

“Creación de una calculadora”



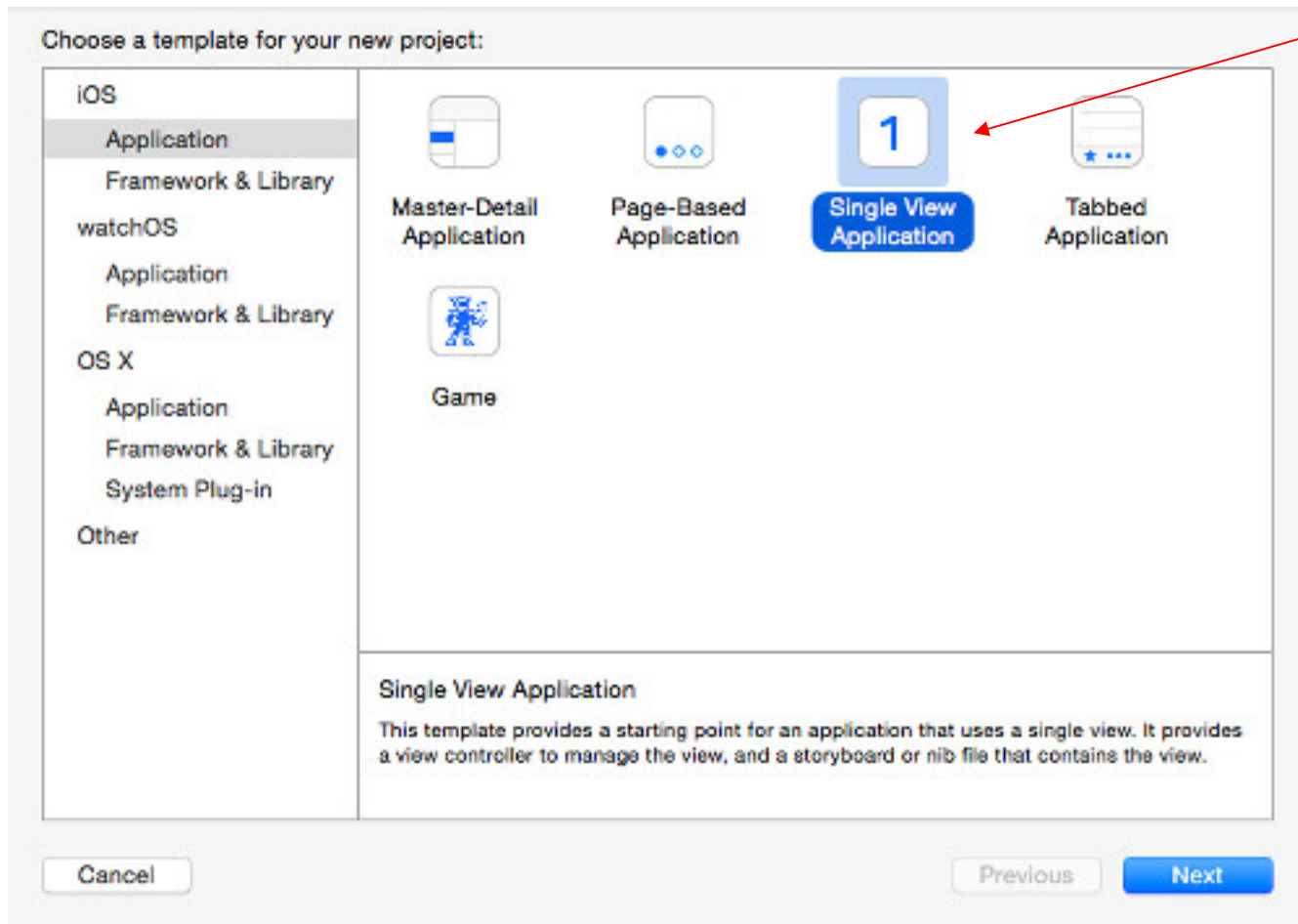
Rogelio Ferreira Escutia



Creación del Proyecto



Seleccionar tipo de aplicación



Nombre del proyecto

Choose options for your new project:

Product Name:

Organization Name:

Organization Identifier:

Bundle Identifier:

Language:

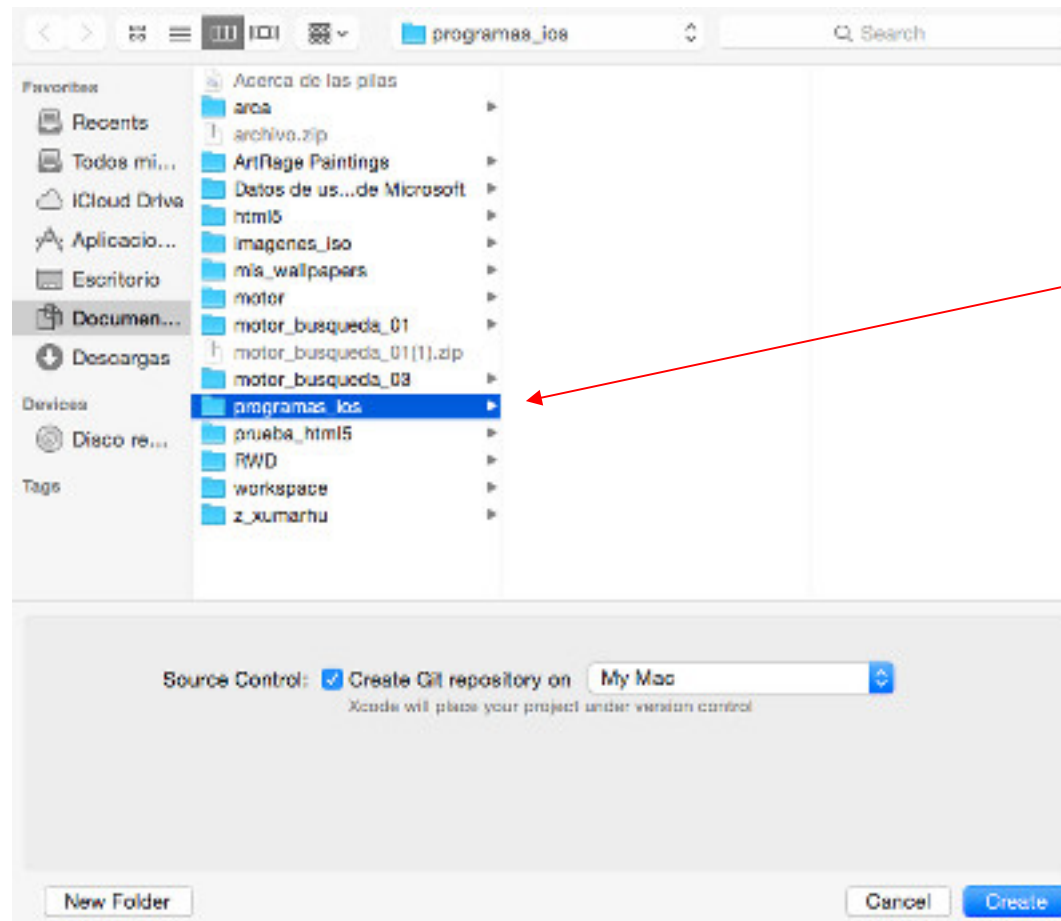
Devices:

Use Core Data

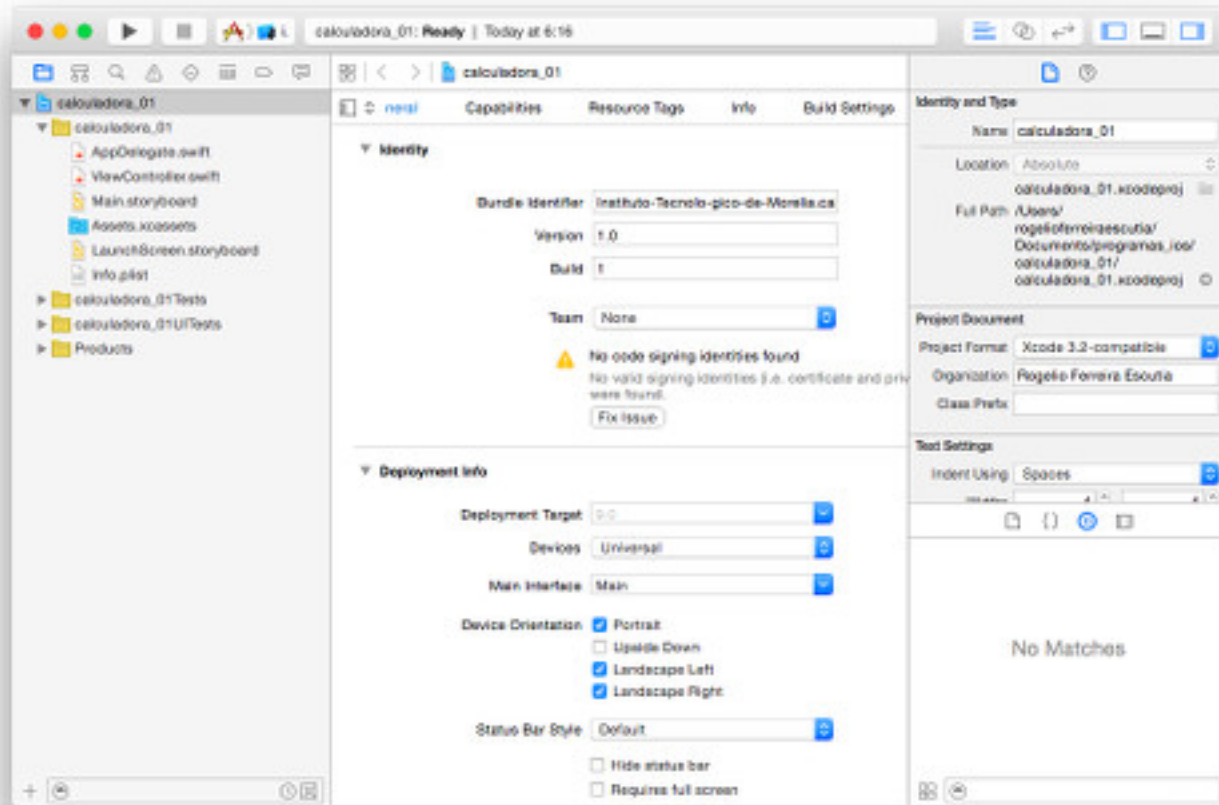
Include Unit Tests

Include UI Tests

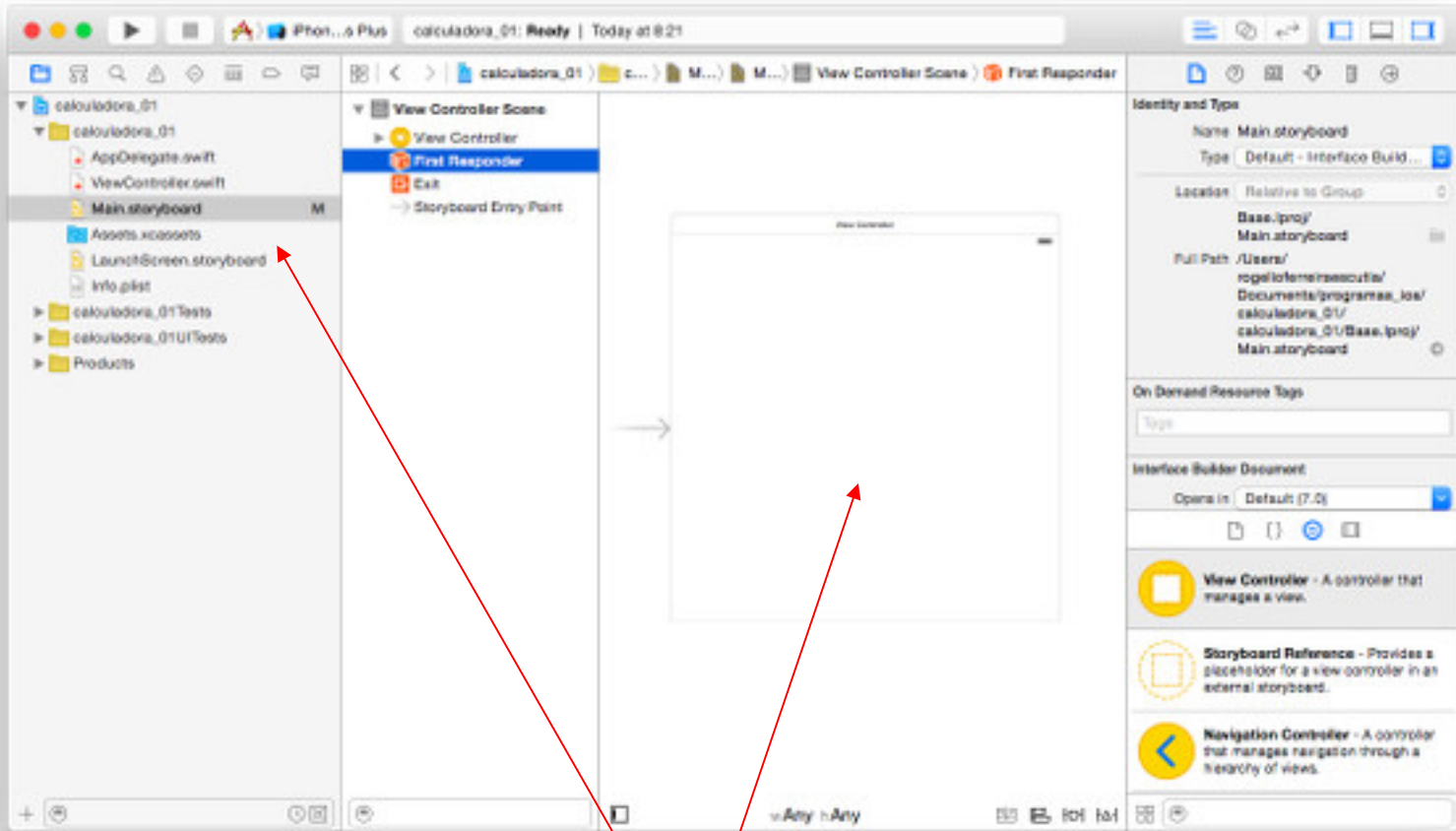
Directorio del proyecto



Pantalla inicial del proyecto



MainStoryboard



Seleccionar el componente “Label”

The image shows two parts of the Xcode interface. On the left is the 'Inspector' window, which displays the details for the selected 'Label' component. At the top, it says 'Label' and 'UILabel'. Below that, it provides a description: 'Implements a read-only text view. A label can contain an arbitrary amount of text, but UILabel may shrink, wrap, or truncate the text, depending on the size of the bounding rectangle and properties you set. You can control the font, text color, alignment, highlighting, and shadowing of the text in the label.' At the bottom of the inspector is a 'Done' button. On the right is the 'Library' window, which shows a list of components. The 'Label' component is highlighted in blue. A red arrow points from the 'Label' component in the library to the 'Label' component in the inspector. The library also shows 'Object' and 'Button' components.

Label UILabel

Implements a read-only text view. A label can contain an arbitrary amount of text, but UILabel may shrink, wrap, or truncate the text, depending on the size of the bounding rectangle and properties you set. You can control the font, text color, alignment, highlighting, and shadowing of the text in the label.

Done

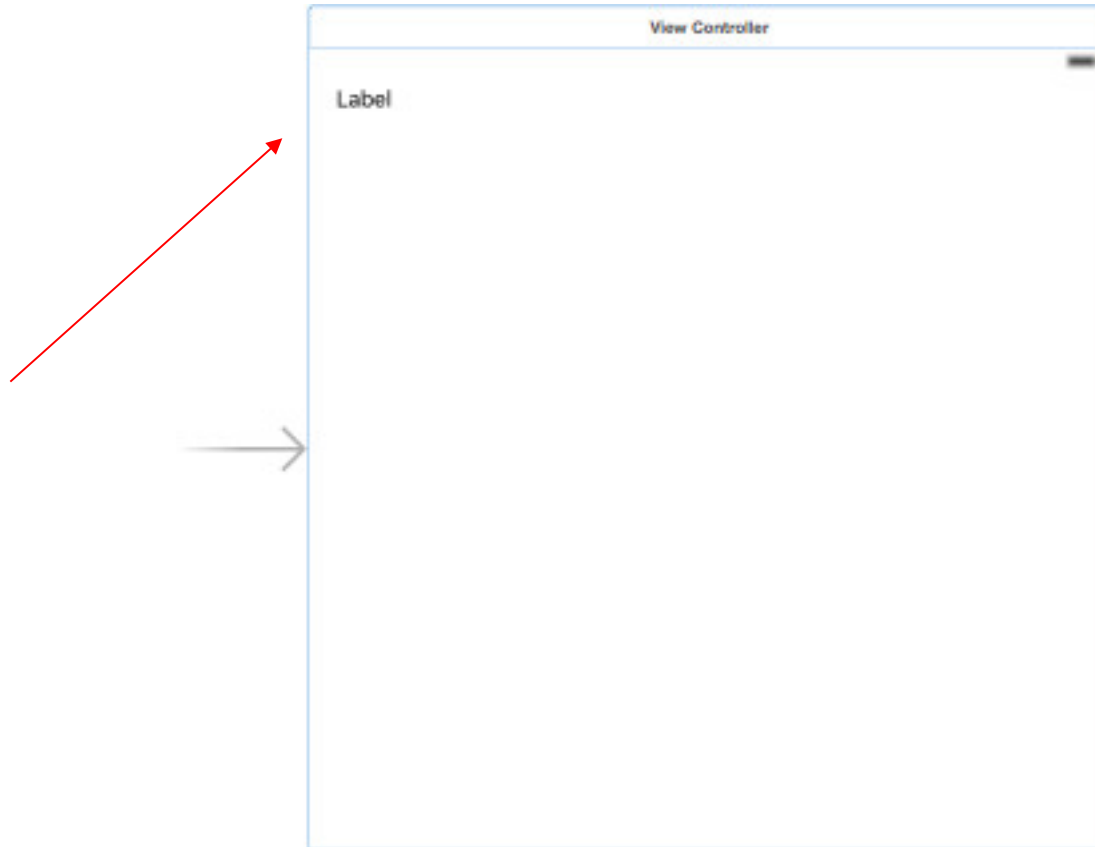
Opens in Default (7.0)

Object - Provides a template for objects and controllers not directly available in Interface Builder.

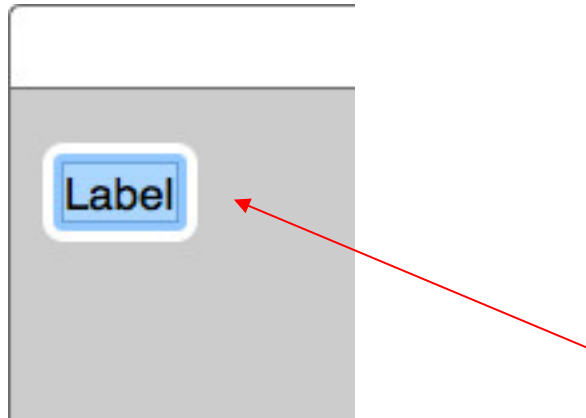
Label **Label** - A variably sized amount of static text.

Button - Intercepts touch events and sends an action message to a target object when it's tapped.

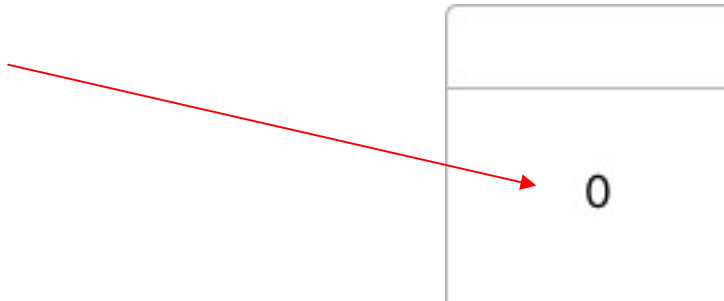
Componente “Label” en el MainStoryboard



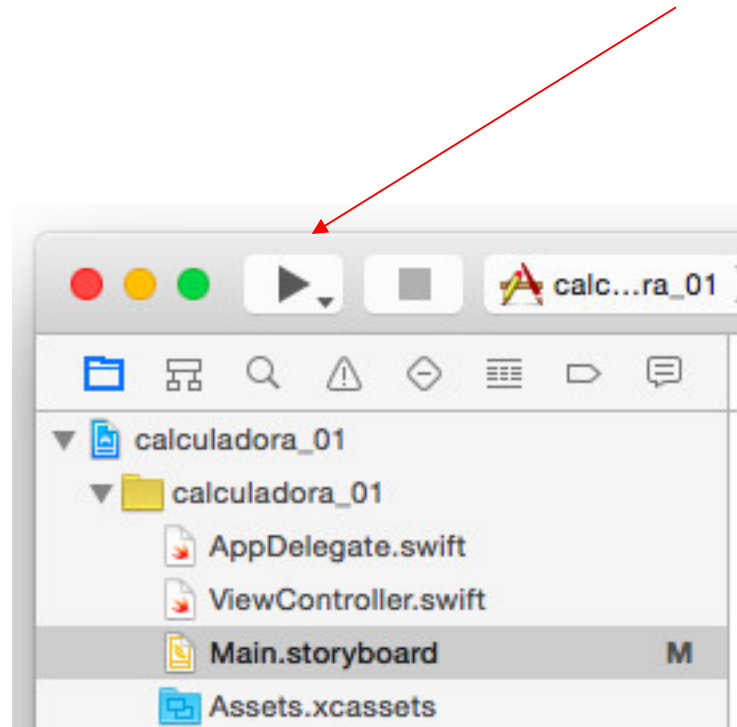
Editar componente “Label”



Componente “Label” modificado



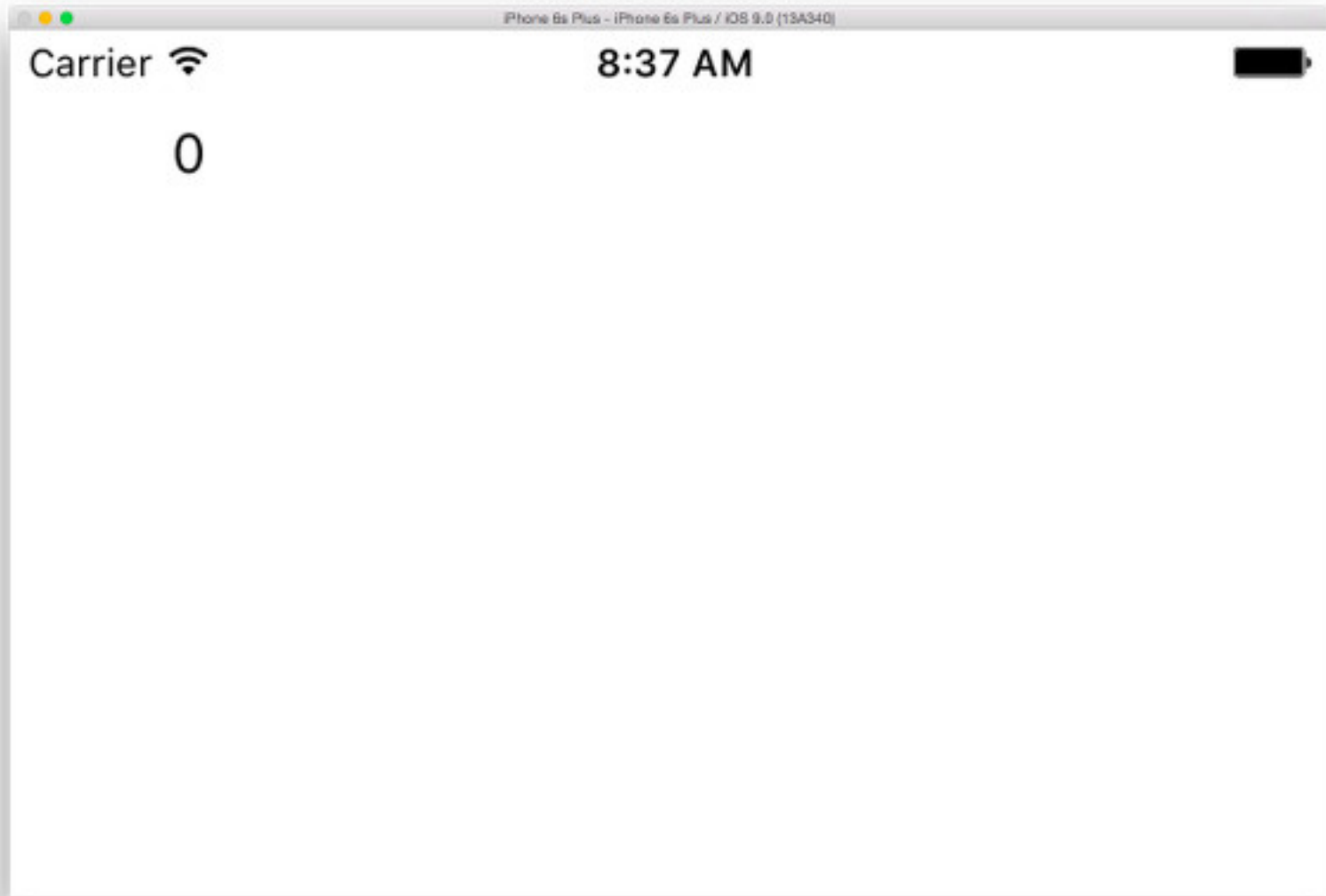
Ejecutar programa (Play)



Arrancando emulador



Arrancando emulador

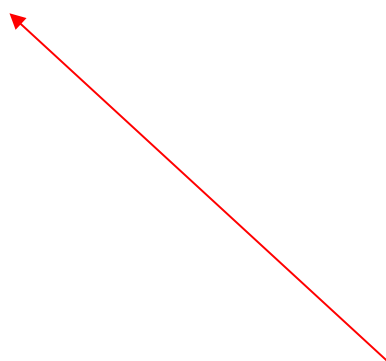


ViewController.swift y su código

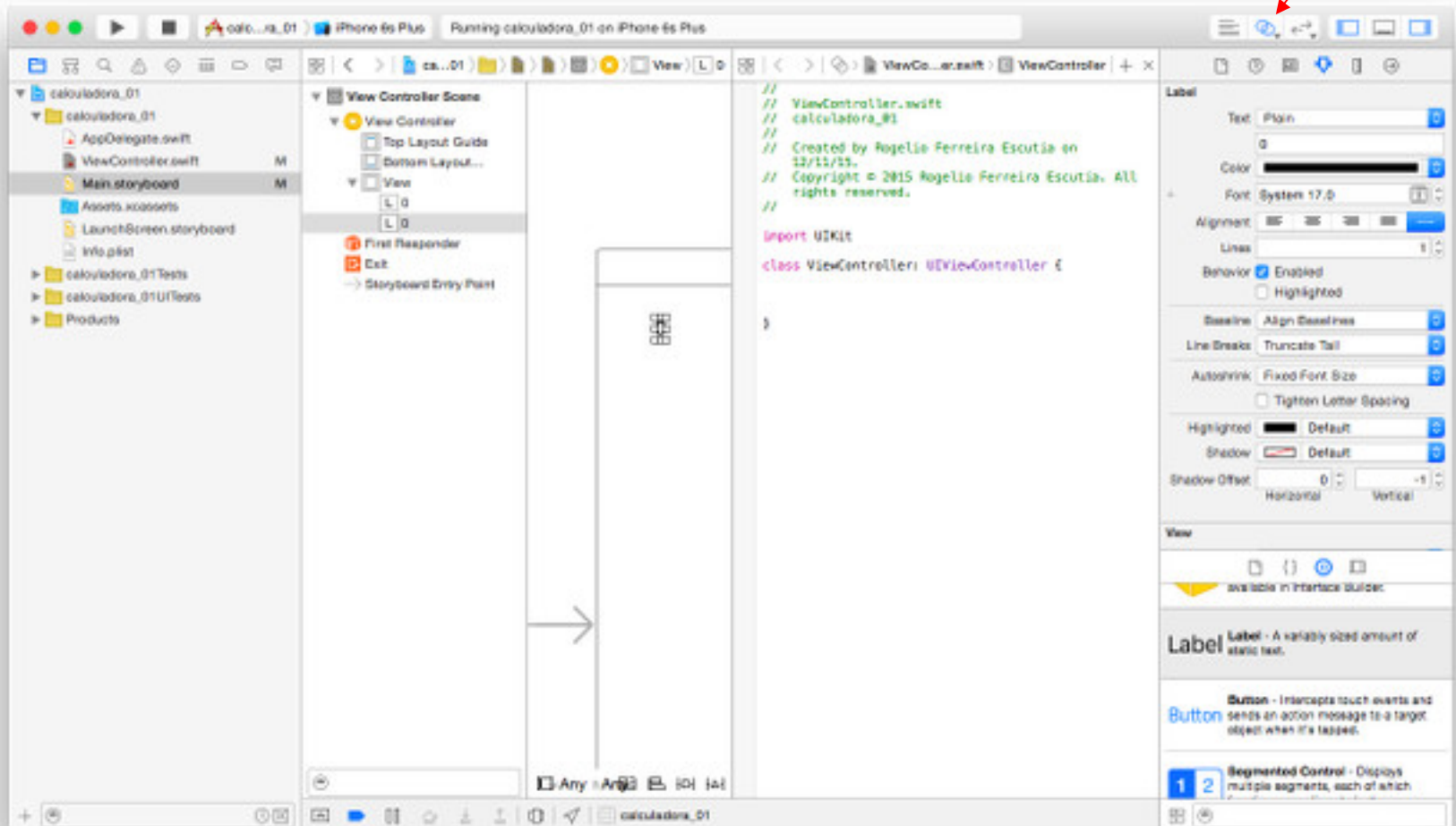
```
//  
// ViewController.swift  
// calculadora_01  
//  
// Created by Rogelio Ferreira Escutia on 12/11/15.  
// Copyright © 2015 Rogelio Ferreira Escutia. All rights reserved.  
//  
  
import UIKit  
  
class ViewController: UIViewController {  
  
    override func viewDidLoad() {  
        super.viewDidLoad()  
        // Do any additional setup after loading the view, typically from a nib.  
    }  
  
    override func didReceiveMemoryWarning() {  
        super.didReceiveMemoryWarning()  
        // Dispose of any resources that can be recreated.  
    }  
  
}
```

Limpiando el código del ViewController.swift

```
//  
// ViewController.swift  
// calculadora_01  
//  
// Created by Rogelio Ferreira Escutia on 12/11/15.  
// Copyright © 2015 Rogelio Ferreira Escutia. All rights reserved.  
//  
  
import UIKit  
  
class ViewController: UIViewController {  
|  
}  
}
```



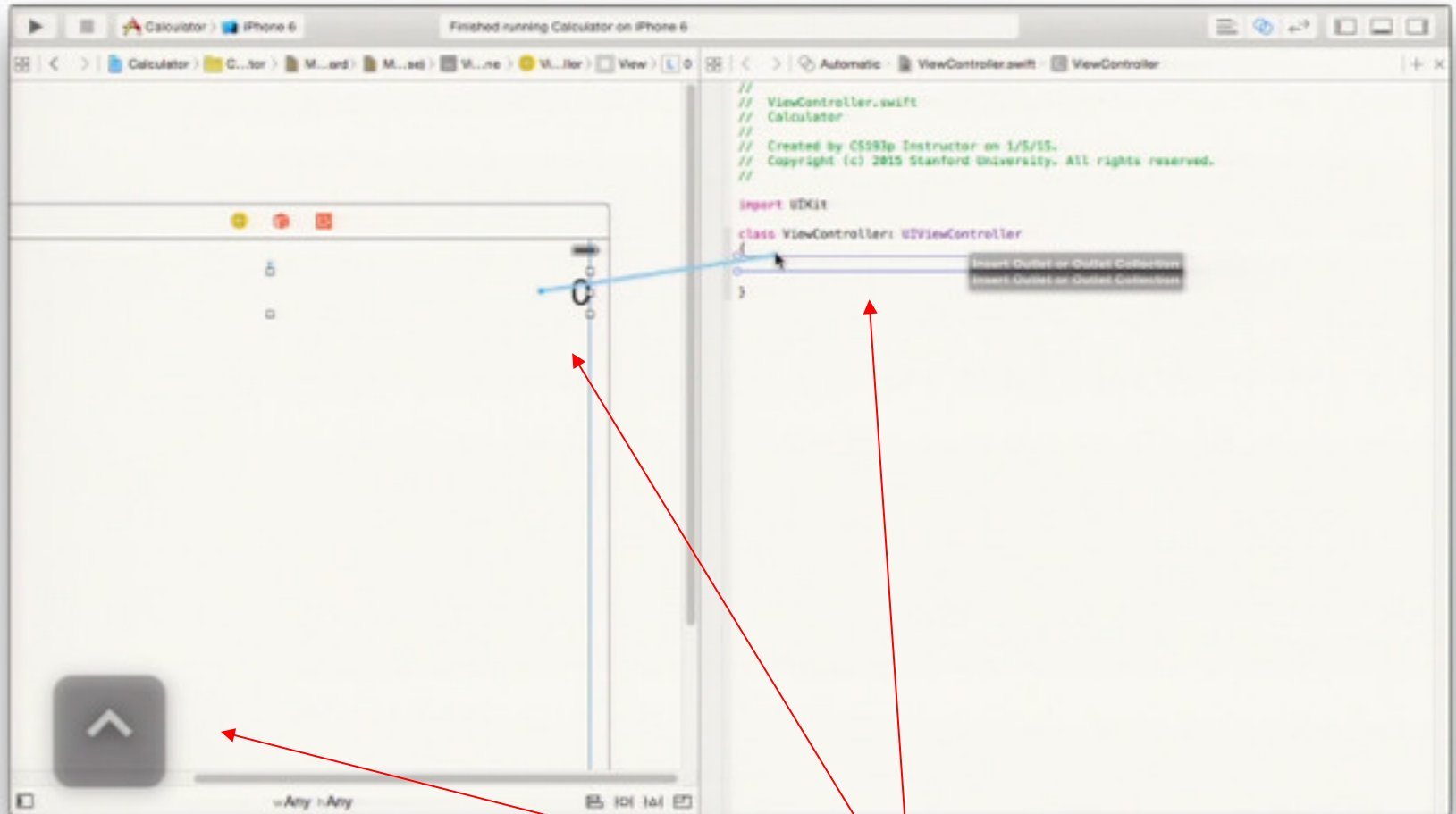
Activando el “Assistant Editor”



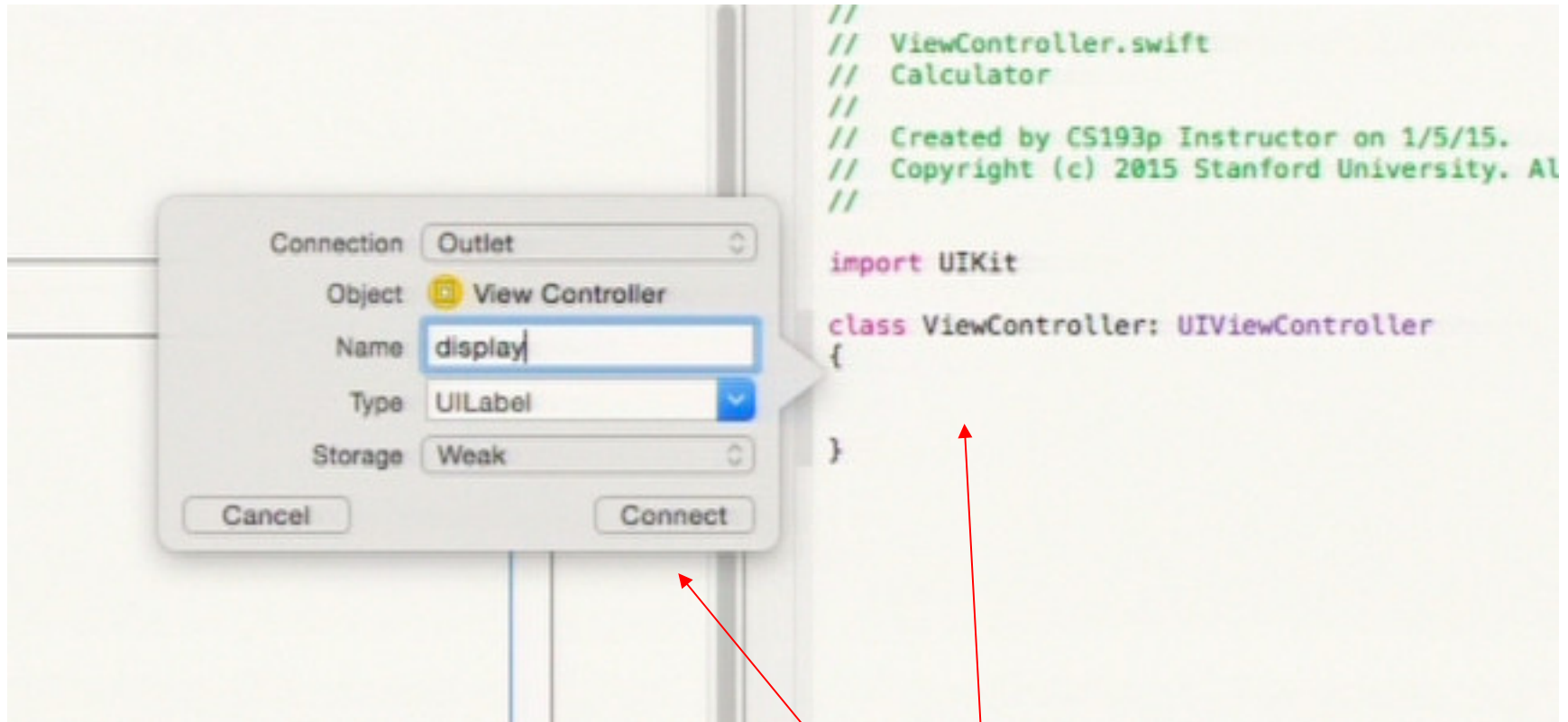
Modificando el componente “Label”



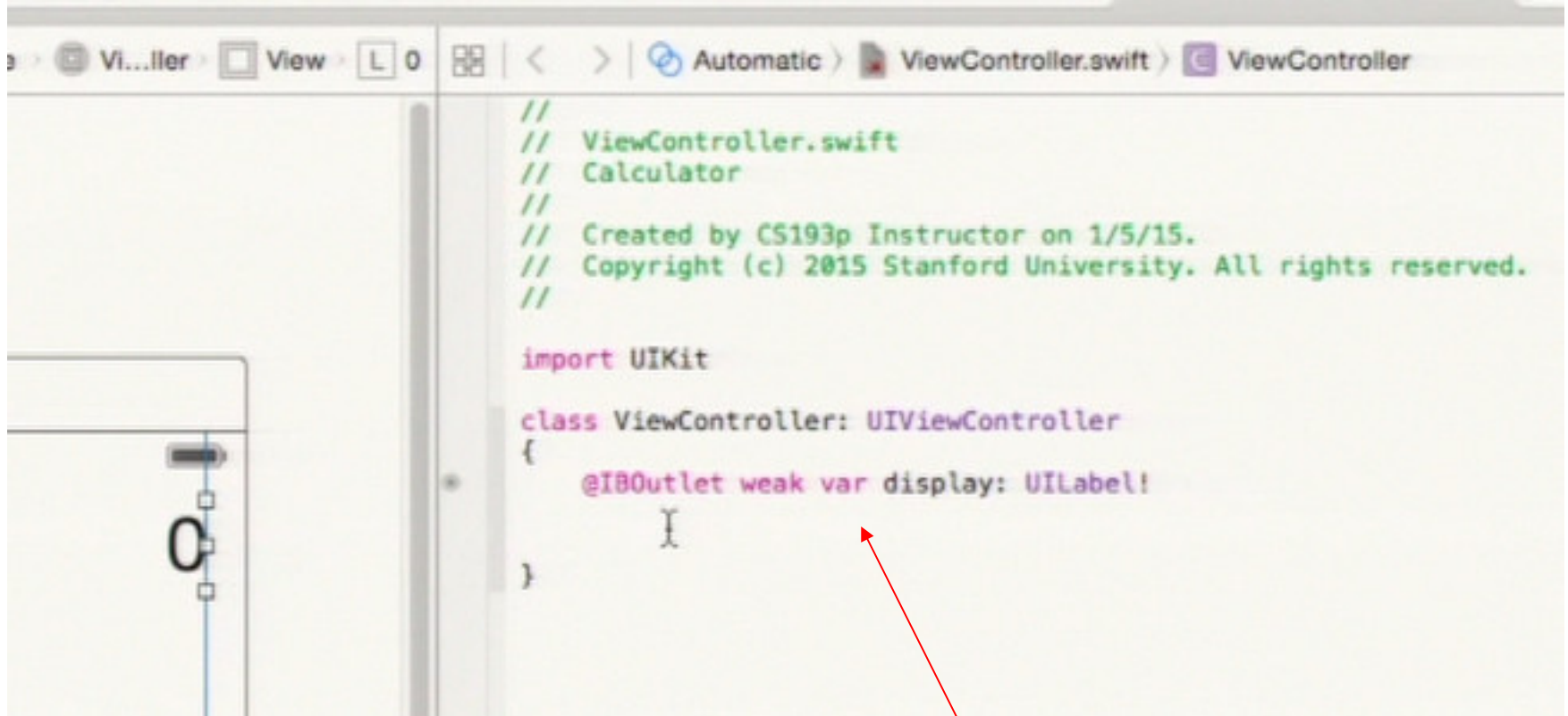
Presionar “ctrl” y arrastrar “Label”



Características y comportamiento del objeto



Código generado en el controlador



```
//  
// ViewController.swift  
// Calculator  
//  
// Created by CS193p Instructor on 1/5/15.  
// Copyright (c) 2015 Stanford University. All rights reserved.  
//  
import UIKit  
  
class ViewController: UIViewController  
{  
    @IBOutlet weak var display: UILabel!  
    }  
}
```

Insertar “Button” a la vista

The screenshot shows the Xcode IDE with a project named "Calculator" on an iPhone 6. The interface is divided into three main sections:

- Canvas (Left):** Displays a grey rectangular view with a blue button labeled "Button" positioned in the upper left. A red arrow points from the button in the canvas to the "Button" entry in the right-hand panel.
- Code Editor (Center):** Shows the Swift code for "ViewController.swift". The code includes comments and an @IBOutlet declaration:

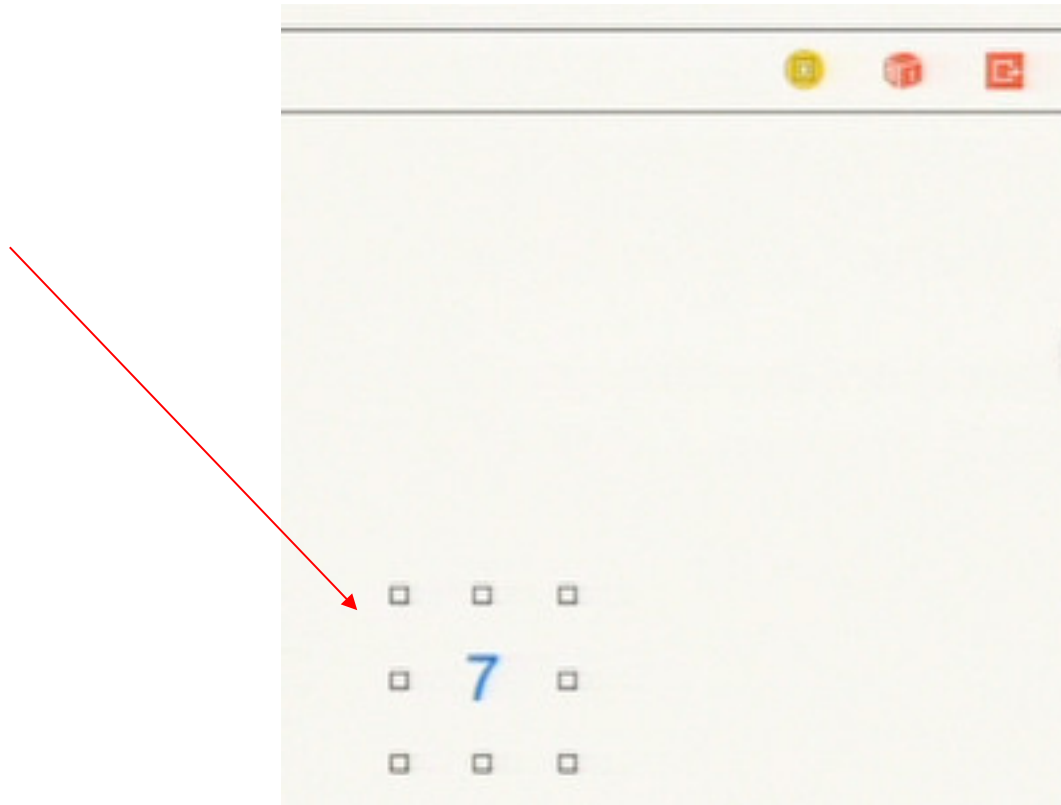
```
// ViewController.swift
// Calculator
//
// Created by CS193p Instructor on 1/5/15.
// Copyright (c) 2015 Stanford University. All rights reserved.
//

import UIKit

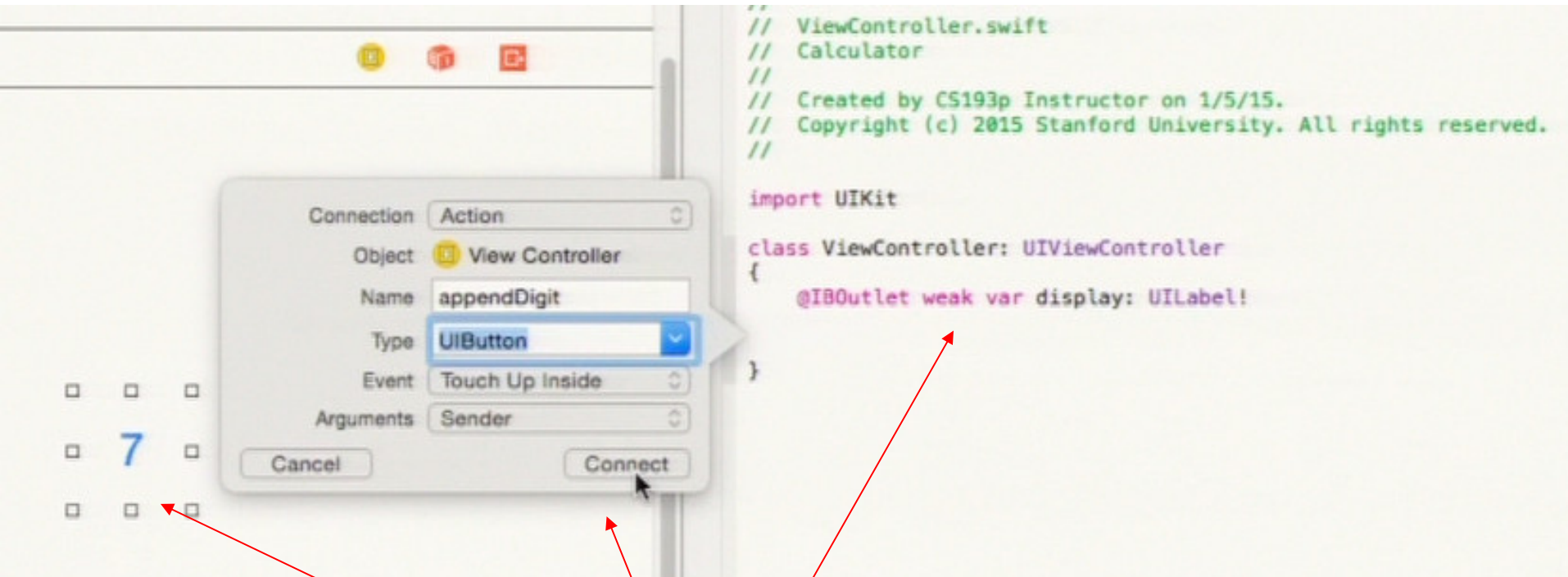
class ViewController: UIViewController
{
    @IBOutlet weak var display: UILabel!
}
```
- Attributes Inspector (Right):** Shows the configuration for the selected "Button". The "Type" is set to "System". Below this, there is a scrollable list of UI element descriptions:
 - Label:** Label - A variably sized amount of static text.
 - Button:** Button - Intercepts touch events and sends an action message to a target object when it's tapped.
 - Segmented Control:** Displays multiple segments, each of which functions as a discrete button.
 - Text Field:** Displays editable text and sends an action message to a target object when Return is tap...
 - Slider:** Displays a continuous range of values and allows the selection of a single value.



Editar “Button” para la calculadora



Enlazar "Button" con el controlador



The image shows a screenshot of the Xcode IDE. On the left, a portion of a storyboard is visible, showing a grid of UI elements with a blue digit '7' in the center. A connection dialog box is open, showing the following configuration:

- Connection: Action
- Object: View Controller
- Name: appendDigit
- Type: UIButton
- Event: Touch Up Inside
- Arguments: Sender

Buttons for 'Cancel' and 'Connect' are visible at the bottom of the dialog. A mouse cursor is hovering over the 'Connect' button. On the right, the Swift code for `ViewController.swift` is displayed:

```
// ViewController.swift
// Calculator
//
// Created by CS193p Instructor on 1/5/15.
// Copyright (c) 2015 Stanford University. All rights reserved.
//


import UIKit

class ViewController: UIViewController
{
    @IBOutlet weak var display: UILabel!
}
```

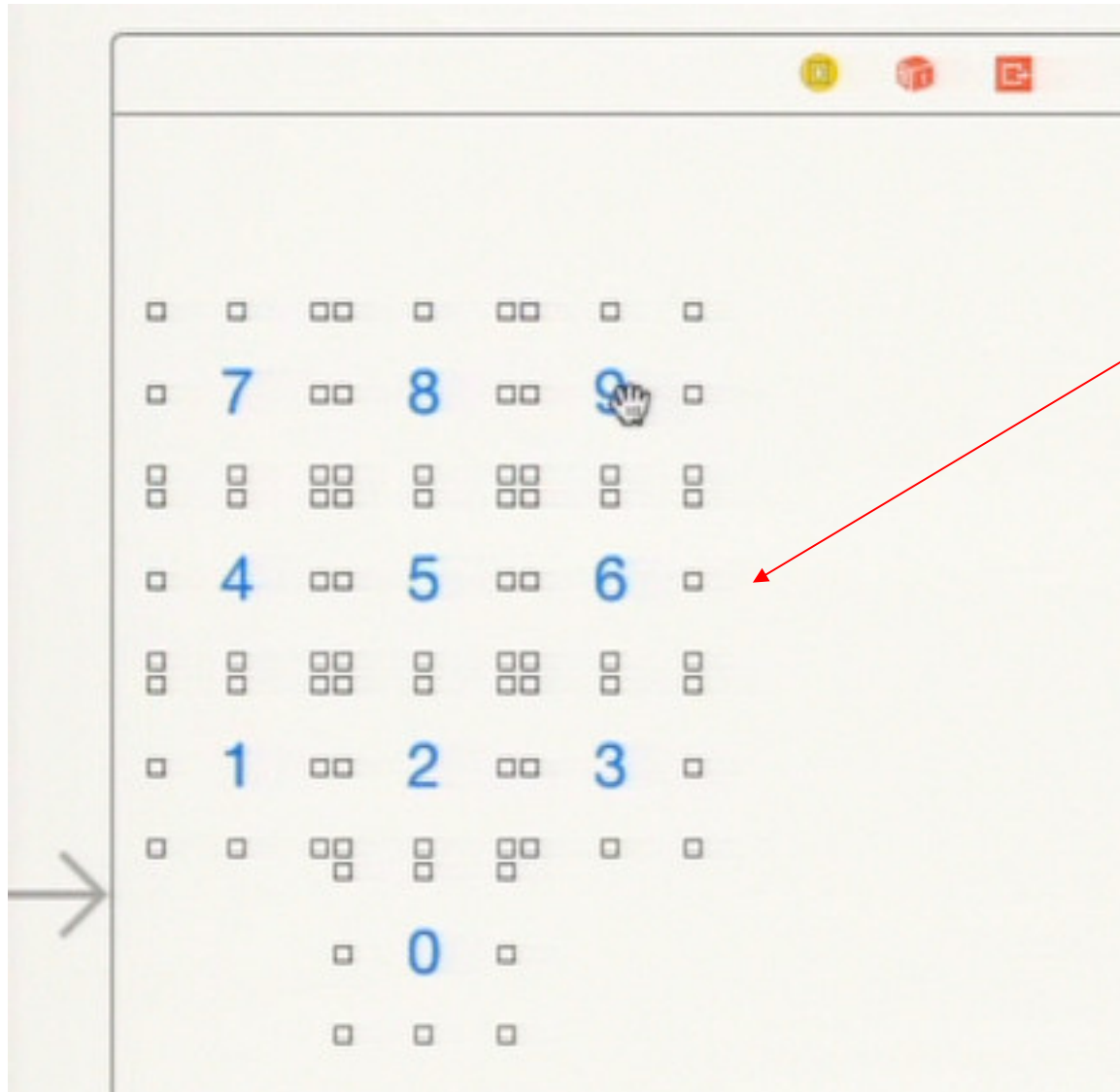
Red arrows point from the 'Connect' button in the dialog to the `appendDigit` property in the Swift code, and from the '7' button in the storyboard to the `appendDigit` property in the Swift code.

Generación de código en el controlador

```
//  
// ViewController.swift  
// Calculator  
//  
// Created by CS193p Instructor on 1/5/15.  
// Copyright (c) 2015 Stanford University. All rights reserved.  
//  
  
import UIKit  
  
class ViewController: UIViewController  
{  
    @IBOutlet weak var display: UILabel!  
  
    @IBAction func appendDigit(sender: UIButton) {  
    }  
}
```



Creando la vista de la calculadora



Código y ejecución de la calculadora

The image shows a split-screen view of an iOS Simulator. On the left, the calculator app is running on an iPhone 6 simulator. The display shows the number '0568'. Below the display is a numeric keypad with buttons for digits 0-9 and a '3' button. On the right, the Xcode editor shows the Swift code for the calculator's ViewController. The code includes comments and an @IBAction method named 'appendDigit(_:)'. Two red arrows originate from the '3' button in the calculator interface and point to the 'appendDigit(_:)' method in the code, illustrating the connection between the UI and the logic.

```
//  
// ViewController.swift  
// Calculator  
//  
// Created by CS193p Instructor on 1/5/15.  
// Copyright (c) 2015 Stanford University. All rights reserved.  
//  
import UIKit  
  
class ViewController: UIViewController  
{  
    * @IBOutlet weak var display: UILabel!  
    * @IBAction func appendDigit(sender: UIButton) {  
        let digit = sender.currentTitle!  
        display.text = display.text! + digit  
    }  
}
```



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Facebook: ***http://www.facebook.com/groups/xumarhu.net/***

