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Tampa Hackerspace 2018

Build Your First iPhone App! Part2



Views

1. Table Views
2. Scroll Views

Table View

1. Add **Table View Controller** from the Object Panel to Storyboard
2. Add **New Cocoa Touch File** to Project, subclass from `UITableViewController`, name it **StormtrooperTableViewController**
3. Delete all boilerplate code
4. From Object Panel, drag and drop Table View Controller to Storyboard, in front of other View Controller
5. At Storyboard, select Table View Controller's Identity Inspector, change to custom class called **StormtrooperTableViewController**

Identifier as a handle

Select Table View Cell's Attributes Inspector, change Identifier to “**StormtrooperCell**”; this creates a variable for us to use in the code



Table View Cell Recycling

- Sets the number of rows to display, returns an Integer

```
override func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {
```

- Recycles data within these rows

```
override func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell {  
    let cell = tableView.dequeueReusableCell(withIdentifier: "StormtrooperCell", for: indexPath)
```

Code to Copy/Write into STVC Class:

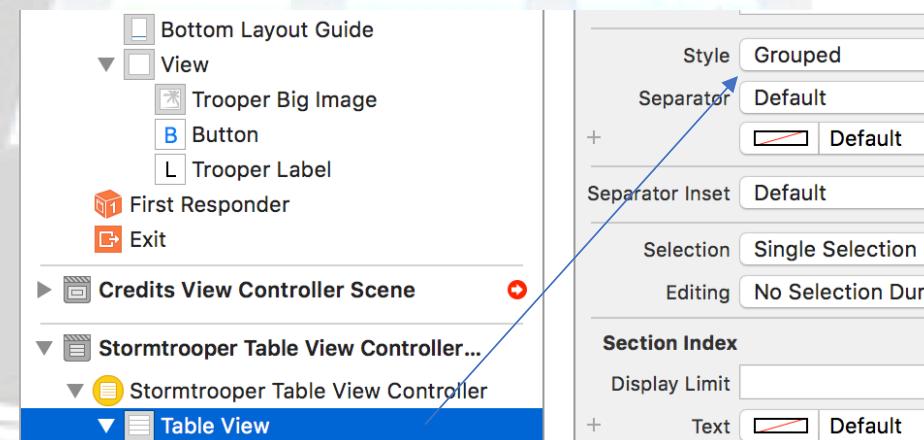
```
override func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {  
    return 5  
}  
  
override func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell {  
    let cell = tableView.dequeueReusableCell(withIdentifier: "StormtrooperCell", for: indexPath)  
  
    // To teach the concept  
    cell.textLabel?.text = "Hello Stormtrooper!"  
    cell.imageView?.image = UIImage(named: "scout_troopers_label")  
  
    return cell  
}
```

Adding Reusable Cells to a Table

- Add two new functions shown on previous slide to StormtrooperTableViewController code.
 - For first func, return 5
 - For second func, add this code:

```
// To teach the concept
cell.textLabel?.text = "Hello Stormtrooper!"
|cell.imageView?.image = UIImage(named: "scout_troopers_label")
```

- Select Table View, in Attributes Inspector, change Style from Plain to Grouped



Checking variables for null that are optional

- Optional chaining:

```
if cell.textLabel != nil {  
    cell.textLabel!.text = "Hello friend."  
}
```

- Or, shorthand is this:

```
cell.textLabel?.text = "Hello friend."
```

Create a Custom Class

- Create Stormtrooper Class swift file from Project -> New File menu
- Add variables in custom class to hold all stormtrooper data per item

```
//  
//  StormtrooperClass.swift  
//  StormtroopersAppPart2  
//  
//  Created by Sunny on 12/31/17.  
//  Copyright © 2017 Tampa Hackerspace. All rights reserved.  
  
import Foundation  
  
class StormtrooperClass {  
    var name: String?  
    var trooperImage: String?  
    var cellImage: String?  
}  
}
```

Dynamic Data Population (1)

```
class StormtrooperTableViewController: UITableViewController {  
  
    var troopers: [StormtrooperClass]?  
  
    override func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {  
  
        // To change for final product  
        let trooper1 = StormtrooperClass()  
        let trooper2 = StormtrooperClass()  
        let trooper3 = StormtrooperClass()  
        let trooper4 = StormtrooperClass()  
  
        trooper1.name = "Scout Trooper"  
        trooper1.cellImage="scout_troopers_label"  
        trooper1.trooperImage="scout_trooper_BIG"  
  
        trooper2.name = "First Order Trooper"  
        trooper2.cellImage="first_order_stormtrooper_label"  
        trooper2.trooperImage="first_order_troopers_BIG"  
  
        trooper3.name = "Snow Trooper"  
        trooper3.cellImage="snow_troopers_label"  
        trooper3.trooperImage="snowtroopers_BIG"  
  
        trooper4.name = "Death Trooper"  
        trooper4.cellImage="death_trooper_label"  
        trooper4.trooperImage="death_troopers_BIG"  
  
        troopers = [trooper1, trooper2, trooper3, trooper4]  
  
        if let sNames = troopers {  
            print("number of troopers is",sNames.count)  
            return sNames.count  
        }  
        return 0  
        //return 5  
    }  
}
```

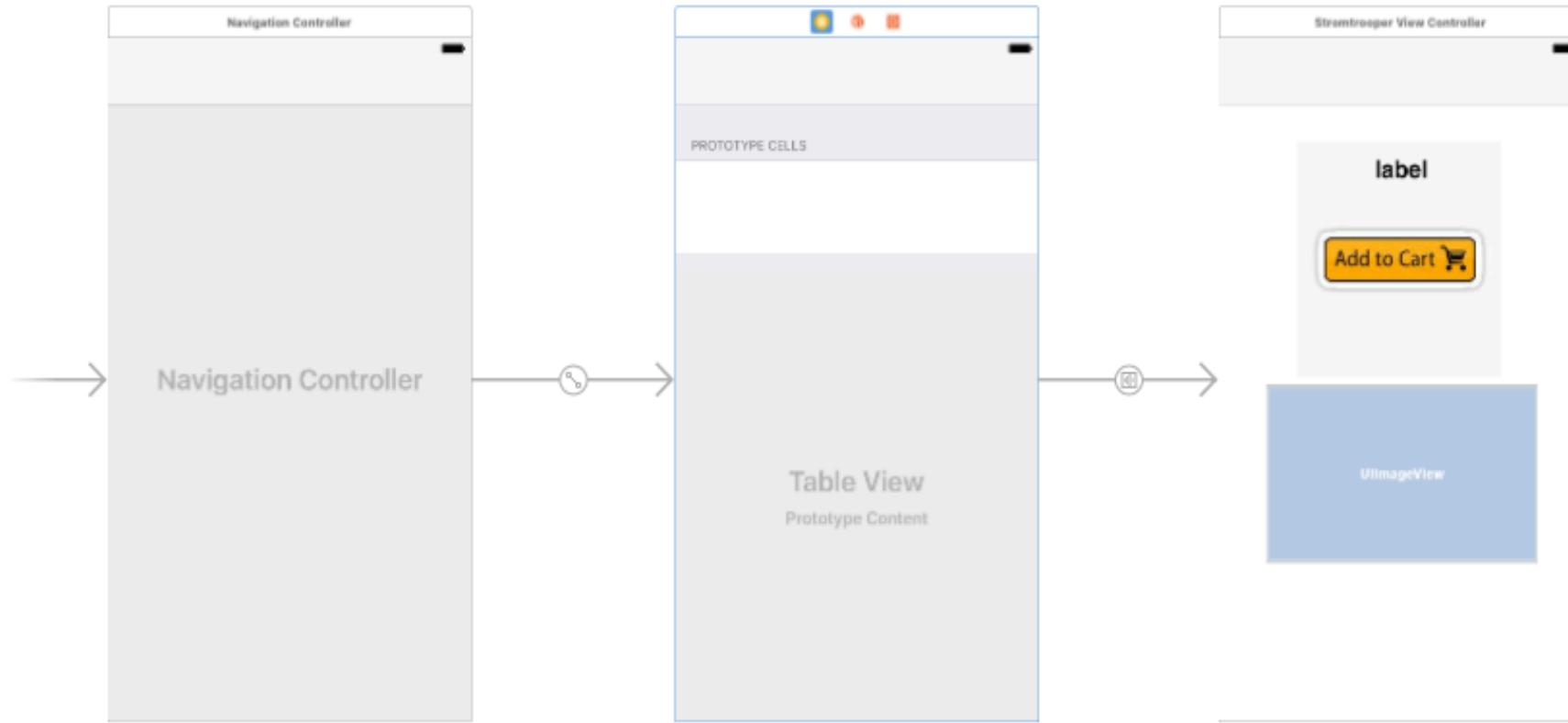
Dynamic Data Population (2)

```
override func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell {  
    let cell = tableView.dequeueReusableCell(withIdentifier: "StormtrooperCell", for: indexPath)  
  
    // To teach the concept  
    //cell.textLabel?.text = "Hello Stormtrooper!"  
    //cell.imageView?.image = UIImage(named: "scout_troopers_label")  
  
    let trooper = troopers?[indexPath.row]  
  
    if let sName = trooper {  
        cell.textLabel?.text = sName.name  
        if let i = sName.cellImage {  
            cell.imageView?.image = UIImage(named: i)  
  
        }  
    }  
    return cell  
}
```

Navigation

1. Transitioning between View Controllers
2. Passing data via a segue (pronounced Segway)

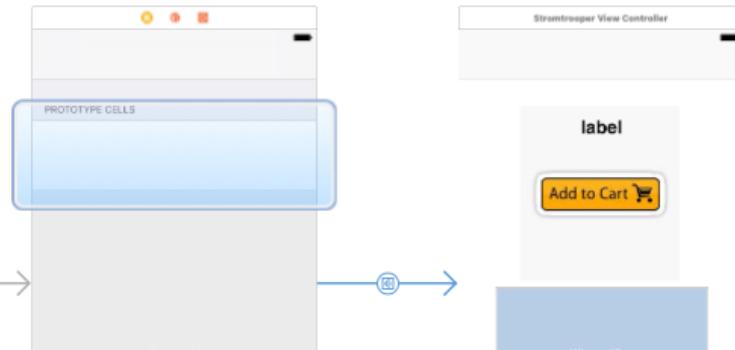
Storyboard Layout & Embedded Navigation



Adding Navigation

1. Organize storyboard the way you want the flow
2. Select Table View Controller's Editor -> Embed In -> Navigation Controller
3. Right-click and drag from “Prototype Cell” to “Stormtrooper View Controller Scene” -> Show Segue; select new segue and give name “**ShowTrooper**” as identifier
4. Add a reference inside of Stormtrooper View Controller of this code:

Code: var trooper: StormtrooperClass?



Swift code changes to StormtrooperViewController:

- Code:

```
var trooper: StormtrooperClass?
```

- Code:

```
if let p = trooper {  
    TrooperLabel.text = p.name  
    if let i = p.trooperImage {  
        TrooperBigImage.image = UIImage(named: i)  
    }  
}
```

Stormtrooper View Controller changes

- Comment out the concept code within `viewDidLoad()` function
- Add the if statements:

```
override func viewDidLoad() {
    super.viewDidLoad()

    // Do any additional setup after loading the view.
    //trooperLabel.text = "Scout Trooper"
    //trooperImage.image = UIImage(named: "scout_trooper_BIG")

    if let p = trooper {
        trooperLabel.text = p.name
        if let i = p.trooperImage {
            trooperImage.image = UIImage(named: i)
        }
    }
}
```

StormtrooperViewController Sample Code:

```
class StormtrooperViewController: UIViewController {  
  
    var trooper: StormtrooperClass?  
  
    @IBAction func addToCartPressed(_ sender: AnyObject) {  
        print("Button tapped")  
    }  
    @IBOutlet weak var scoutImageView: UIImageView!  
    @IBOutlet weak var scoutLabel: UILabel!  
    override func viewDidLoad() {  
        super.viewDidLoad()  
  
        //CONCEPT CODE COMMENTED OUT  
        //scoutLabel.text = "Scout Trooper"  
        //scoutImageView.image = UIImage(named: "scout_trooper_BIG")  
  
        if let p = trooper {  
            scoutLabel.text = p.name  
            if let i = p.trooperImage {  
                scoutImageView.image = UIImage(named: i)  
            }  
        }  
    }  
}
```

Swift code for segue inside StromtrooperTableViewController:

```
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if segue.identifier == "ShowTrooper"{
        let trooperVC = segue.destination as? StromtrooperViewController

        //get the cell that was tapped
        guard let cell = sender as? UITableViewCell,
              let indexPath = tableView.indexPath(for: cell) else {
            return
        }

        //get the index path for that cell
        //use the index path to get the productName from the array
        //send the product name to the product view controller
        trooperVC?.trooper = troopers?[indexPath.row]
    }
}
```

Test Your App!

