
APP
EVOLUTION
with Swift

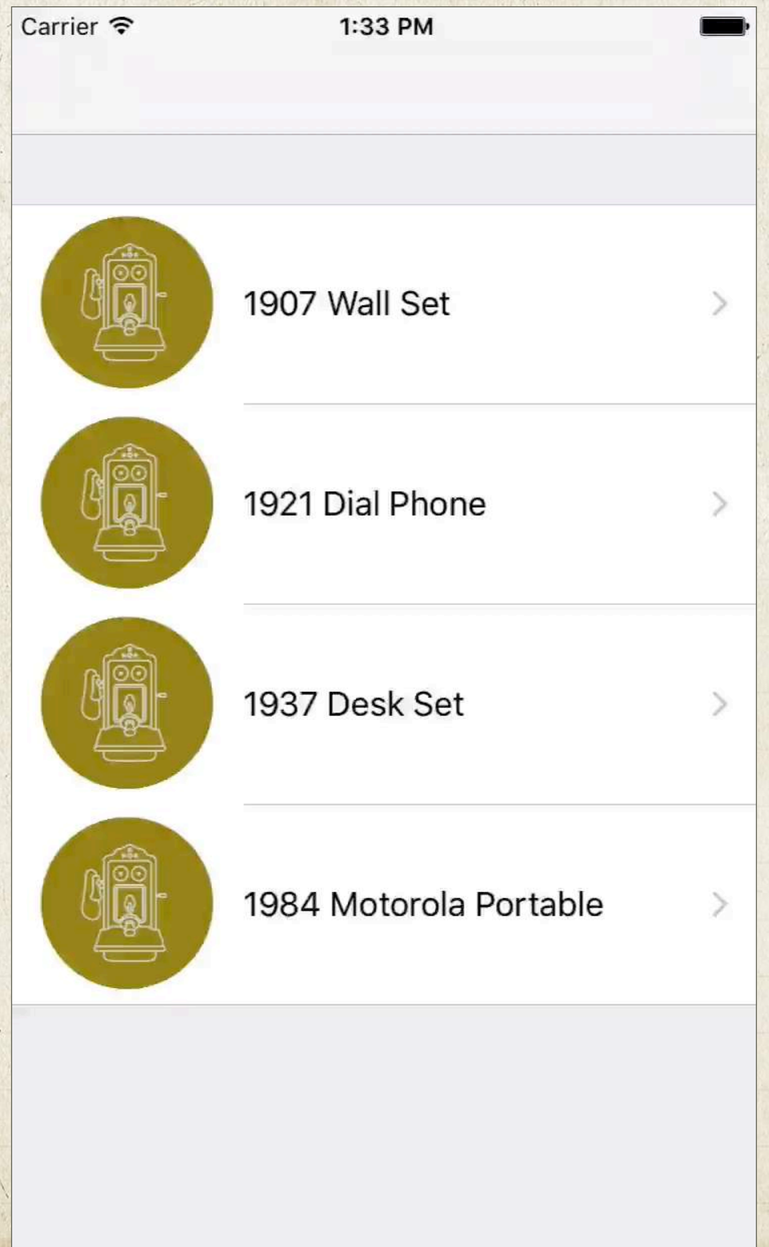
Level 5

Navigation

Section 3 - Passing Dynamic Data During a Transition

APP EVOLUTION with Swift

Problem: We Want the Product Detail to Update Too



APP EVOLUTION with Swift

The Plan for Updating prepareForSegue

ProductsTableViewController.swift

```
class ProductsTableViewController: UITableViewController {
  ...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController
      productVC?.productName = "Really old phone"

      // get the cell that was tapped
      // 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

    }
  }
}
```

Stop hard-coding the product name

Getting a Copy of the Cell That Was Tapped

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      let cell = sender as? UITableViewCell

    }
  }
}
```

"Sender" Here is the cell that caused the segue to happen

Let the compiler know the **sender** is a **UITableViewCell**

Using the Cell to Get an indexPath

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      let cell = sender as? UITableViewCell
      if let c = cell {
        let indexPath = tableView.indexPathForCell(c)
      }
    }
  }
}
```

This function returns an index path if you give it a cell

we have to unwrap first because cell is optional

Using the indexPath to Get a Product Name

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      let cell = sender as? UITableViewCell
      if let c = cell {
        let indexPath = tableView.indexPathForCell(c)
        if let ip = indexPath {
          let productName = productNames?[ip.row]
        }
      }
    }
  }
}
```

The index path that's returned is also an optional

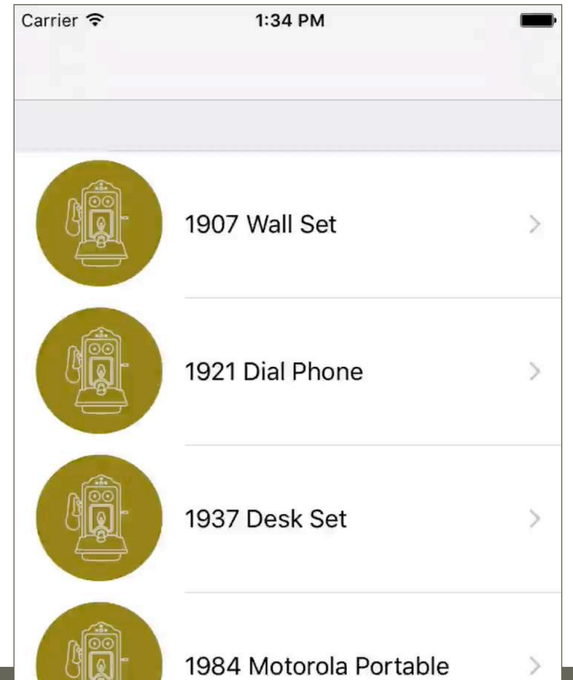
Use the index path to get the correct item from the array

Send the Name to the ProductViewController

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      let cell = sender as? UITableViewCell
      if let c = cell {
        let indexPath = tableView.indexPathForCell(c)
        if let ip = indexPath {
          let productName = productNames?[ip.row]
          productVC?.productName = productName
        }
      }
    }
  }
}
```

Set the **productName** for the product view controller



Problem: This Is a Lot of Messy Nested Code

ProductsTableViewController.swift

```
...
        let cell = sender as? UITableViewCell
        if let c = cell {
          let indexPath = tableView.indexPathForCell(c)
          if let ip = indexPath {
            let productName = productNames?[ip.row]
            productVC?.productName = productName
          }
        }
    }
  }
}
```

Ambiguous variable names

Lots of code block nesting

Problem: This Is a Lot of Messy Nested Code

ProductsTableViewController.swift

```
...
        let cell = sender as? UITableViewCell
        if let c = cell {
          let indexPath = tableView.indexPathForCell(c)
          if let ip = indexPath {
            let productName = productNames?[ip.row]
            productVC?.productName = productName
          }
        }
    }
  }
}
```

Ambiguous variable names

Lots of code block nesting

Solution 1: Reuse Variable Names in if let

It's fine to use the same name to unwrap the optional variable.

ProductsTableViewController.swift

```
...
        let cell = sender as? UITableViewCell
        if let cell = cell {
          let indexPath = tableView.indexPathForCell(cell)
          if let indexPath = indexPath {
            let productName = productNames?[indexPath.row]
            productVC?.productName = productName
          }
        }
    }
  }
}
```

These are the old optionals

These are the new unwrapped values

Solution 2: Unwrap and Set on the Same Line

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      if let cell = sender as? UITableViewCell {
        let indexPath = tableView.indexPathForCell(cell)
        if let indexPath = indexPath {
          let productName = productNames?[indexPath.row]
          productVC?.productName = productName
        }
      }
    }
  }
}
```

Get a copy of the cell and unwrap it in the same line

Before

```
let cell = sender as? UITableViewCell
if let cell = cell {
  ...
}
```

Refactor the indexPath Unwrapping to 1 Line

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      if let cell = sender as? UITableViewCell {
        if let indexPath = tableView.indexPathForCell(cell) {
          let productName = productNames?[indexPath.row]
          productVC?.productName = productName
        }
      }
    }
  }
}
```

Get a copy of the indexPath and unwrap it in the same line

Before

```
let indexPath = tableView.indexPathForCell(cell)
if let indexPath = indexPath {
  ...
}
```

Refactor Setting the Product Name to 1 Line

ProductsTableViewController.swift

```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      if let cell = sender as? UITableViewCell {
        if let indexPath = tableView.indexPathForCell(cell) {
          productVC?.productName = productNames?[indexPath.row]
        }
      }
    }
  }
}
```

Look up the right product name and assign it in one line

Before

```
let productName = productNames?[indexPath.row]
productVC?.productName = productName
```

Using Guard to Clean Up if let Nesting

ProductsTableViewController.swift

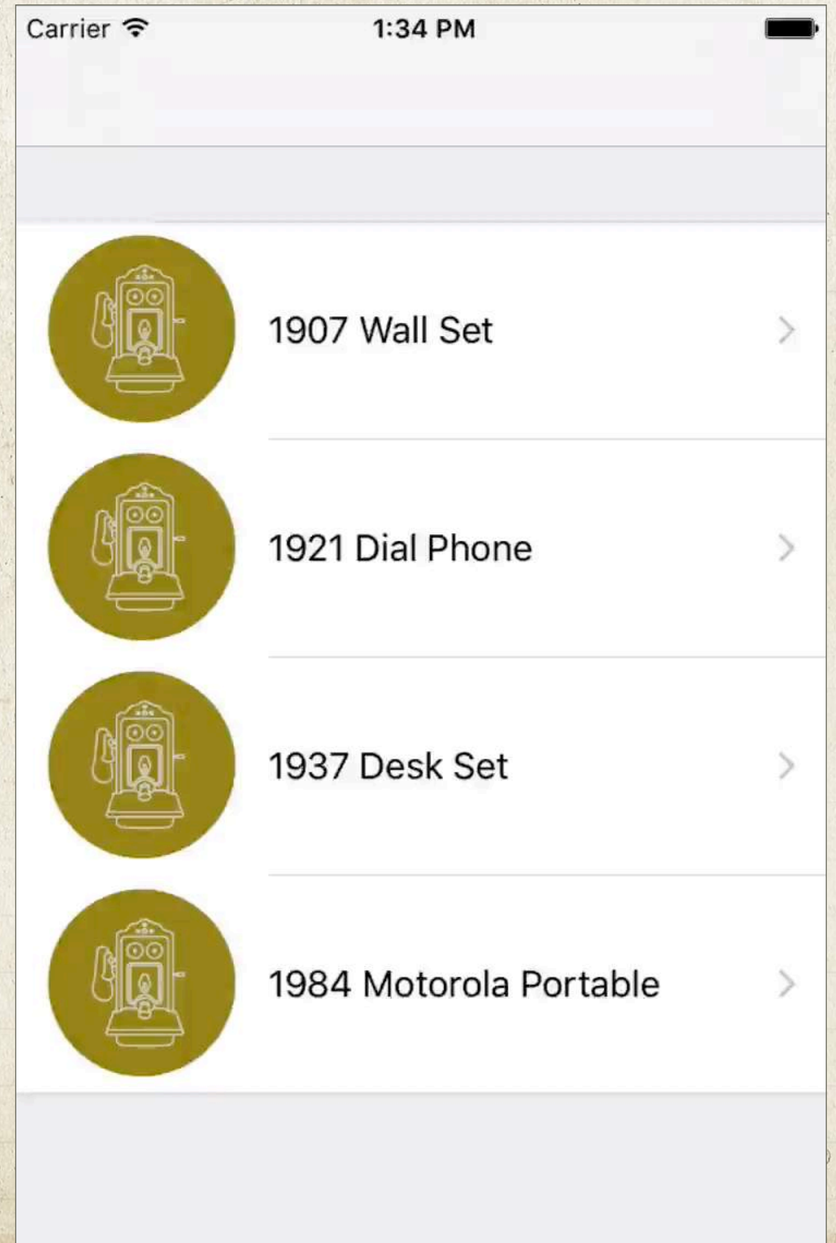
```
...

  override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == "ShowProduct" {
      let productVC = segue.destinationViewController as? ProductViewController

      guard let cell = sender as? UITableViewCell,
            let indexPath = tableView.indexPathForCell(cell) else {
        return
      }
      productVC?.productName = productNames?[indexPath.row]
    }
  }
}
```

stops running the function

This first checks if these values exist, and if they do it sets them to the **cell** and **indexPath** variables

Now safely use **indexPath**

Demo: Segue Passing Over Product Data



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