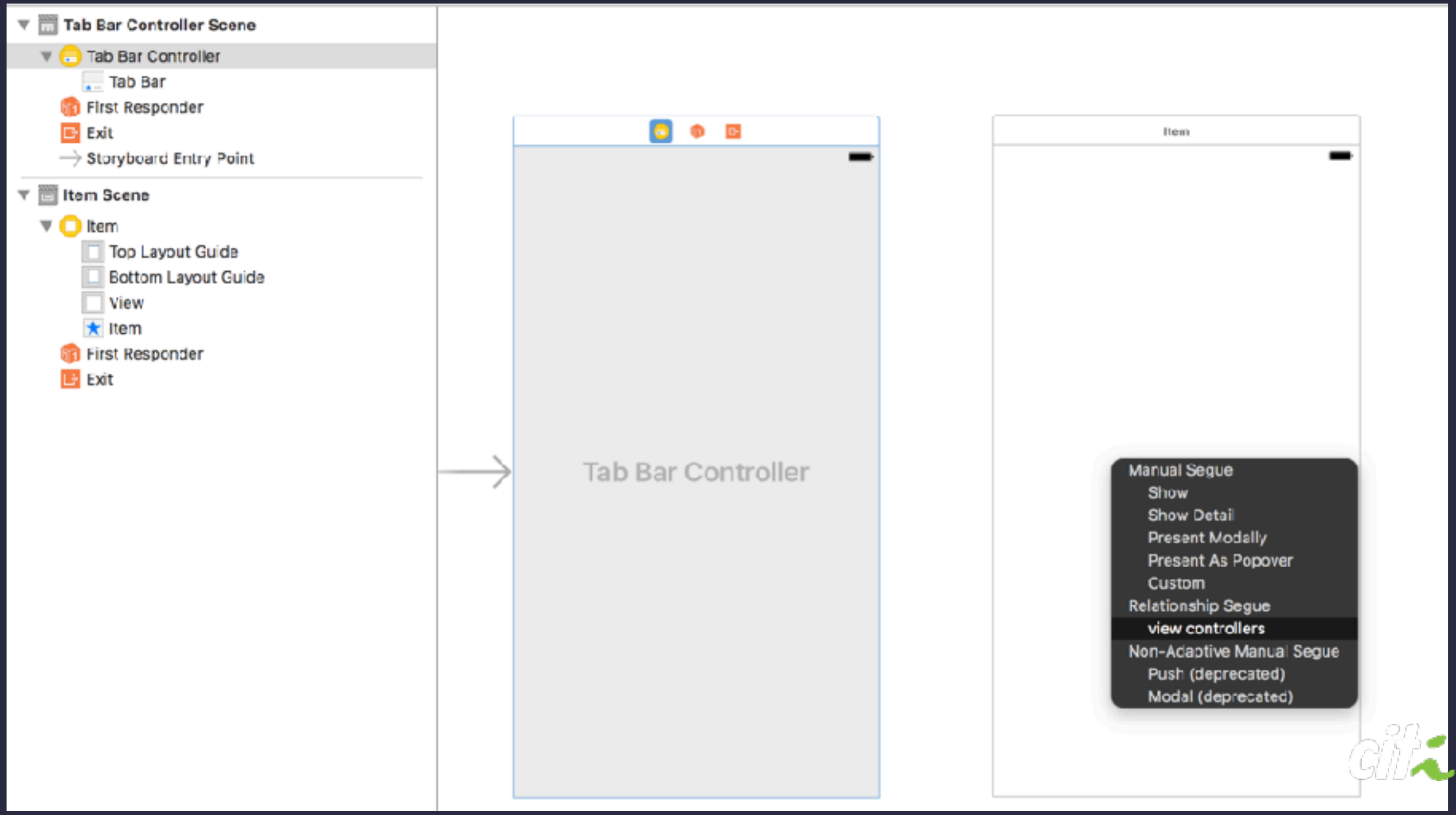
https://goo.gl/U9jLvQ

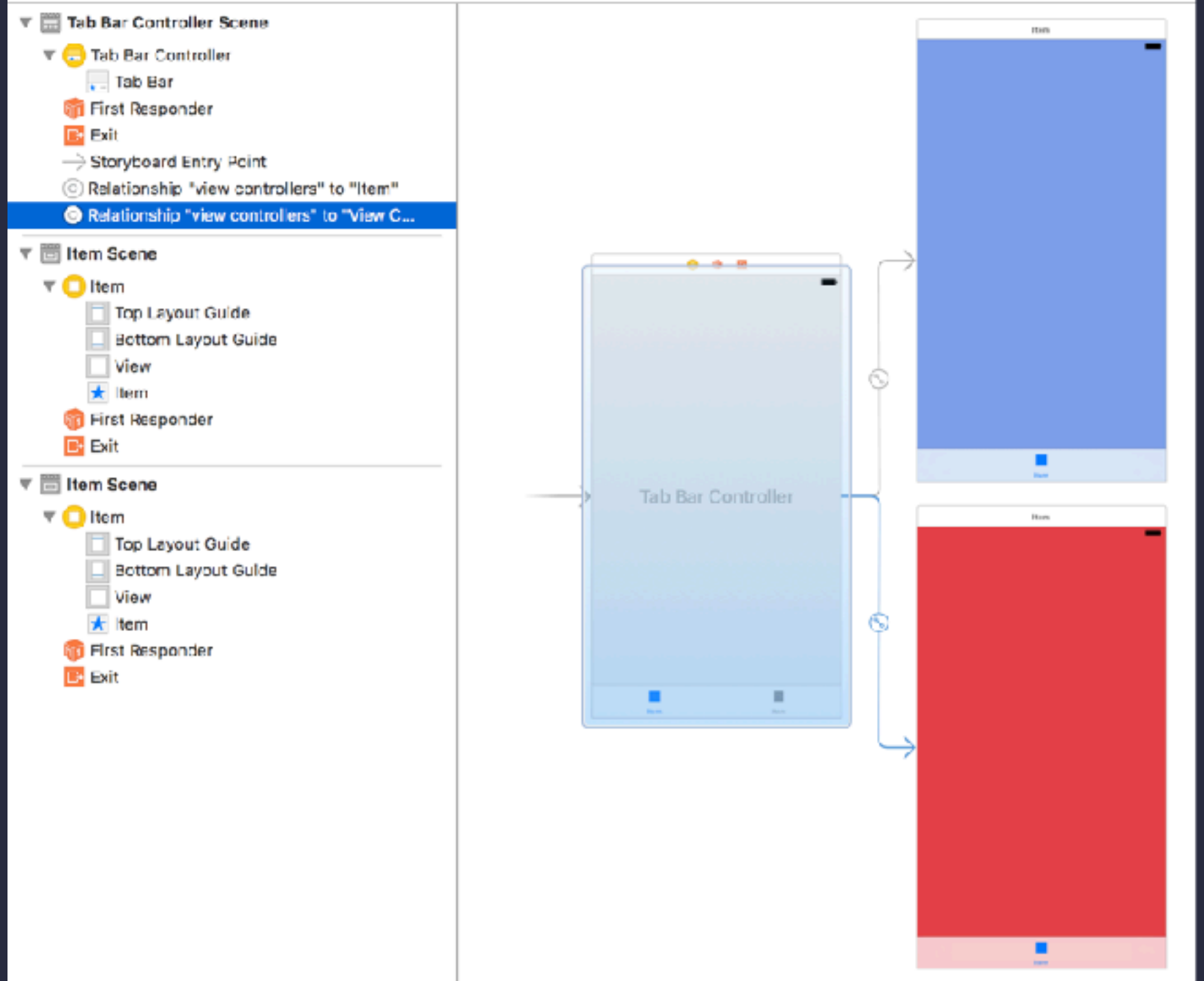
// tab bar





https://goo.gl/U9jLvQ


Tab Bar Controller Scene
Tab Bar Controller
Tab Bar
First Responder
Exit
Storyboard Entry Point
Item Scene
Item
Top Layout Guide
Bottom Layout Guide
View
Item
First Responder
Exit
Tab Bar Controller
Item
Manual Segue
Show
Show Detail
Present Modally
Present As Popover
Custom
Relationship Segue
view controllers
Non-Adaptive Manual Segue
Push (deprecated)
Modal (deprecated)


Tab Bar Controller Scene
Tab Bar Controller
Tab Bar
First Responder
Exit
Storyboard Entry Point
Relationship "view controllers" to "Item"
Relationship "view controllers" to "View C...
Item Scene
Item
Top Layout Guide
Bottom Layout Guide
View
Item
First Responder
Exit
Item Scene
Item
Top Layout Guide
Bottom Layout Guide
View
Item
First Responder
Exit
Tab Bar Controller

// tab bar item

```swift
class RedViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.

        self.tabBarItem = UITabBarItem(title: "Fire", image: fire, tag: 2)
    }
```

```swift
class BlueViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.

        self.tabBarItem.title = "Ice"
        self.tabBarItem.image = ice
    }
```

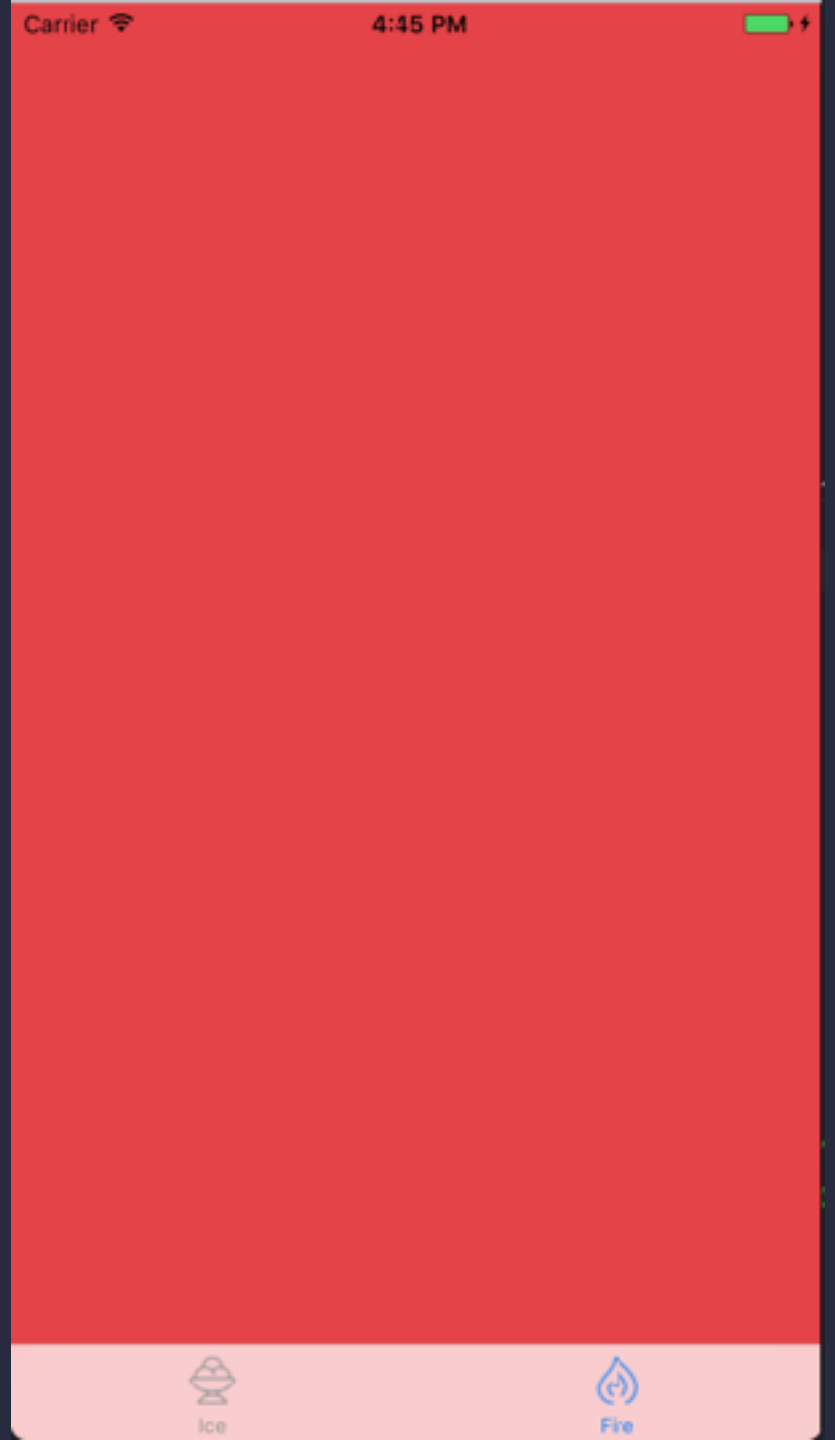
citi

icons by: https://icons8.com/

// tab bar item

icons by: https://icons8.com/

// tab bar item



icons by: https://icons8.com/

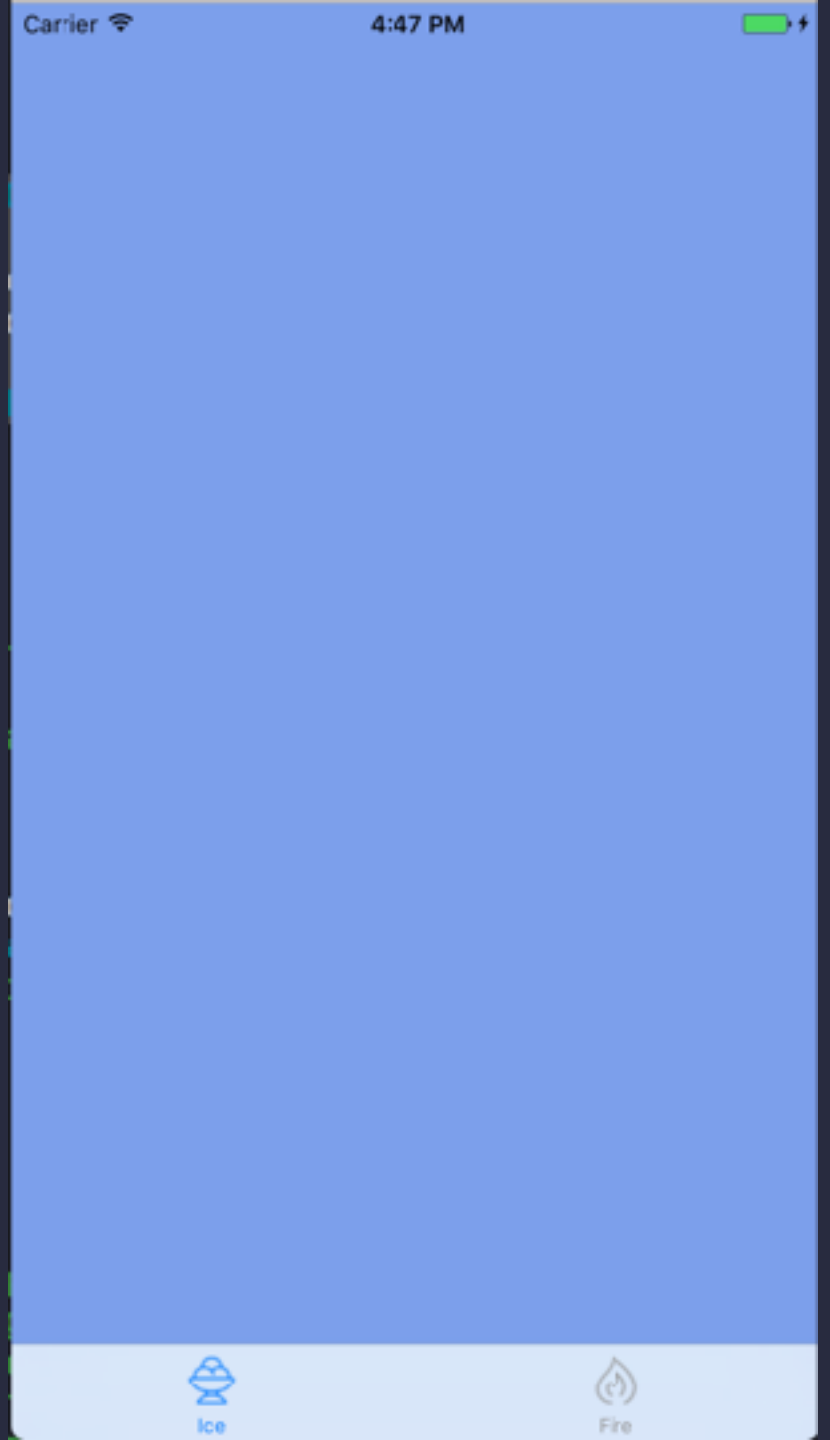
```
// tab bar item


    class RedViewController: UIViewController {

        required init?(coder aDecoder: NSCoder) {
            super.init(coder: aDecoder)

            self.tabBarItem = UITabBarItem(title: “Fire",
                                           image: #imageLiteral(resourceName: “fire"),
                                           tag: 2)
        }
```

// tab bar item



icons by: https://icons8.com/

```
// tab bar badge

class RedViewController: UIViewController {

    required init?(coder aDecoder: NSCoder) {
        super.init(coder: aDecoder)

        self.tabBarItem = UITabBarItem(title: “Fire",
                                       image: #imageLiteral(resourceName: “fire"),
                                       tag: 2)

        self.tabBarItem.badgeValue = “😱"
    }
```

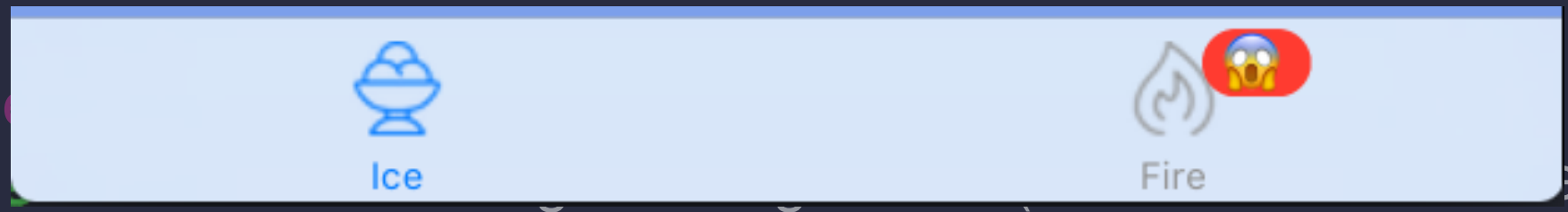
// tab bar badge

```
class RedViewController: UIViewController {

    required init?(coder aDecoder: NSCoder) {
        super.init(coder: aDecoder)

        s
                                                                    e"),
                                tag: 2)

        self.tabBarItem.badgeValue = "😱"
    }
```



// Exercício

// Exercício 12

Tab bar grande

Fazer uma aplicação com um **TabBarController**

Colocar os seguintes **ViewControllers**:

1. CarroViewController
2. MotoViewController
3. BarcoViewController
4. NavioViewController
5. TremViewController
6. OnibusViewController

Colocar um ícone e um título no **construtor** de cada VC

Colocar uma **ImageView** em cada ViewController com uma imagem correspondente

Tentar **reajustar** os itens mostrados na tab bar

// Desafio 01

Tab e Nav

Junte os últimos dois exercícios, para que sua aplicação final contenha uma **Tab Bar**, e uma **Nav Bar** ao mesmo tempo.

// Ementa

Swift:

- Por que desenvolver em swift?
- Variavéis, constantes e operadores
- Tipos, optionals
- Coleções (arrays, dicionários)
- Fluxo de controle
- Condicionais e loops
- Funções e closures
- Enums
- Classes e structs

Storyboard:

- Model
- View
- Controler

- Delegação
- UIKit
  - Labels
  - Botões
  - Textfields
  - Tableview
- Storyboard
- Navegação
- Persistência local

Swift:

- ~~Por que desenvolver em swift?~~
- ~~Variavéis, constantes e operadores~~
- ~~Tipos, optionals~~
- ~~Coleções (arrays, dicionários)~~
- ~~Fluxo de controle~~
- ~~Condicionais e loops~~
- ~~Funções e closures~~
- ~~Enums~~
- ~~Classes e structs~~

Storyboard:

- ~~Model~~
- ~~View~~
- ~~Controler~~

- ~~Delegação~~
- UIKit
  - ~~Labels~~
  - ~~Botões~~
  - ~~Textfields~~
  - Tableview
- ~~Storyboard~~
- ~~Navegação~~
- Persistência local

// Proposta semana 02

Segunda	Terça	Quarta	Quinta	Sexta
TableView	WebView	Projeto	Projeto	Projeto
ScrollView	Persistência		Extra	Extra


DÚVIDAS
?