

iPhone App Development

CM420-09-2016-C

Lesson 5

Lecturer

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Git

[https://github.com/bryanttang/iOS-
Class-2016-9](https://github.com/bryanttang/iOS-Class-2016-9)

Summary

- NSArray
- UITableViewController
- Custom Cell
- NSDictionary

UIPickerView (Advance)

Image.....

.....Text



UIPickerView (Advance)

- Use Delegate to Setup

- (UIView *)pickerView:(UIPickerView *)pickerView viewForRow:(NSInteger)row
forComponent:(NSInteger)component reusingView:(UIView *)view;

Create and Return



NSArray

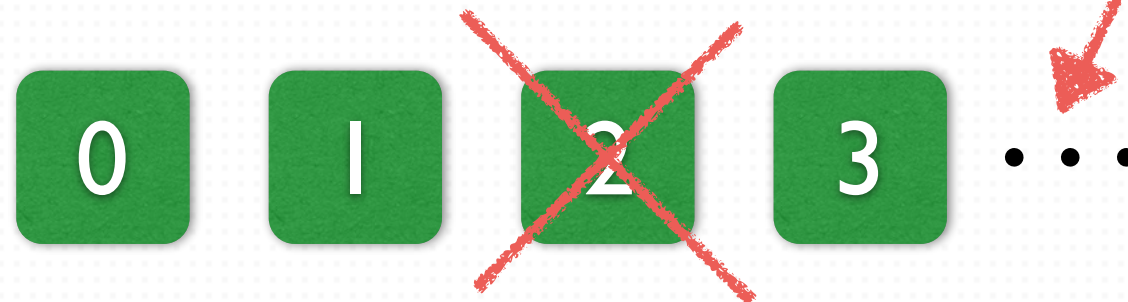
NSArray

- Store a set of objects
- Generate an ordered collection of objects
- Searching objects
- Compare object in difference array

NSArray

- Static (NSArray)
- Dynamic (NSMutableArray)

length = 4 (ever)



length = 4 (Temporary)

NSArray

- Declaration

```
NSArray *cars =@[ obj1, obj2, obj3];
```

```
NSArray *cars = [[NSArray alloc] initWithObjects:obj1,obj2,nil] ;
```

```
NSArray *cars = [[NSArray alloc] initWithArray: Array2];
```

NSArray

- **Example:**

```
NSArray *cars = @[@"Ferrari" , @"Audi", @"Chevrolet",@"Porsche"];
```

```
for (int i = 0 ; i < [cars count]; i++) {  
    NSLog(@"Car %d : %@", i,[cars objectAtIndex:i]);  
}
```

Result:

```
2014-04-28 21:55:41.372 Consumer_iPad[314:60b] Car 0 : Ferrari  
2014-04-28 21:55:41.374 Consumer_iPad[314:60b] Car 1 : Audi  
2014-04-28 21:55:41.376 Consumer_iPad[314:60b] Car 2 : Chevrolet  
2014-04-28 21:55:41.379 Consumer_iPad[314:60b] Car 3 : Porsche
```

NSMutableArray

- Declaration:

```
NSMutableArray *CDs = [[NSMutableArray alloc] init]; (*have to alloc first)
```

```
NSMutableArray *CDs = [[NSMutableArray alloc] initWithObjects: @"a", @"b"];
```

- Example:

```
[CDs addObject : @"周杰倫專輯"] ;
```

```
[CDs addObject : @"張學友專輯"] ;
```

```
[CDs addObject : @"張惠妹專輯"] ;
```

```
[CDs removeObject : @"張學友專輯"] ;
```

```
for (int i = 0 ; i < [CDs count]; i++) {  
    NSLog(@"CD %d : %@", i,[CDs objectAtIndex:i]);  
}
```

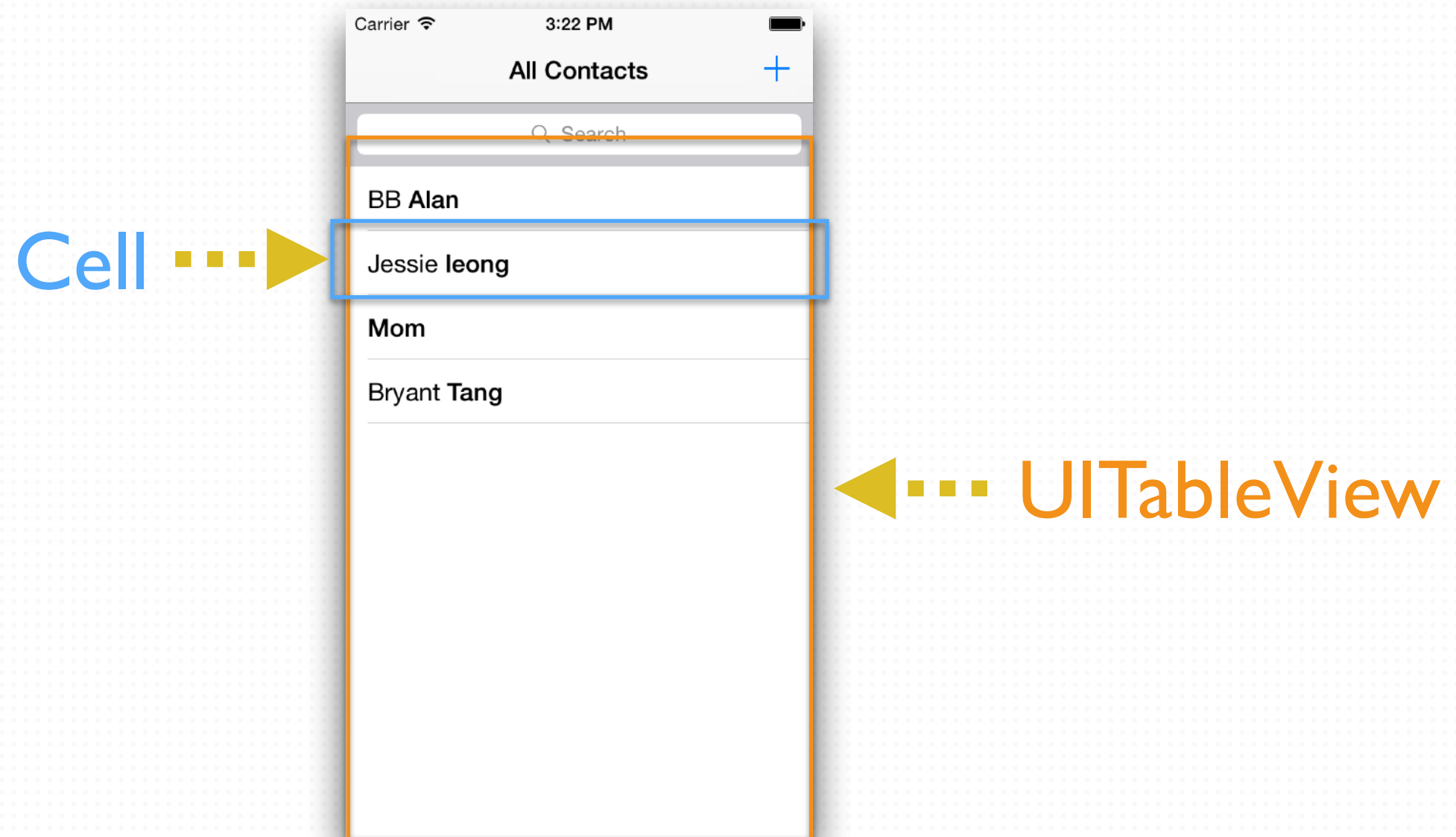
Exercise

- Use `NSArray` to be the source of `UIPicker`

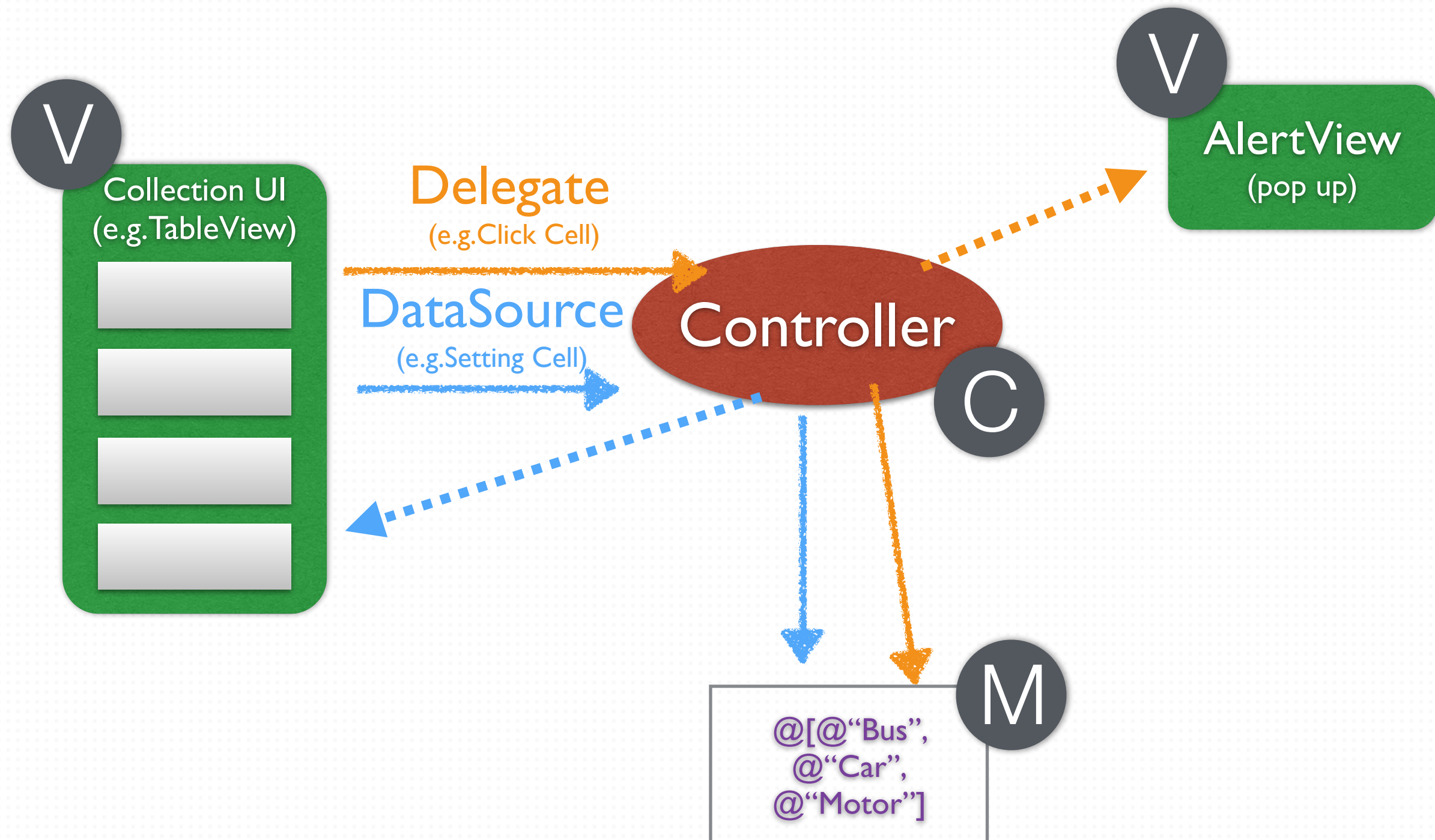
UITableViewController

UITableViewController

- Control TableView and Cells



MVC model



UITableViewController

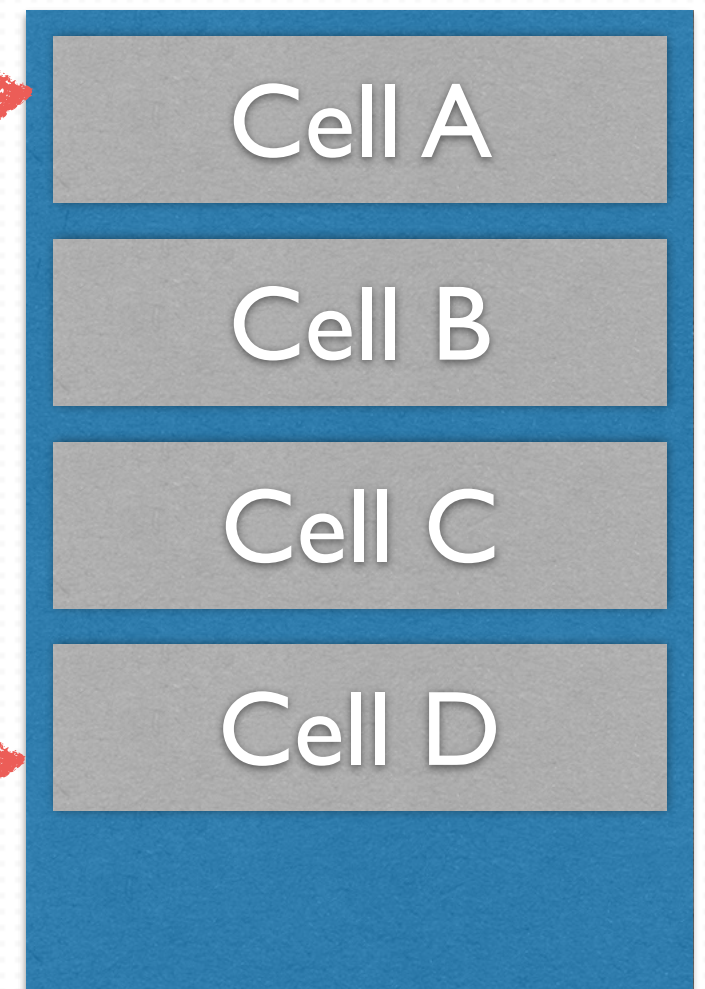
- DataSource

- ❖ Configuring a Table View
- ❖ Inserting or Deleting Table Rows
- ❖ Reordering Table Rows

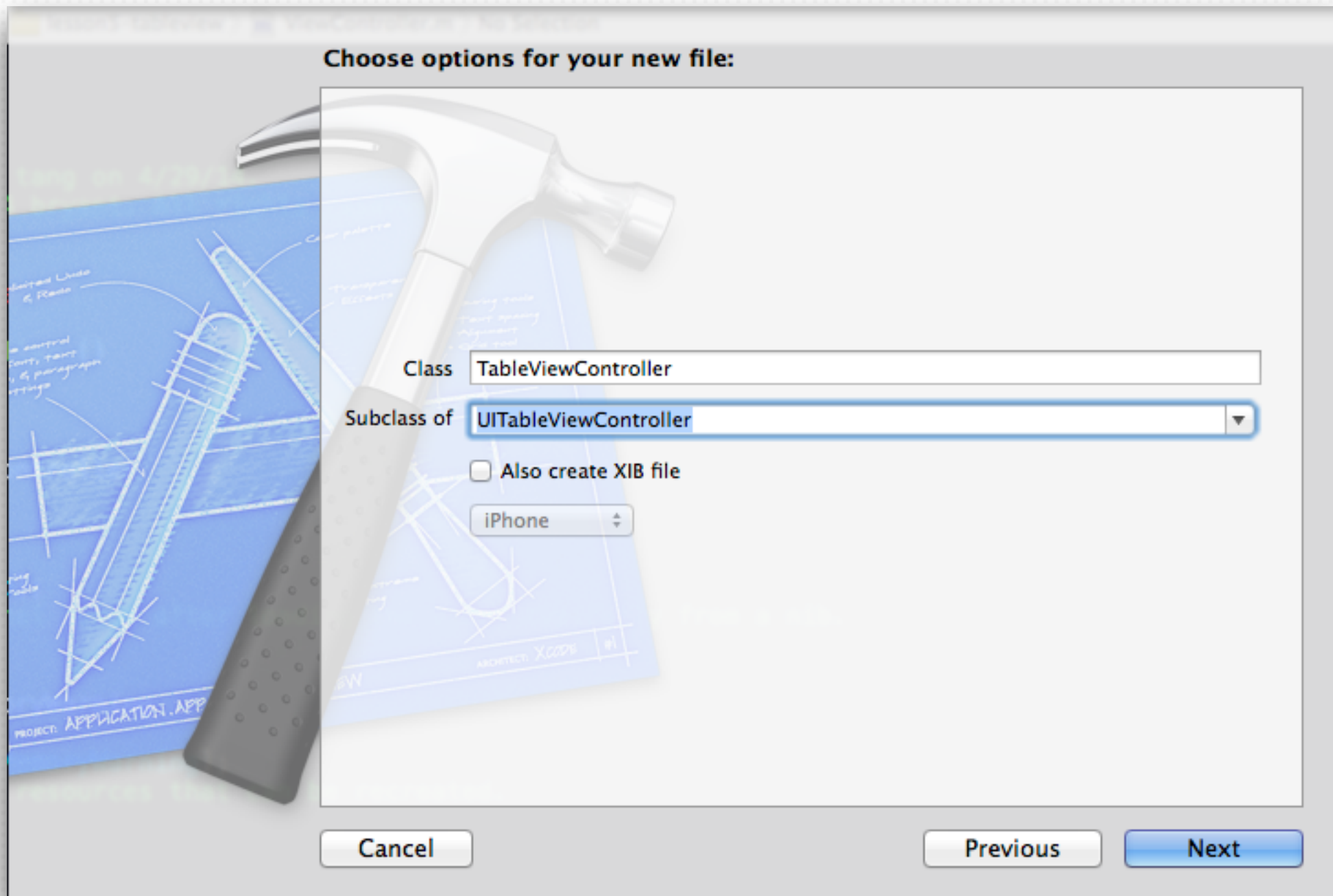
Controller

- Delegate

- ❖ Configuring Rows for the Table View
- ❖ Managing Selections
- ❖ Modifying the Header and Footer of Sections
- ❖ Managing Table View Highlighting

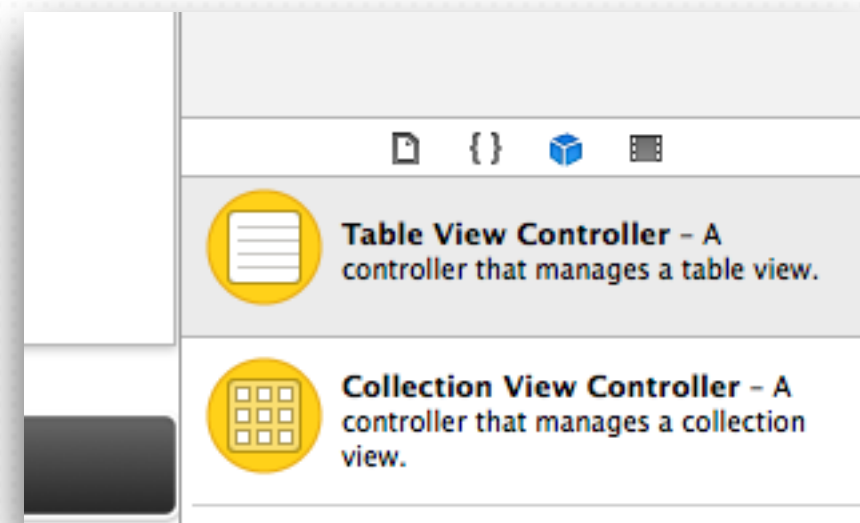
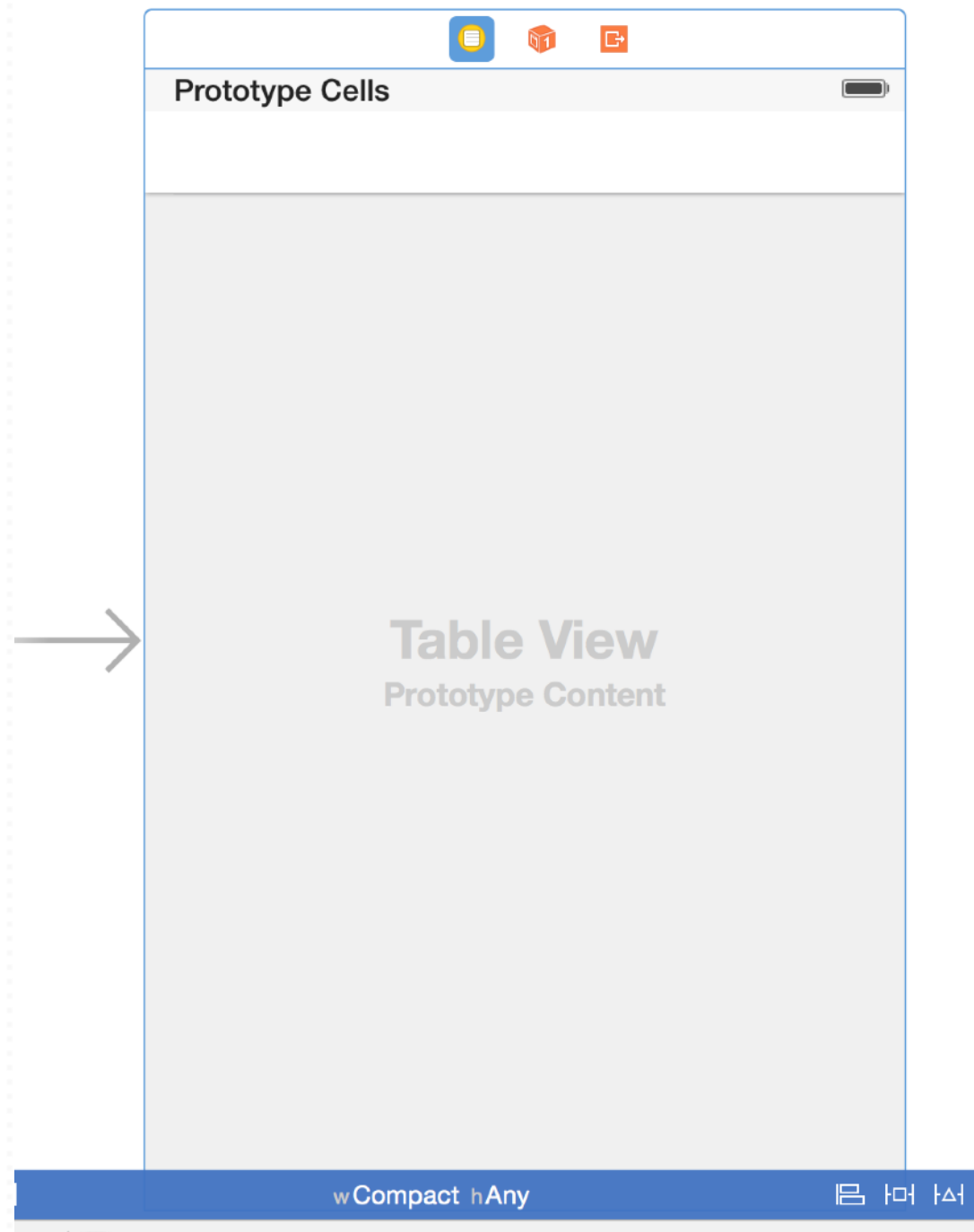


UITableViewController



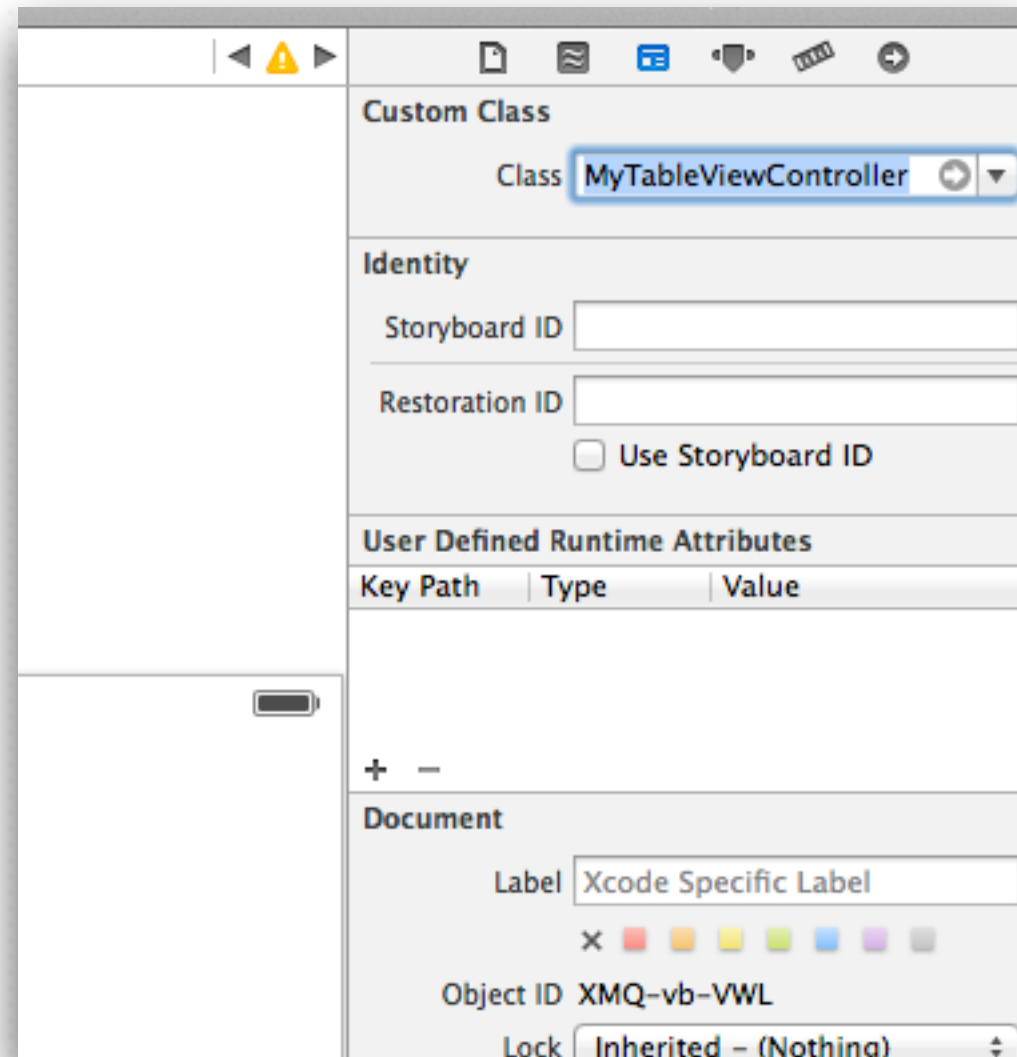
Create a UITableViewController

UITableViewController



Drag a Table View Controller on storyboard

UITableViewController



Change the **Custom Class** of the UITableViewController to the new class (ex. MyTableViewController)

UITableViewController

- The Basic setting functions:

- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView

(Asks the data source to return the number of sections in the table view)

- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSectionSection:
(NSInteger)section

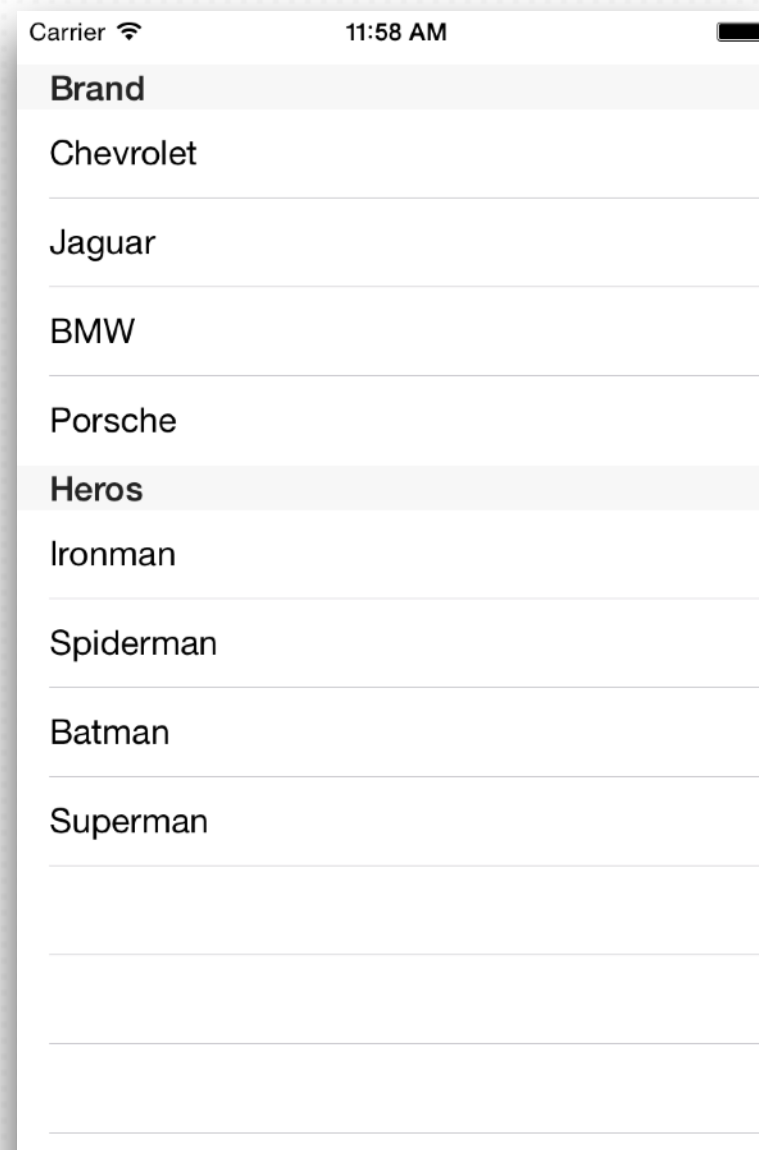
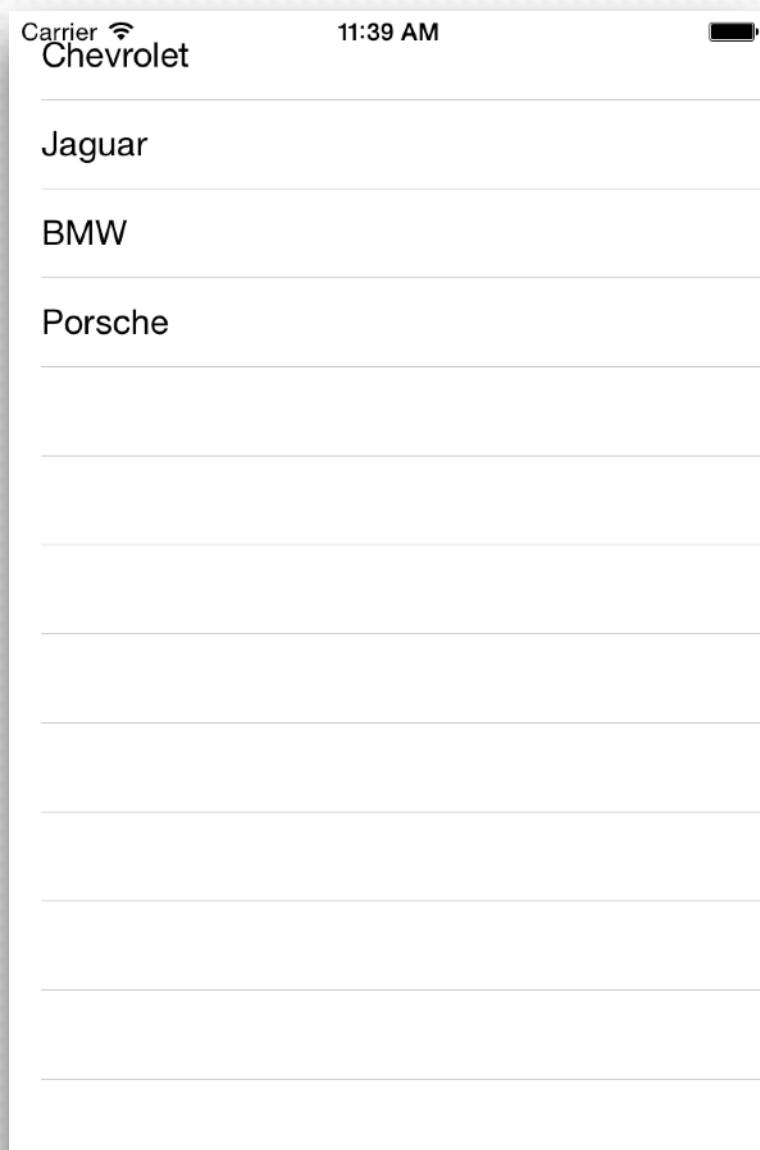
(Tells the data source to return the number of rows in a given section of a table view)

- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:
(NSIndexPath *)indexPath

(Asks the data source for a cell to insert in a particular location of the table view)

UITableViewController

- One section and Multi-section



UITableViewController

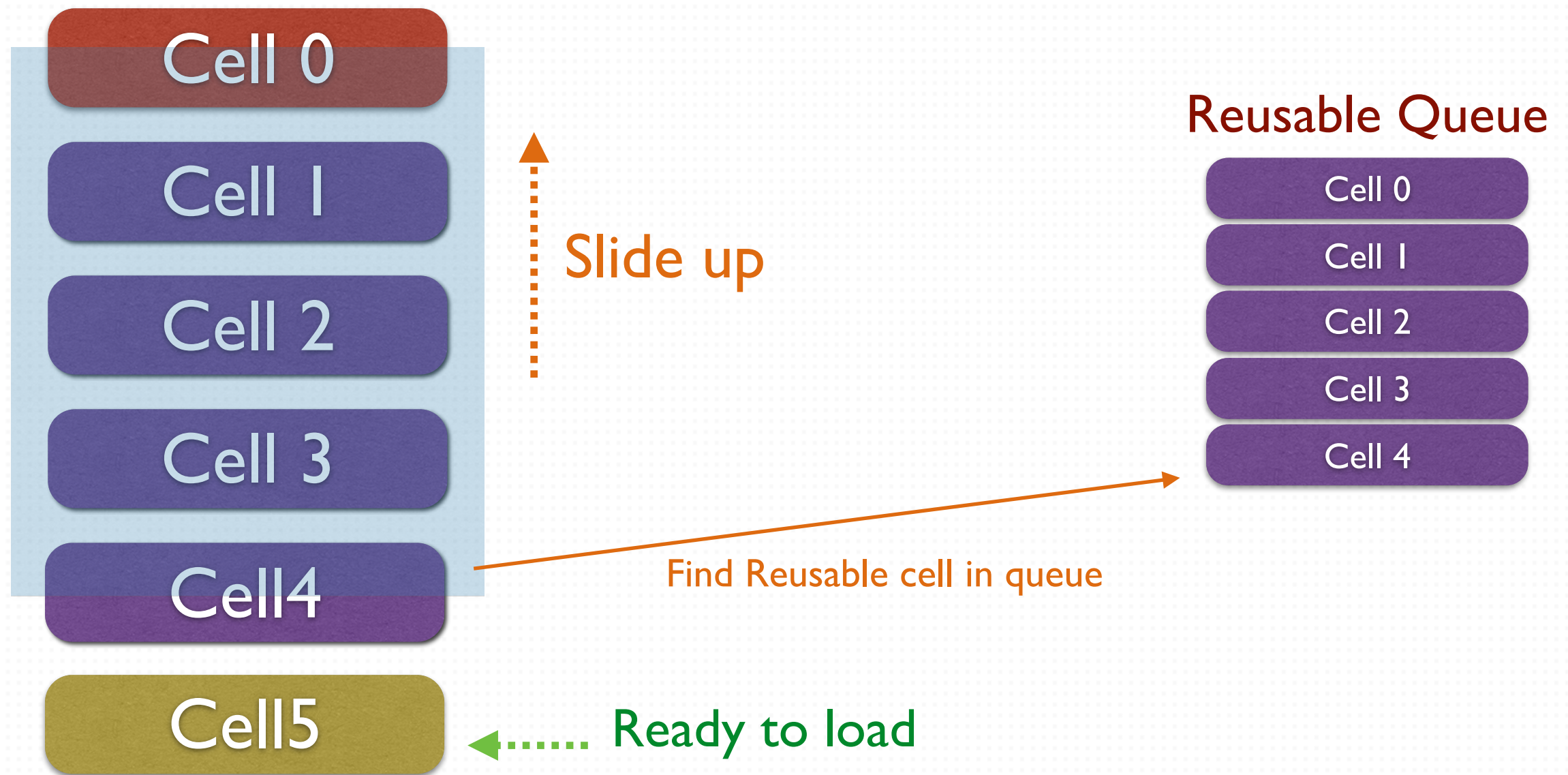
```
- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
{
    return 1;
}

- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
{
    return 4;
}

- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
{
    UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:@"Cell" forIndexPath:indexPath];
    if (cell == nil) {
        cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"Cell"];
    }
    cell.textLabel.text = @"Cell A";

    return cell;
}
```


UITableViewController



How the cell transition work

Default Cell Style

- Title
- Subtitle

Title

Basic

Title

Detail

Right

Title Detail

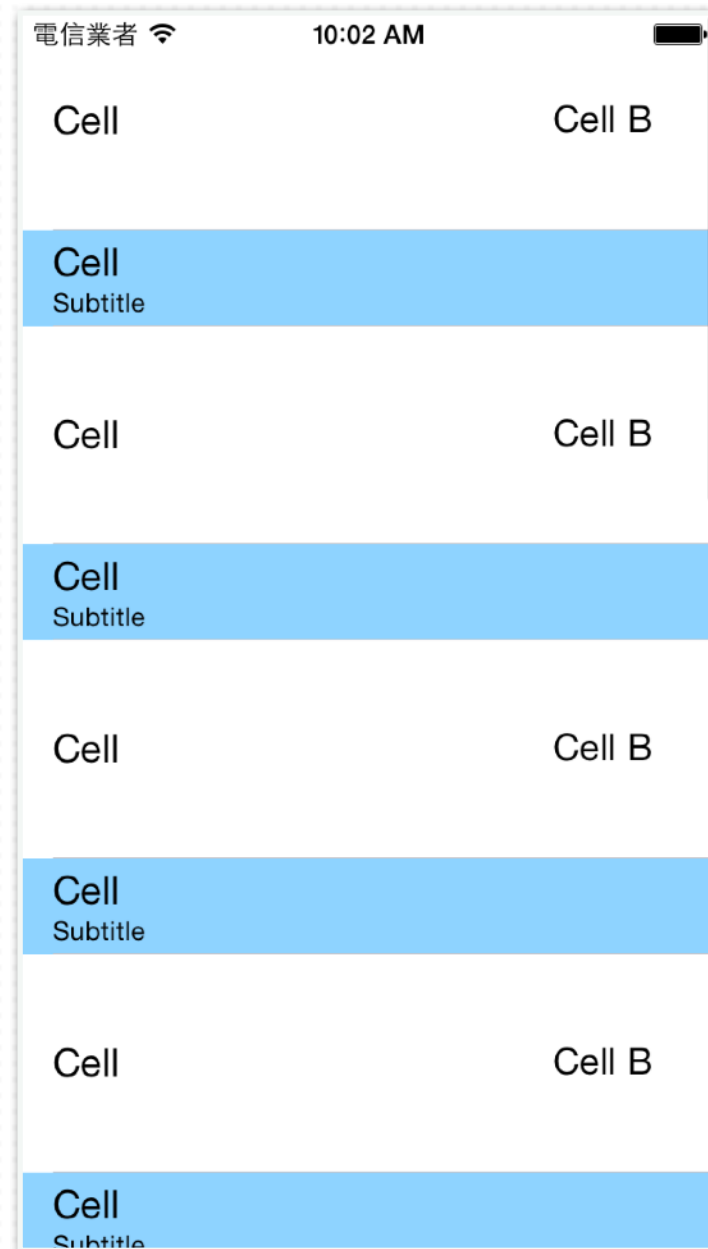
Left

Title

Subtitle

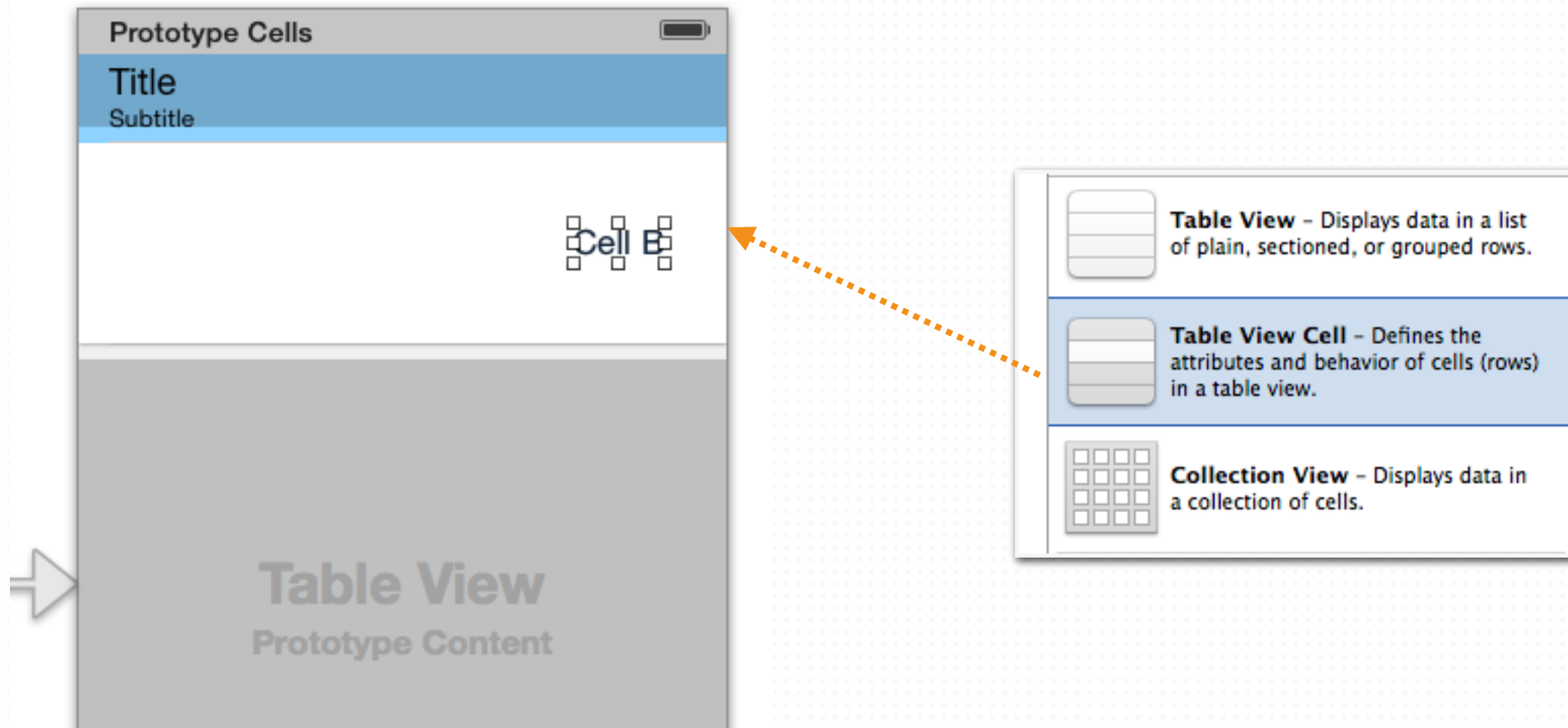
Subtitle

UITableViewController



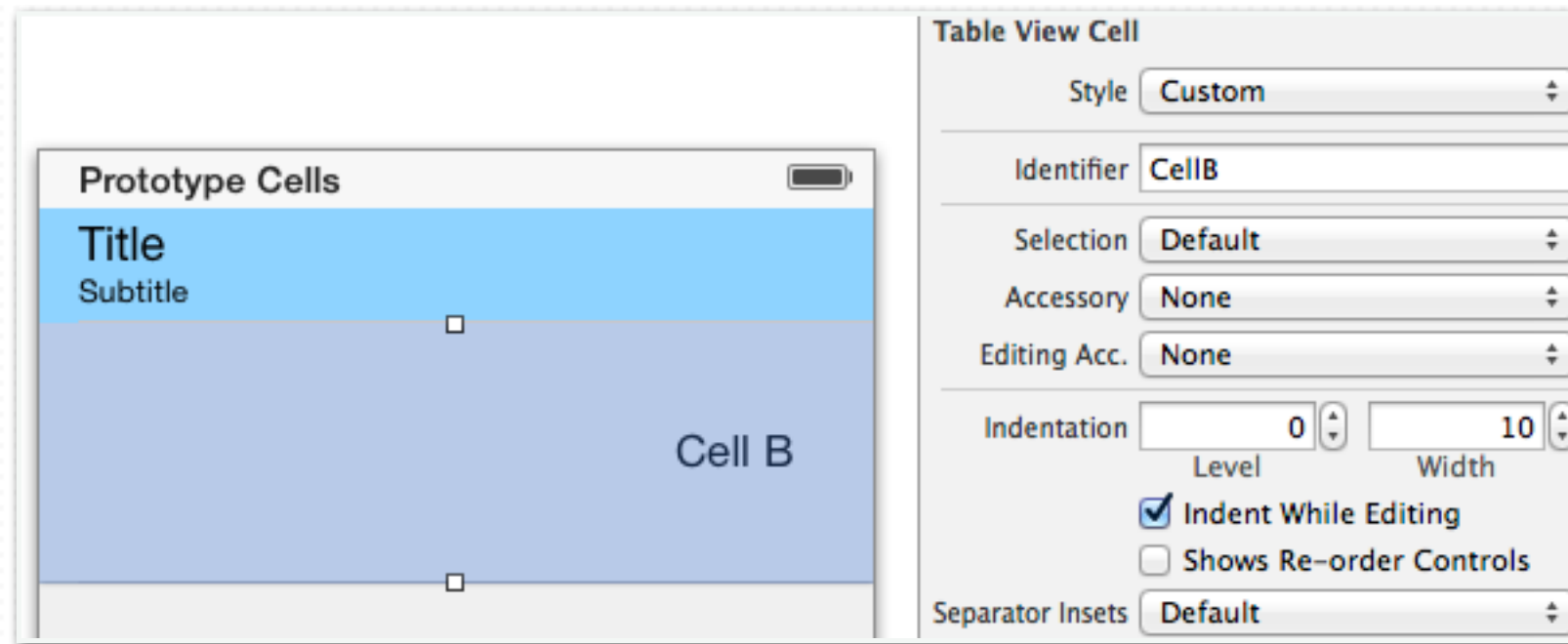
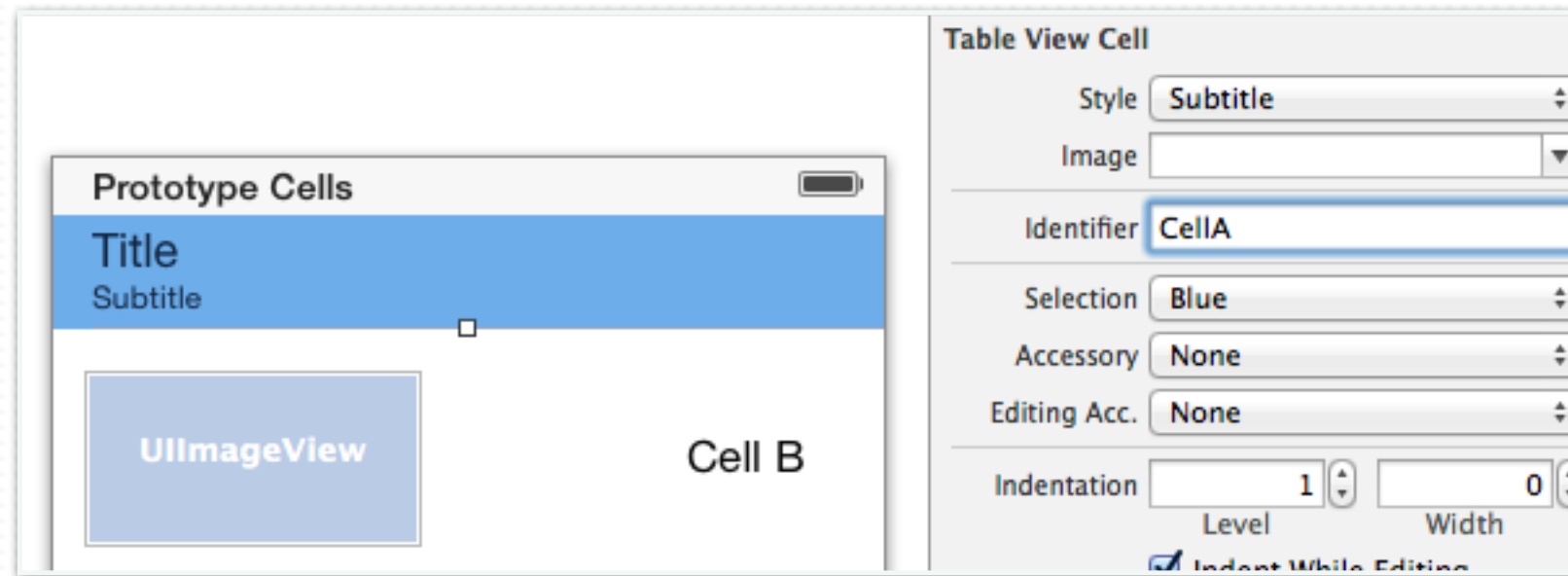
Use cell in different style

Custom Cell



Drag a Table View Cell on Table View

UITableViewController



Use difference cell style in a Table View

UITableViewController

```
- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
{
    NSString *identifier = @"";    //Define a identifier for difference cell style
    if (indexPath.row % 2 != 0) {    //(Single row use "CellB", Double row use "CellA")
        identifier = [NSString stringWithFormat:@"CellA"];
    }else{
        identifier = [NSString stringWithFormat:@"CellB"];
    }

    UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:identifier];

    if (cell == nil) {
        cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:identifier];
    }
    cell.textLabel.text = @"Cell";

    return cell;
}
```

Set up cell content

UITableViewController

- **Add the following function to UITableViewController**

```
- (CGFloat)tableView:(UITableView *)tableView  
heightForRowAtIndexPath:(NSIndexPath *)indexPath{  
  
    if (indexPath.row % 2 != 0) { //mod 2  
  
        return 44.0;  
    }else{  
  
        return 100.0;  
    }  
}
```

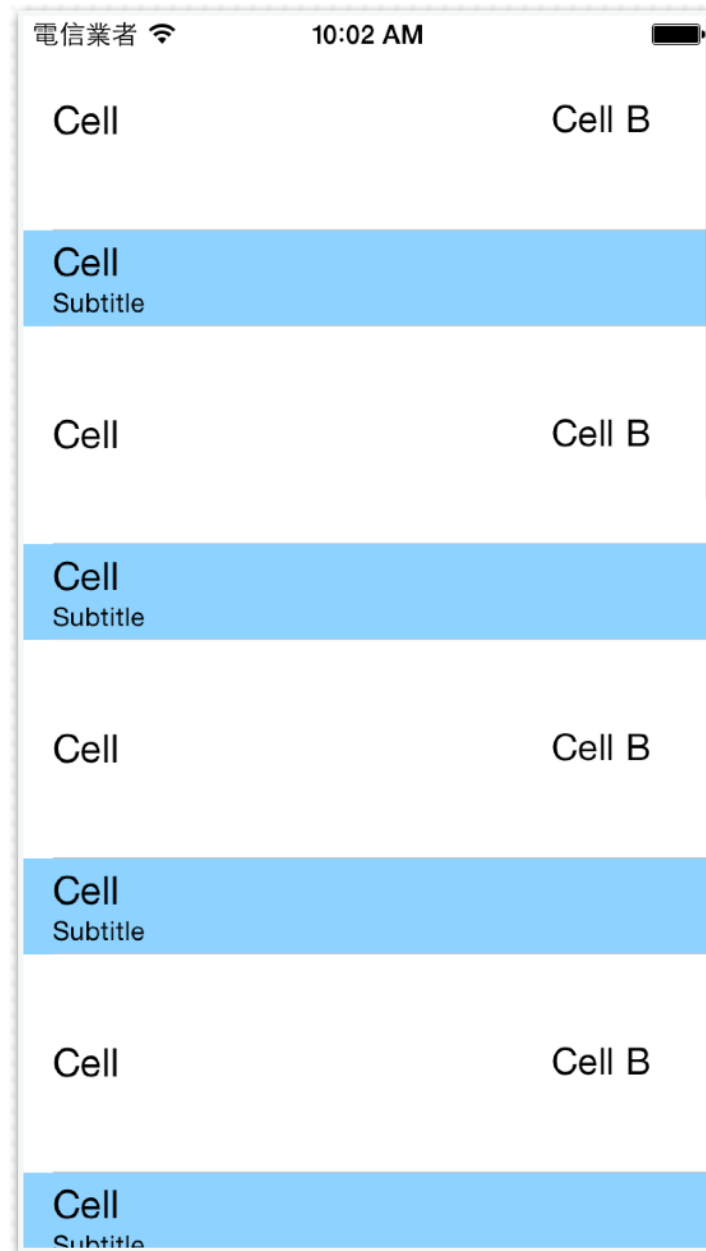
Assign different height of row with respect to indexPath

UITableViewController

- **Exercise:**

Change the Data Source from hardcode data to data set (NSArray)

UITableViewController

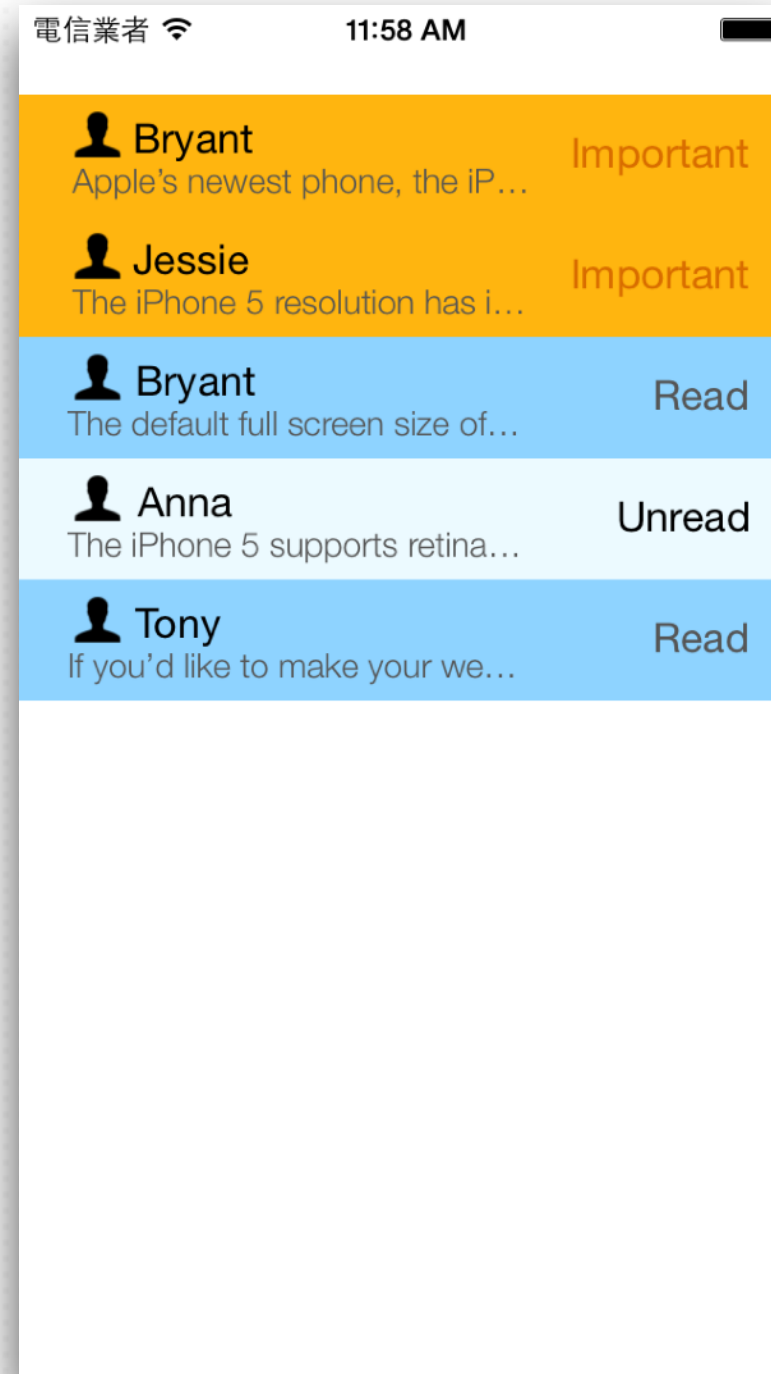


Use difference cell style in a Table View

Homework

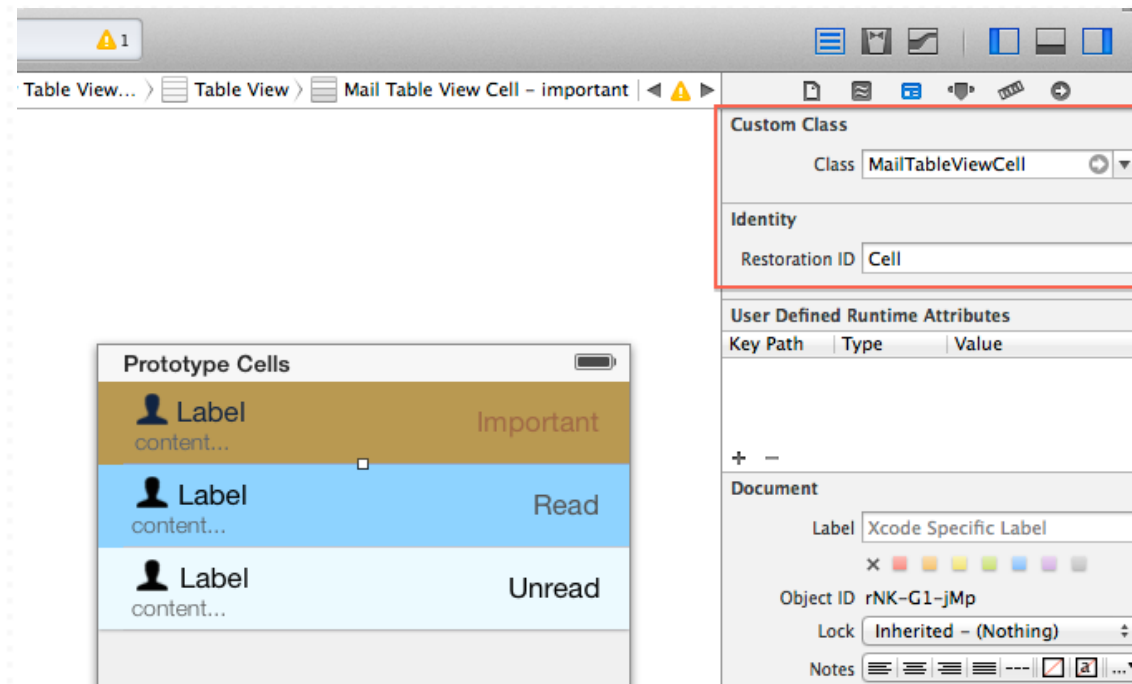
✓ Email List

- Custom Cell
- NSDictionary



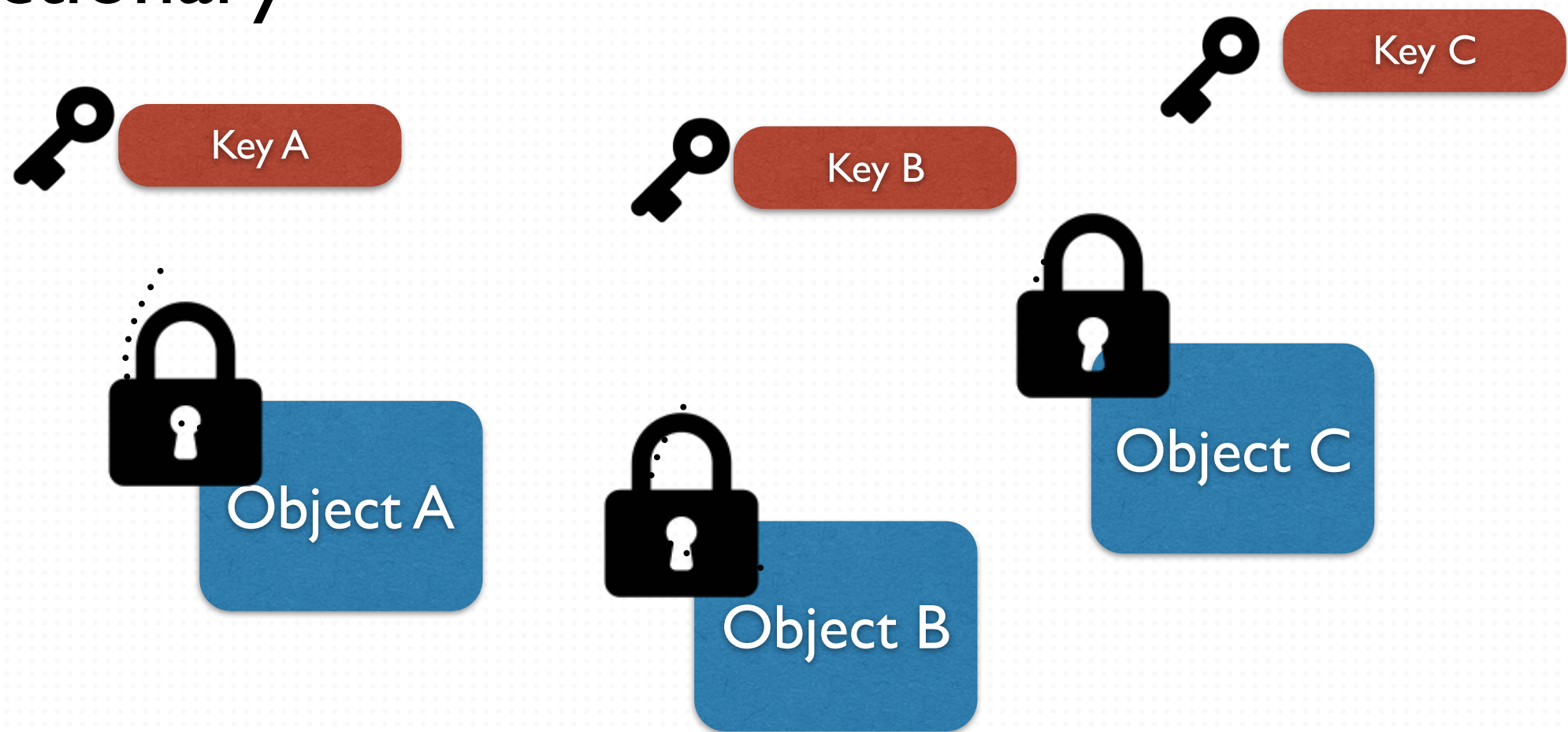
Custom cell

- Create new class, subclass of UITableViewCell
- Import the new class to storyboard



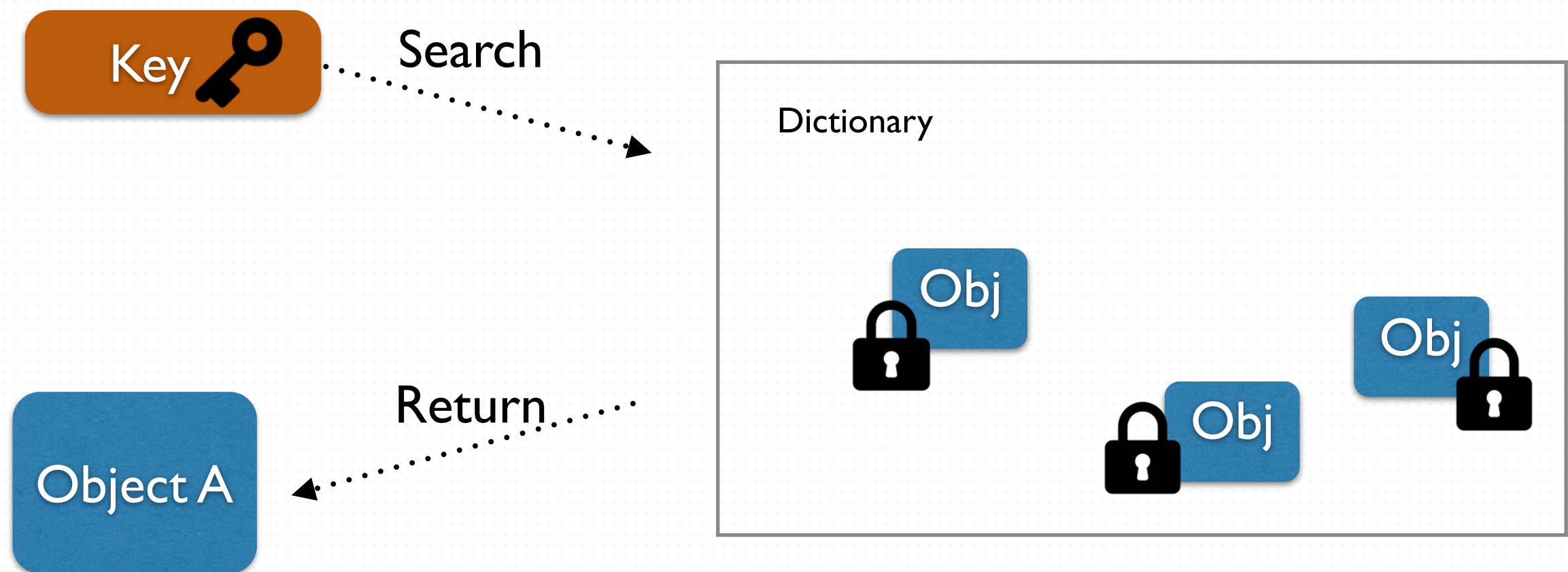
NSDictionary

NSDictionary



NSDictionary

- Find object in Dictionary



NSDictionary

- Create a NSDictionary with three objects

method 1:

```
NSDictionary *aDictionary = @{@"keyA : objectA, keyB : objectB, keyC : objectC};
```

method 2:

```
NSDictionary *aDictionary = [NSDictionary dictionaryWithObjects:@[objectA,  
objectB, objectC] forKeys:@[keyA, keyB, keyC]];
```

NSDictionary

- Get an **object** in dictionary by using a **key**

```
id object_get = [NSDictionary objectForKey: Key];
```