APP EVOLUTION

A-volution
Stem
Joint
Shoulder
This is the second "P" in "App" which is short for application (in case you didn't know).
"O" is most definitely the best letter of the alphabet.
So uhh.. this is a grid.
1/4
Right angle
1/4
"L" is for the way you look at meee. "O" is for the only one I seee.
Stirrup/"U" skyscrapes
Crossbar
Stem
Again, "O" is totally the best letter.
"N" for Natural Selection. #Darwin

with Swift

Level 2

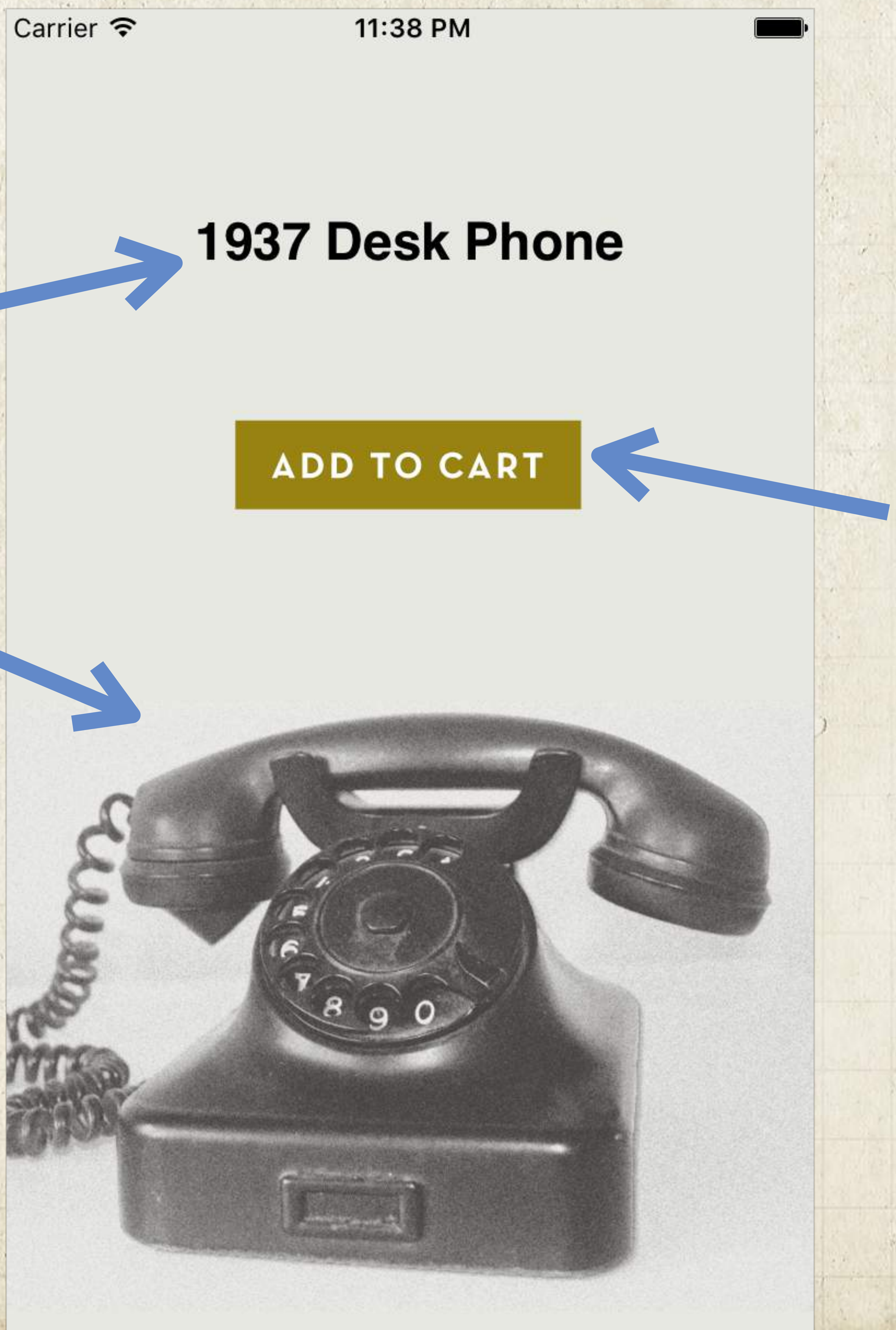
Outlets and Actions

Section 1 - Storyboard Outlets

APP EVOLUTION with Swift

Problem: We Want to Set Content Programmatically

Here's what we have right now, but we want to change a few things.



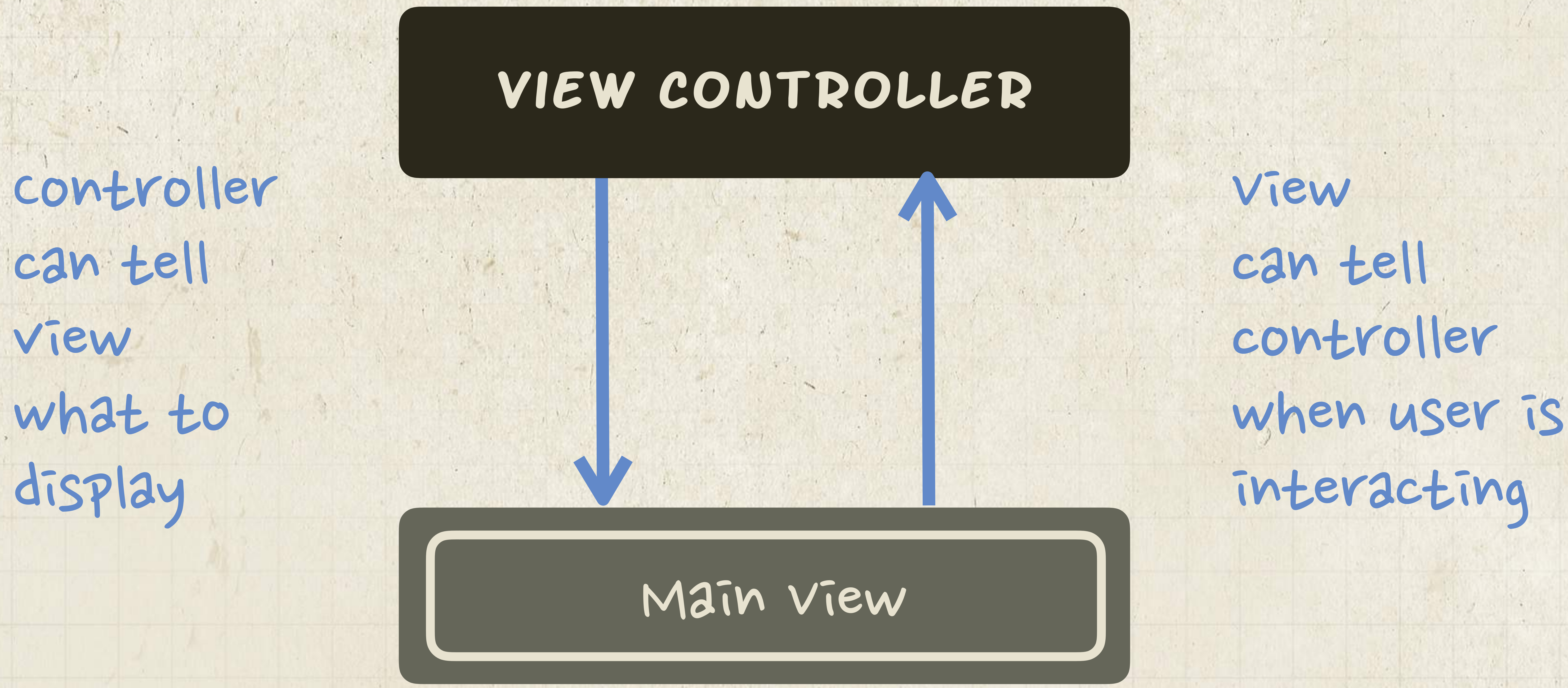
Set the text and image programmatically

Make this button do something when it is tapped

APP EVOLUTION with Swift

Why View Controllers?

Separating the program logic from the display code makes the code you write easier to understand than 1 giant file.



VIEW CONTROLLER

Main View

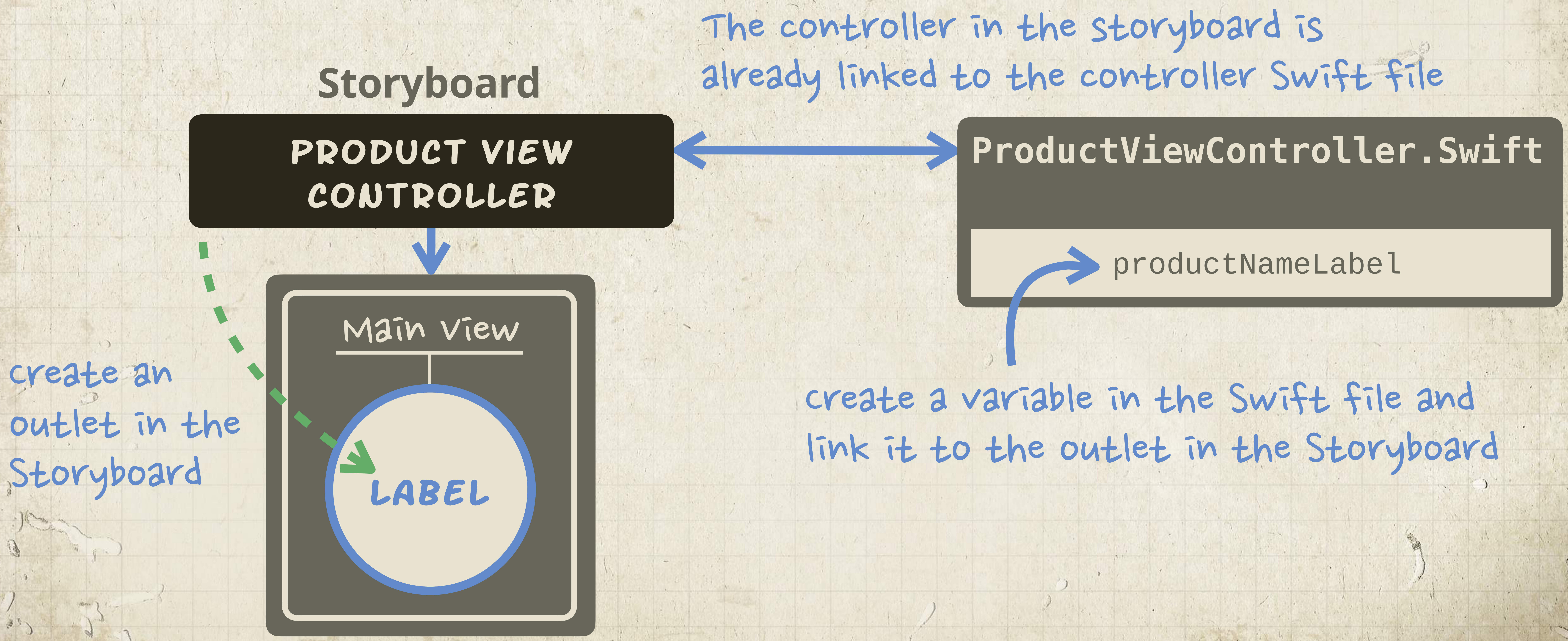
controller can tell view what to display

view can tell controller when user is interacting

Screencast: Creating a Swift File

How Outlets Work

Outlets create a connection between a storyboard object and a variable in Swift.



The controller in the storyboard is already linked to the controller Swift file

create an outlet in the Storyboard

create a variable in the Swift file and link it to the outlet in the Storyboard

Screencast: Using the Assistant Editor

The Controller After Connecting an Outlet

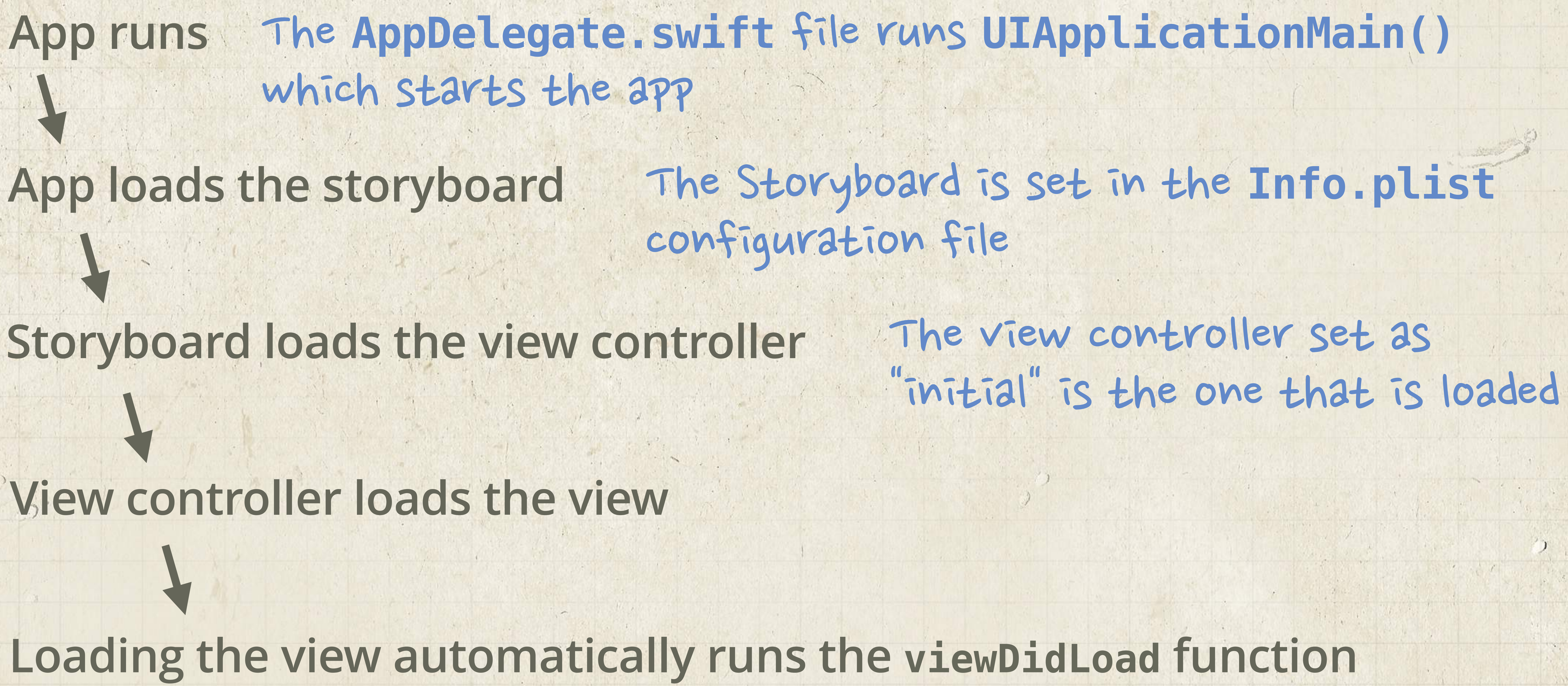
ProductViewController.swift

```
import UIKit

class ProductViewController: UIViewController {

    @IBOutlet weak var productNameLabel: UILabel!

    override func viewDidLoad() {
        super.viewDidLoad()

    }

}
```

Now we can access our Storyboard label in this file and change the text

But where should we write code to change that text?

What Happens When an App Runs



App runs

The **`AppDelegate.swift`** file runs **`UIApplicationMain()`** which starts the app

App loads the storyboard

The Storyboard is set in the **`Info.plist`** configuration file

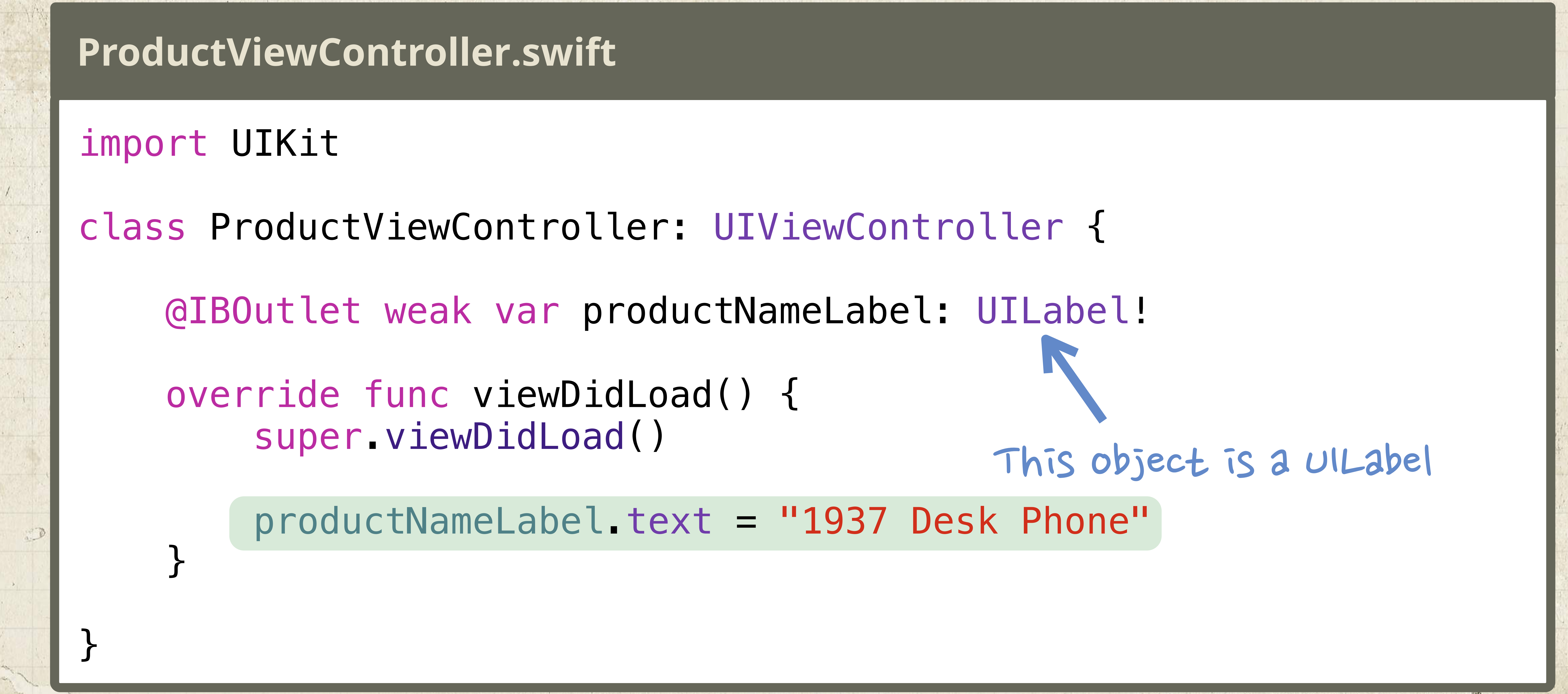
Storyboard loads the view controller

The view controller set as "initial" is the one that is loaded

View controller loads the view

Loading the view automatically runs the `viewDidLoad` function

Setting the Label Text in Code



ProductViewController.swift

```swift
import UIKit

class ProductViewController: UIViewController {

    @IBOutlet weak var productNameLabel: UILabel!

    override func viewDidLoad() {
        super.viewDidLoad()

        productNameLabel.text = "1937 Desk Phone"
    }

}
```

This object is a UILabel

UILabels have a text property that you can set equal to a string

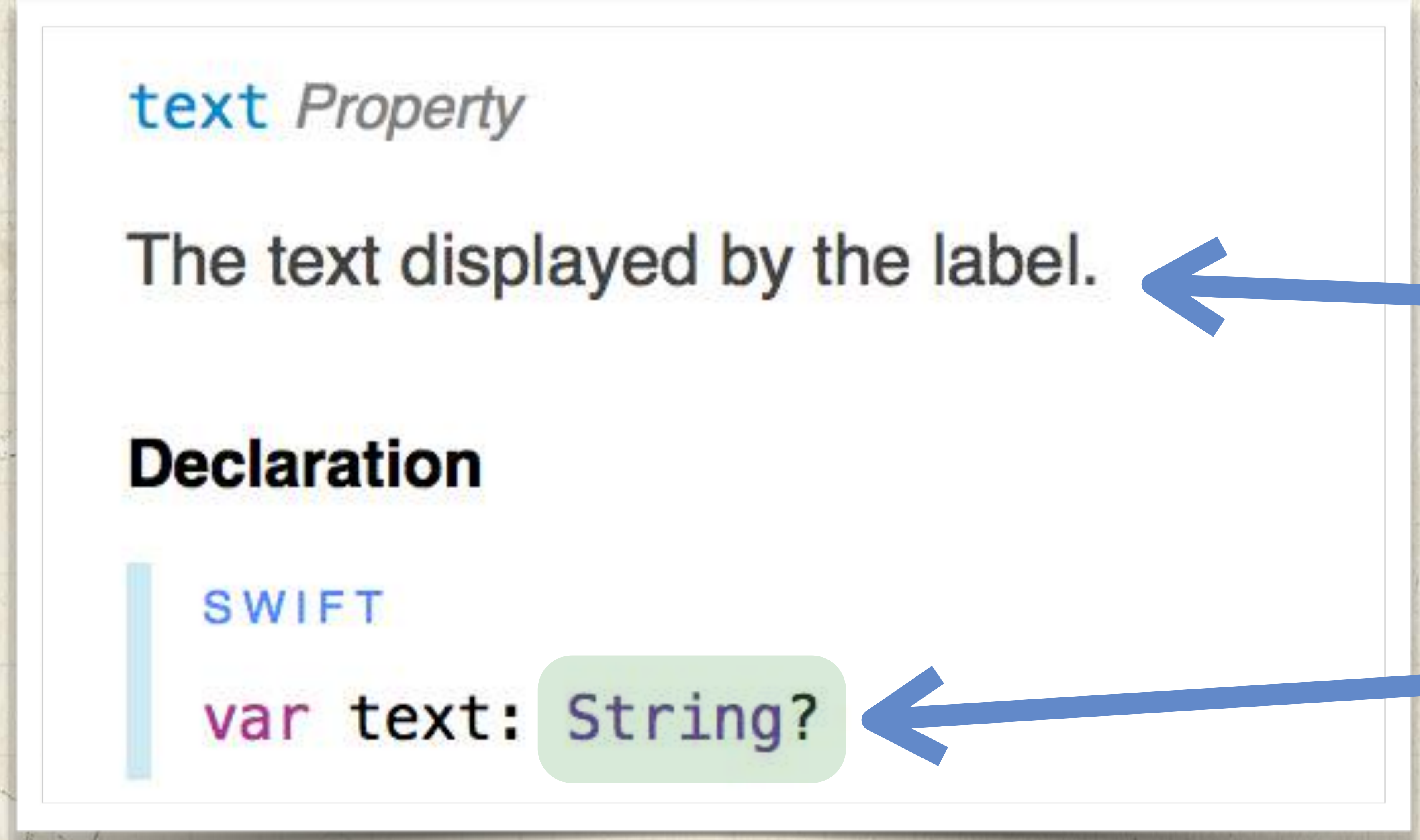
Finding Properties in Apple's Documentation

ProductViewController.swift

```
...
        productNameLabel.text = "1937 Desk Phone"
...
```

We can find the names of properties in Apple's documentation

Swift documentation for UILabel



text *Property*

The text displayed by the label.

Declaration

SWIFT

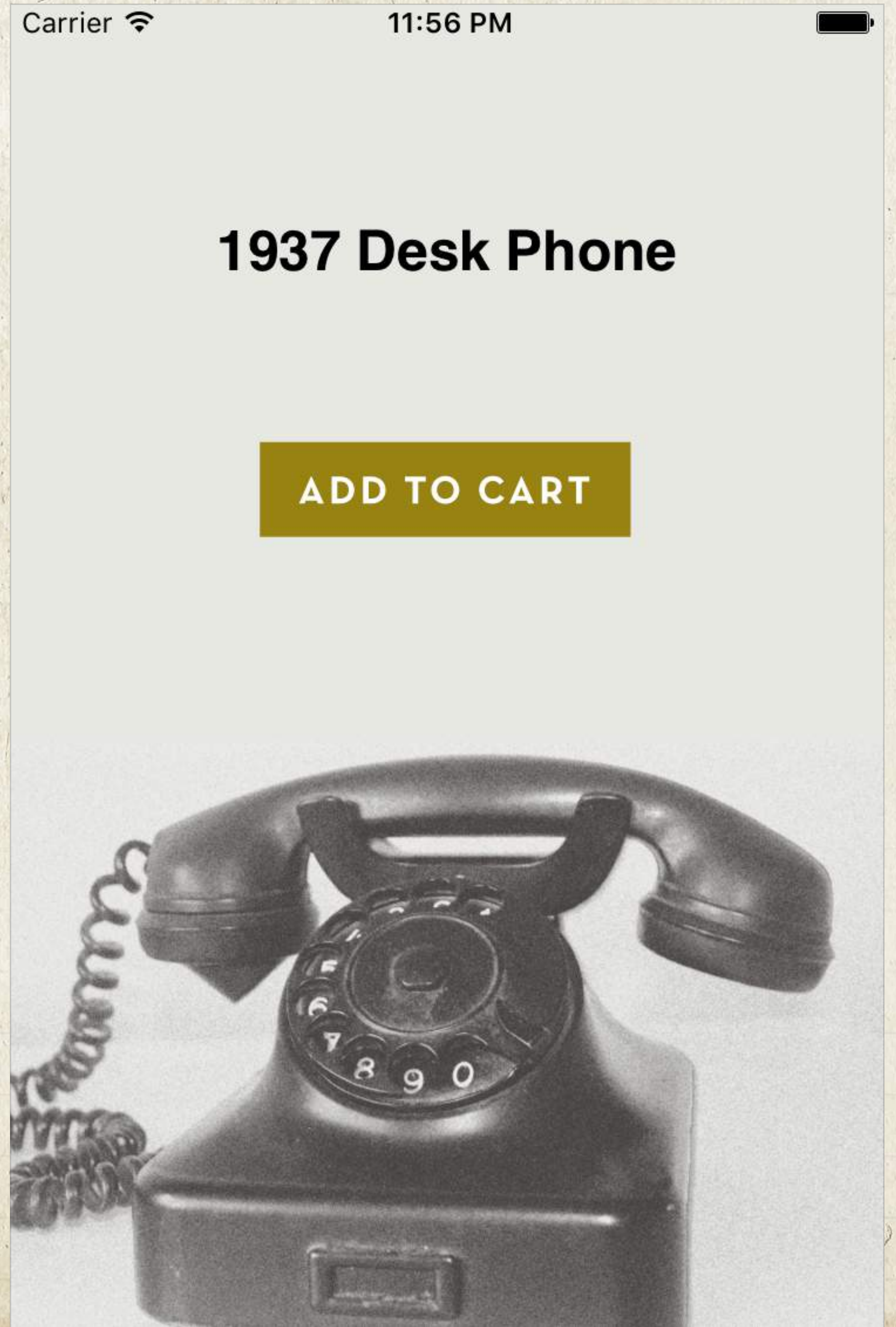
```
var text: String?
```

Docs show properties and functions for each class

This means this property is expecting us to assign a string to it

Check out the full UIKit docs here: **http://go.codeschool.com/uikit-docs**

Demo: Label Text Being Set with Code



APP EVOLUTION with Swift

Screencast: Connecting the Image View to Code

APP EVOLUTION with Swift

Setting the Image for an Image View With Code

ProductViewController.swift

```swift
import UIKit

class ProductViewController: UIViewController {

    @IBOutlet weak var productNameLabel: UILabel!
    @IBOutlet weak var productImageView: UIImageView!

    override func viewDidLoad() {
        super.viewDidLoad()

        productNameLabel.text = "1937 Desk Phone"
        productImageView.image = UIImage(named: "phone-fullscreen3")
    }

}
```

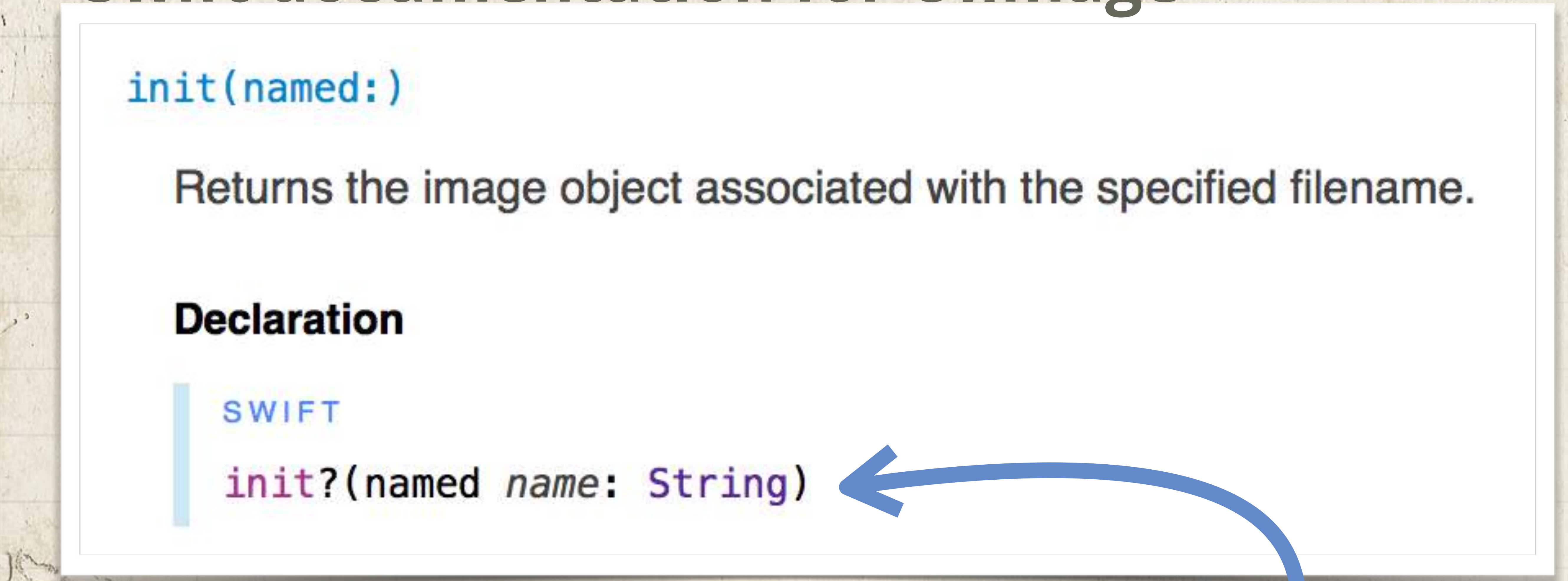
Image views have an image property that you can set equal to a **UIImage** object

Creating a UIImage Object

```
UIImage(named: "phone-fullscreen3")
```

writing the name of a class with parentheses
after it runs an initializer function

Swift documentation for UIImage



`init(named:)`

Returns the image object associated with the specified filename.

Declaration

SWIFT

```
init?(named name: String)
```

This init function is expecting you to put a String
with the **named** parameter in the parentheses

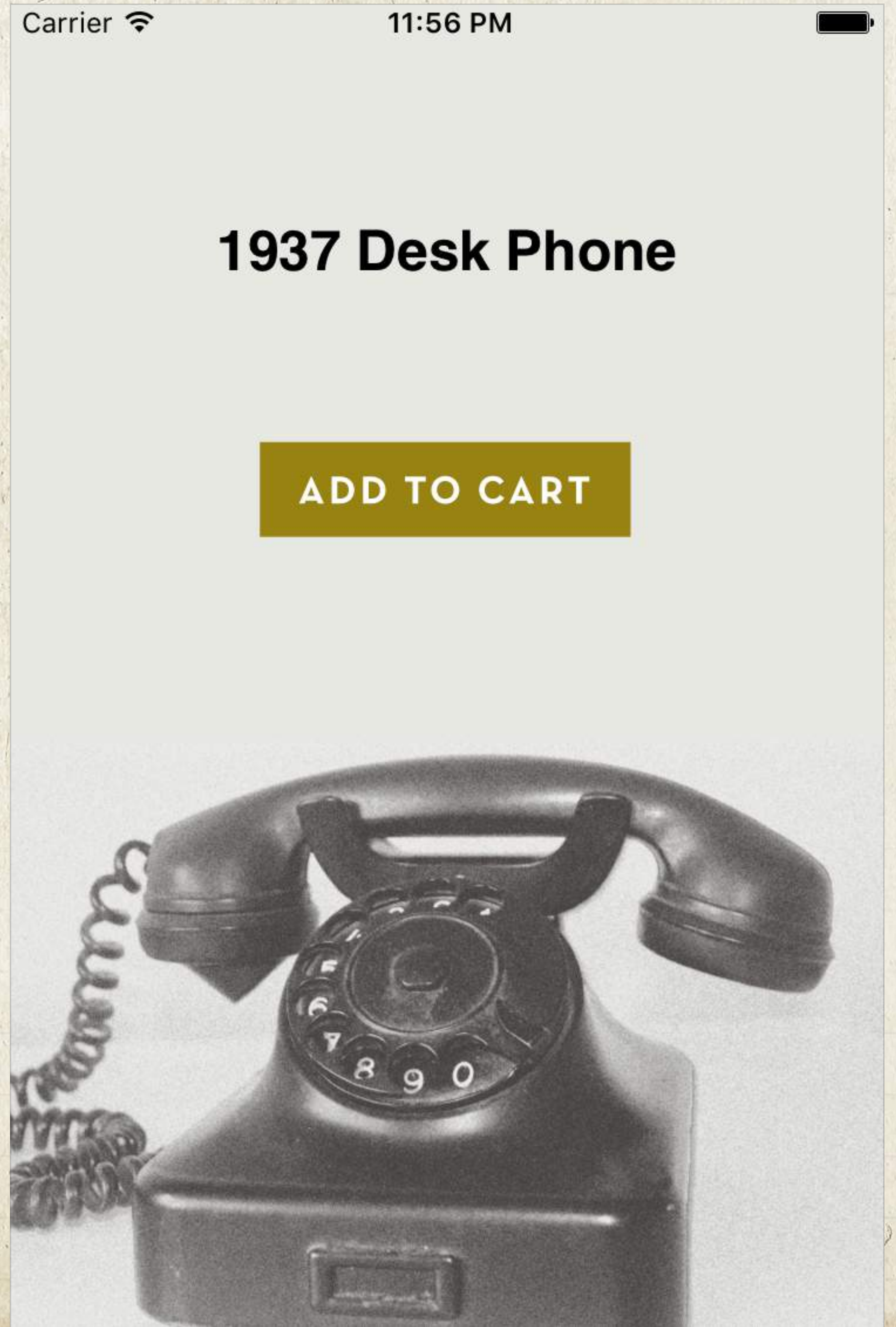
Using the UIImage Object to Display an Image

ProductViewController.swift

```
...
    productImageView.image = UIImage(named: "phone-fullscreen3")
...
```

The **UIImage** initializer returns a **UIImage** object that the image view wants

Demo: Image View Being Set With Code



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