iPhone App Development

CM420-09-2016-C

Lesson 5

Lecturer

Bryant Tang

bryant.tang14mo@gmail.com

CPTTMLAB_B
pw: cpttm1234

Git

https://github.com/bryanttang/iOS-Class-2016-9

Summary

- NSArray
- UITableViewController
- Custom Cell
- NSDictionary

UIPickView (Advance)

Image

Text

UIPickView (Advance)

- Use Delegate to Setup

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

Create and Return

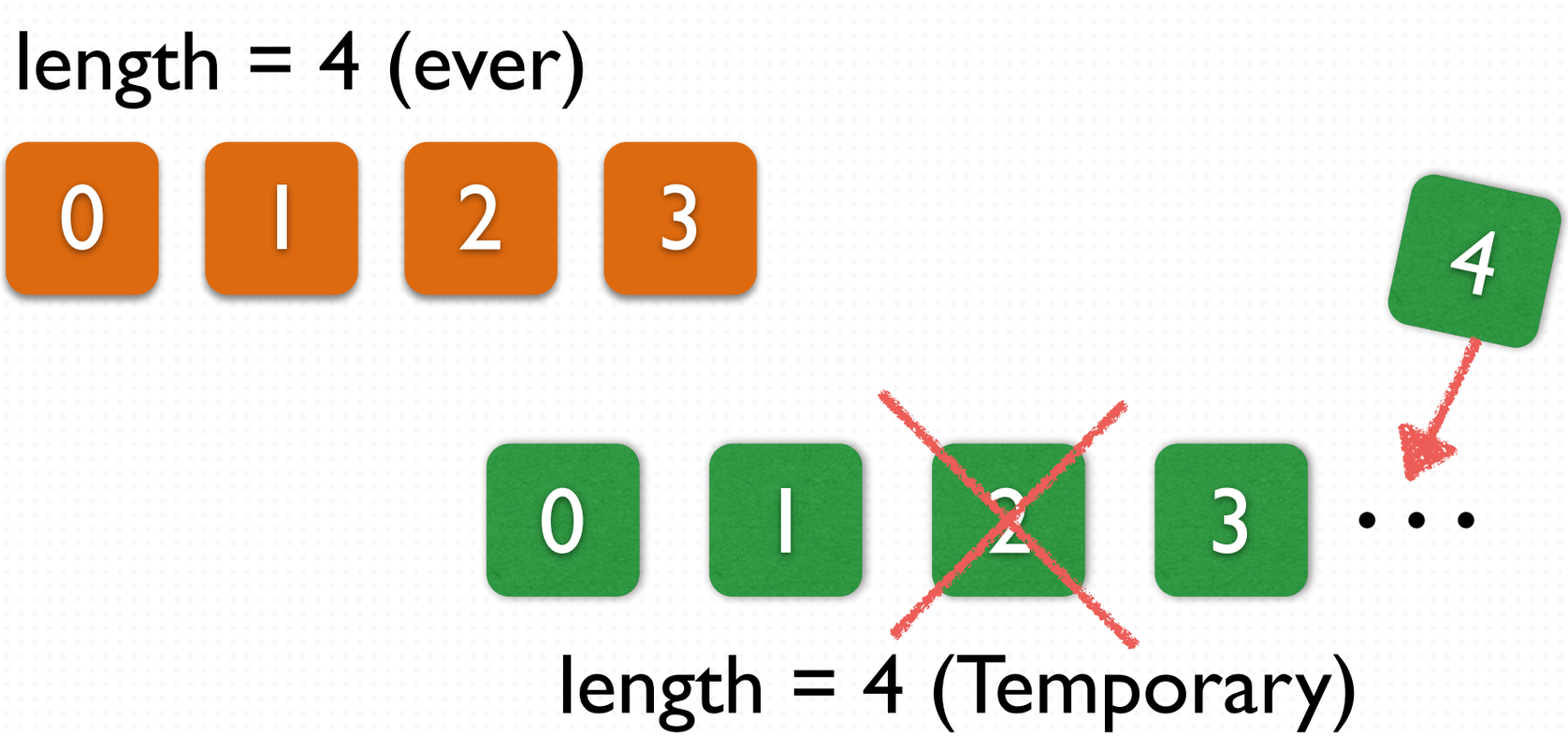
NSArray

NSArray

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

NSArray

- Static (NSArray)
- Dynamic (NSMutableArray)



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]);
    }
```

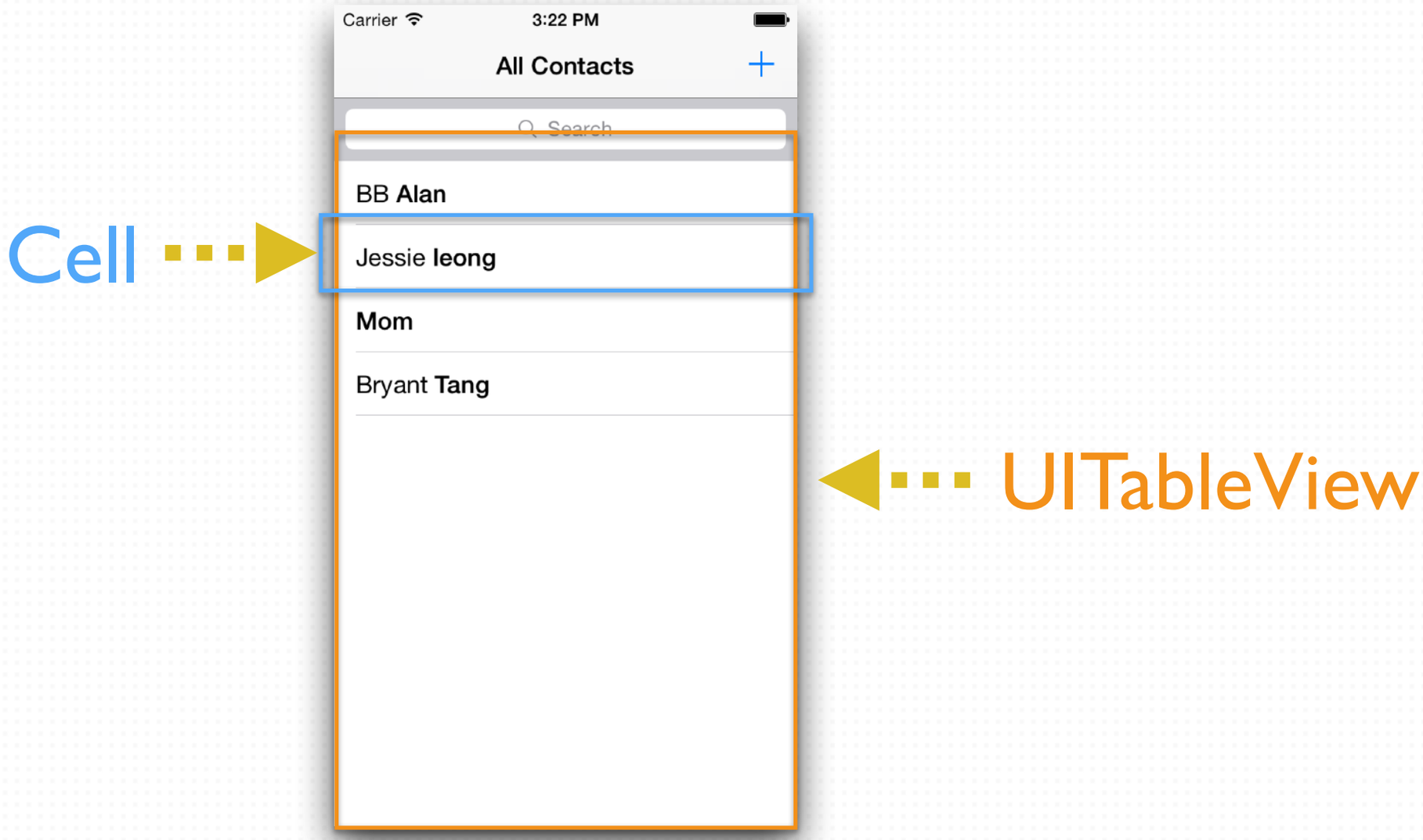
Exercise

- Use NSArray to be the source of UIPicker

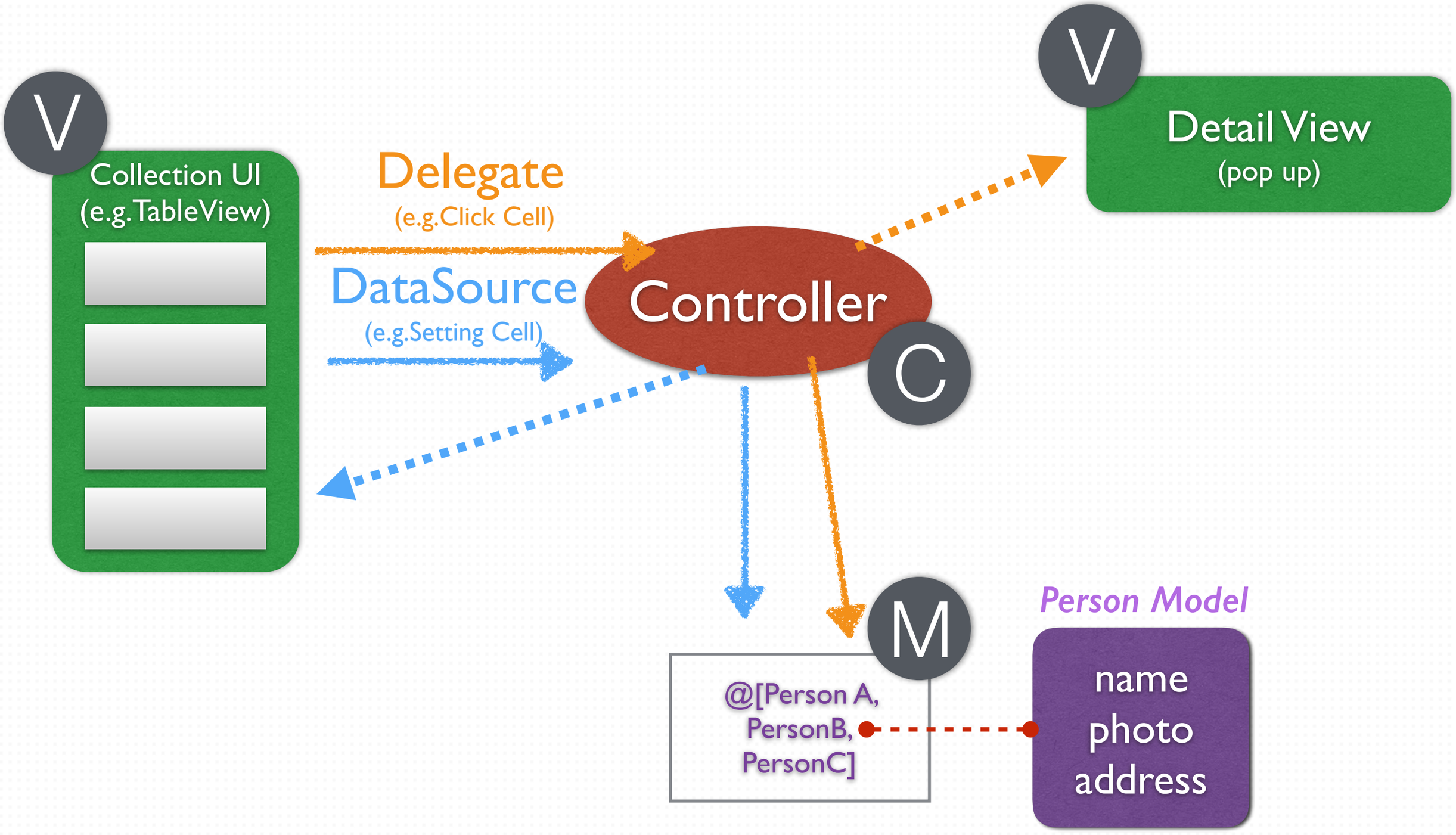
UITableViewController

UITableViewController

- Control TableView and Cells

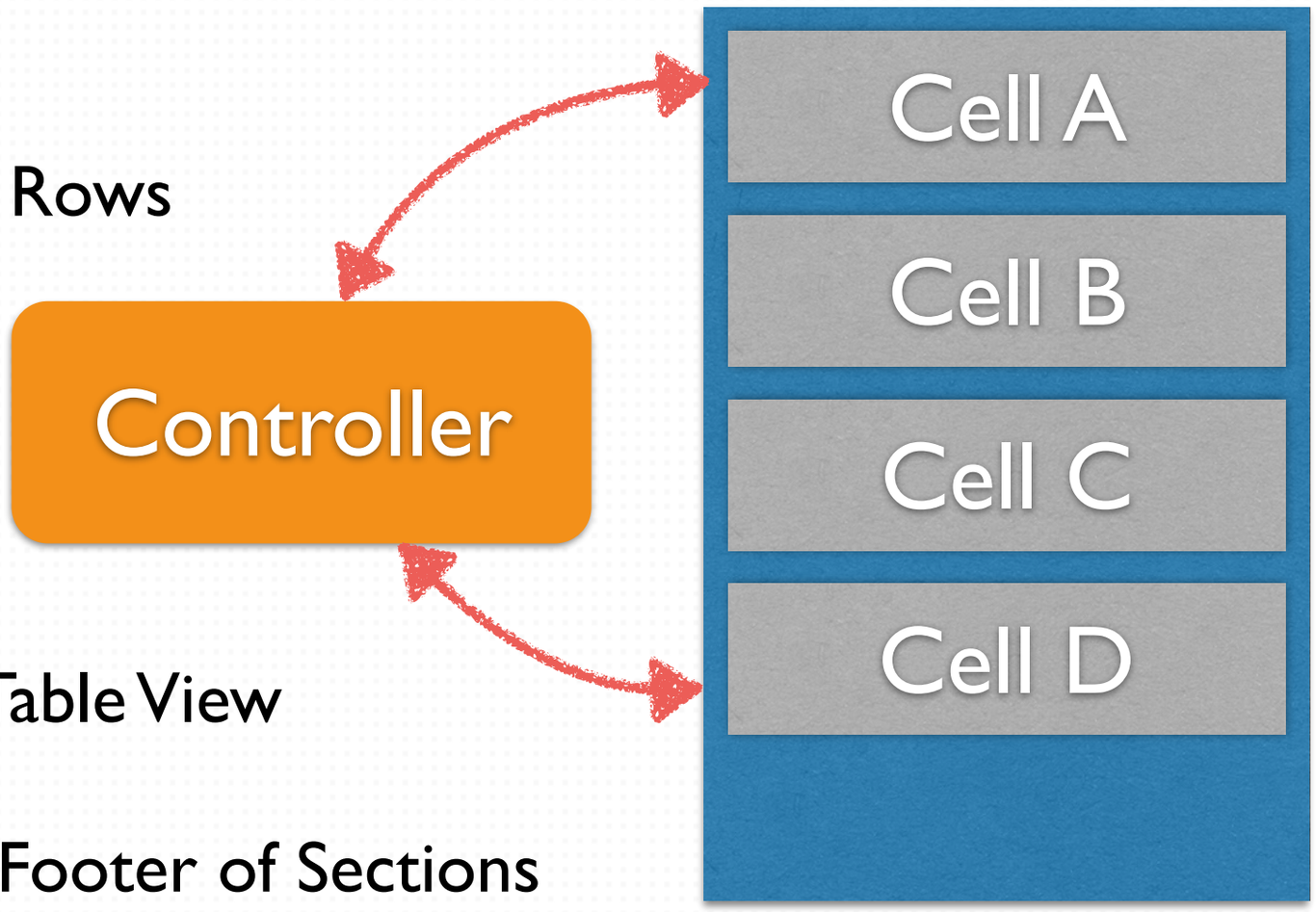


MVC model


V
Collection UI
(e.g.TableView)
Delegate
(e.g.Click Cell)
DataSource
(e.g.Setting Cell)
Controller
C
V
Detail View
(pop up)
M
@[Person A,
PersonB,
PersonC]
Person Model
name
photo
address

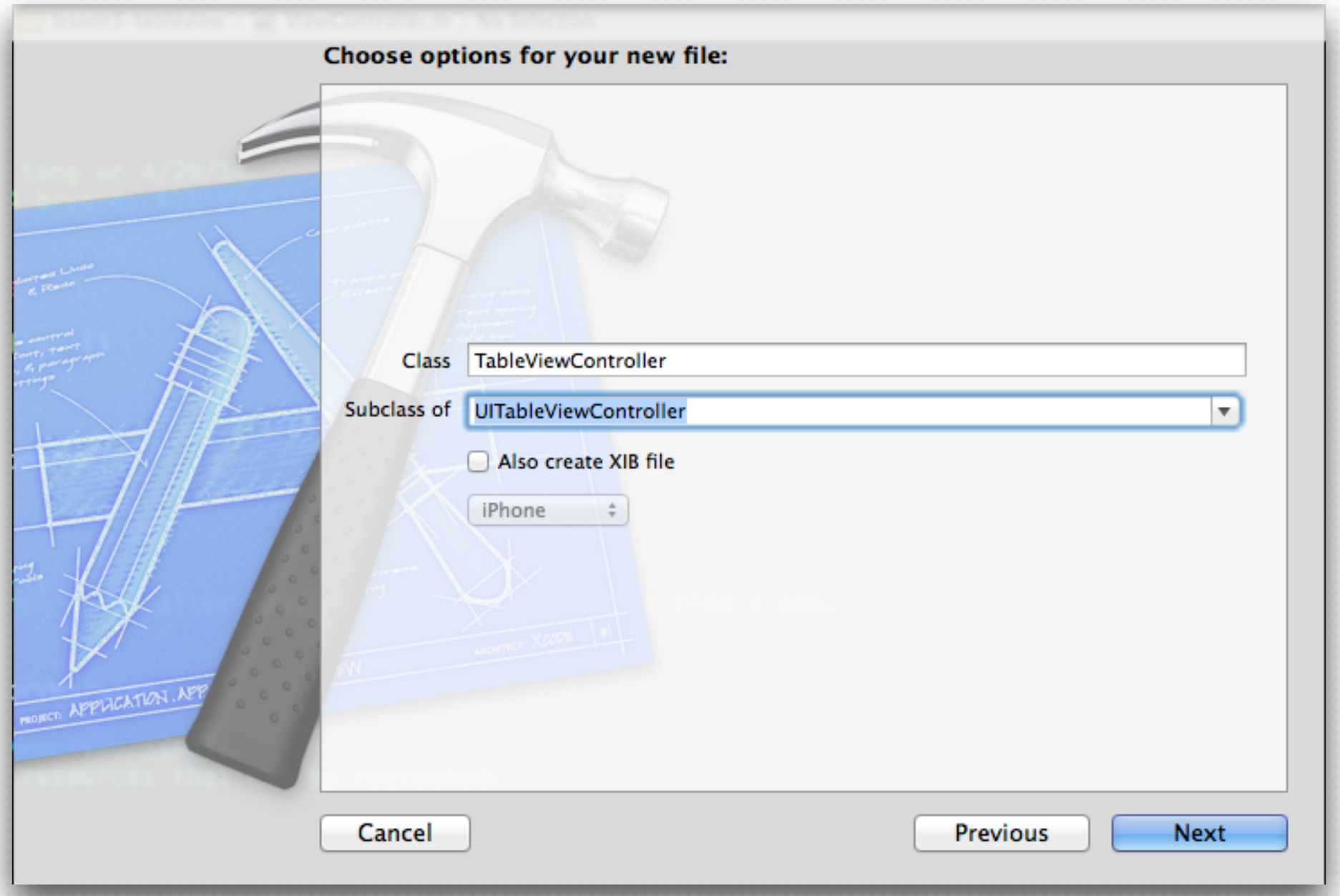
UITableViewController

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



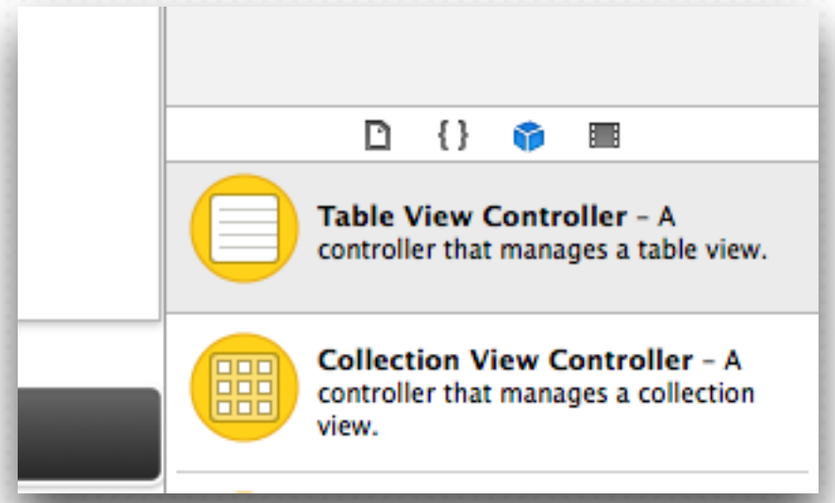
- Delegate
  - Configuring Rows for the Table View
  - Managing Selections
  - Modifying the Header and Footer of Sections
  - Managing Table View Highlighting

UITableViewController



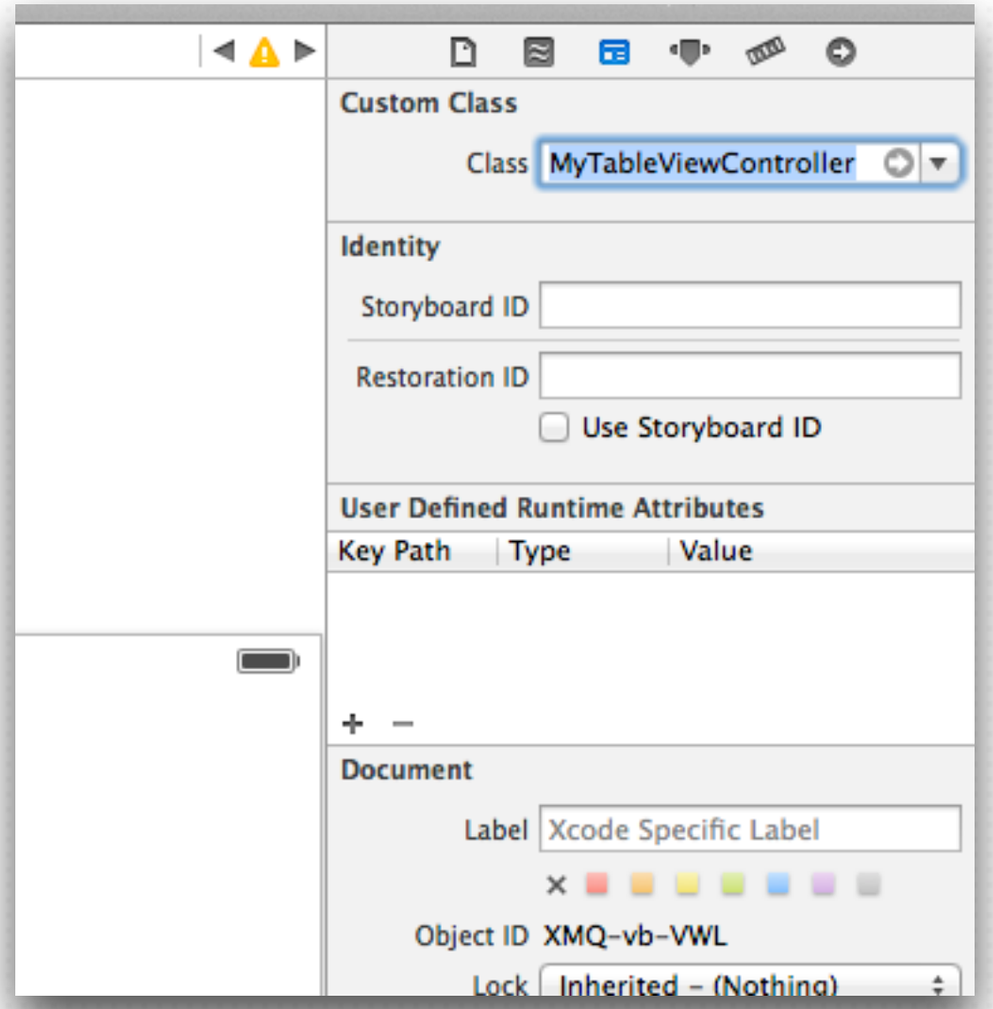
Create a UITableViewController

UITableViewController



Drag a Table View Controller on storyboard

UITableViewController



Change the Custom Class of the TableViewController 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 numberOfRowsInSection:(NSInteger)section

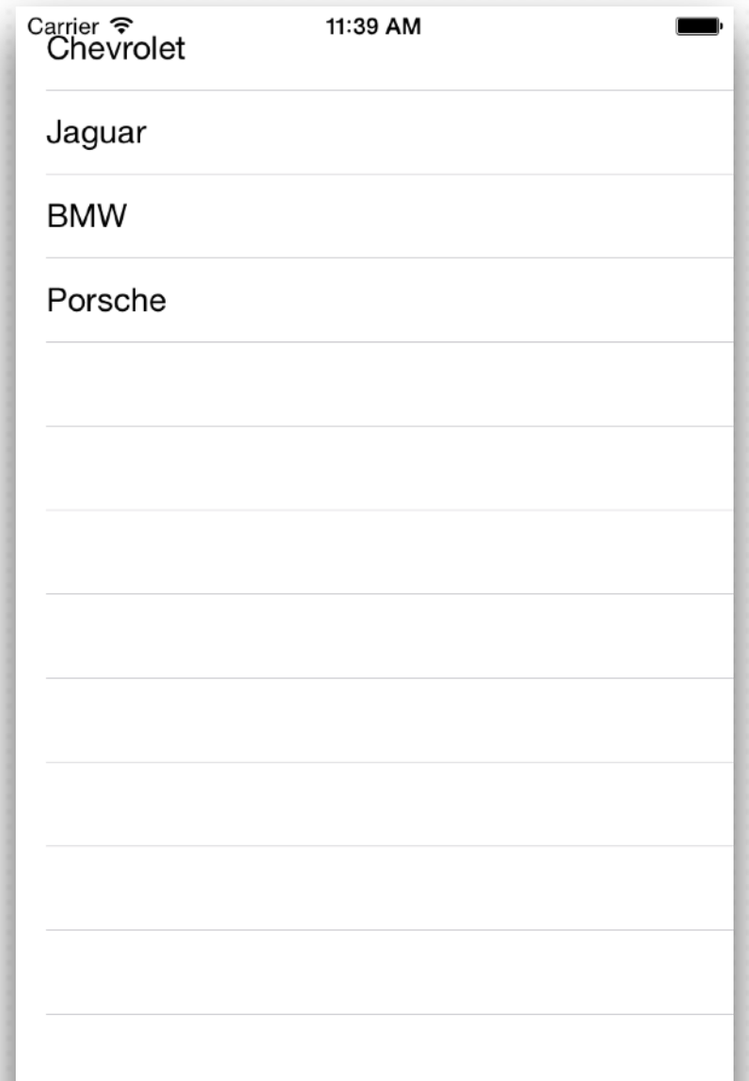
(Tells the data source to return the number of rows in a given section of a table view)

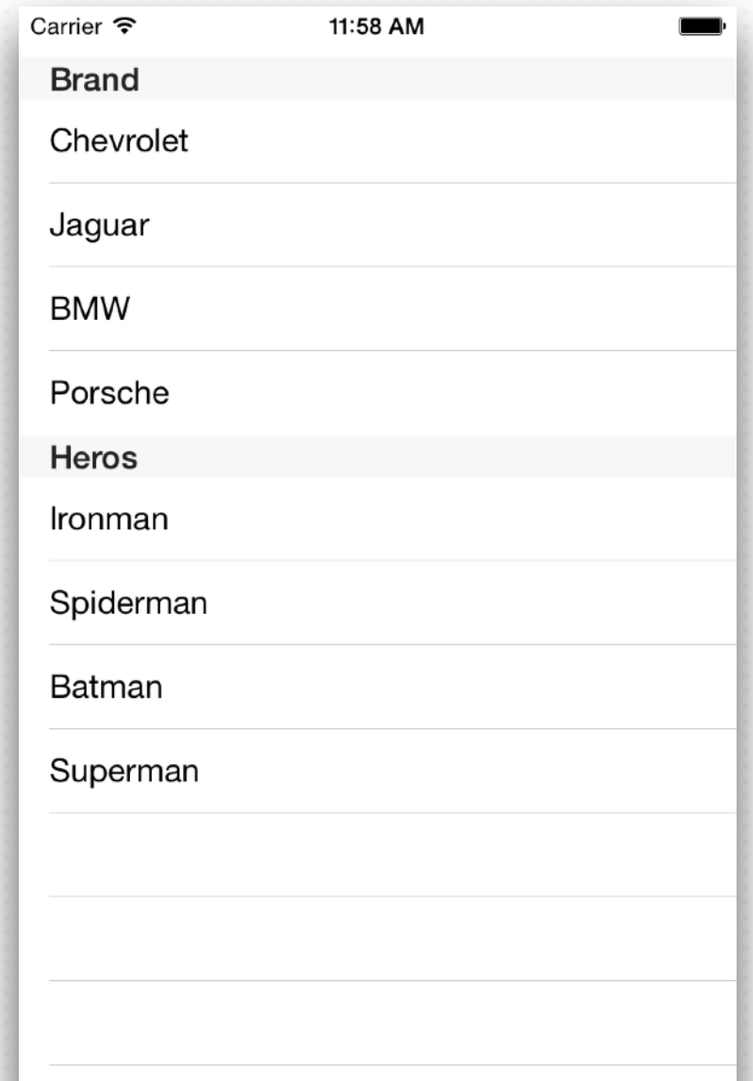
- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath

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

UITableViewController

- One section and Multi-section





UITableViewController

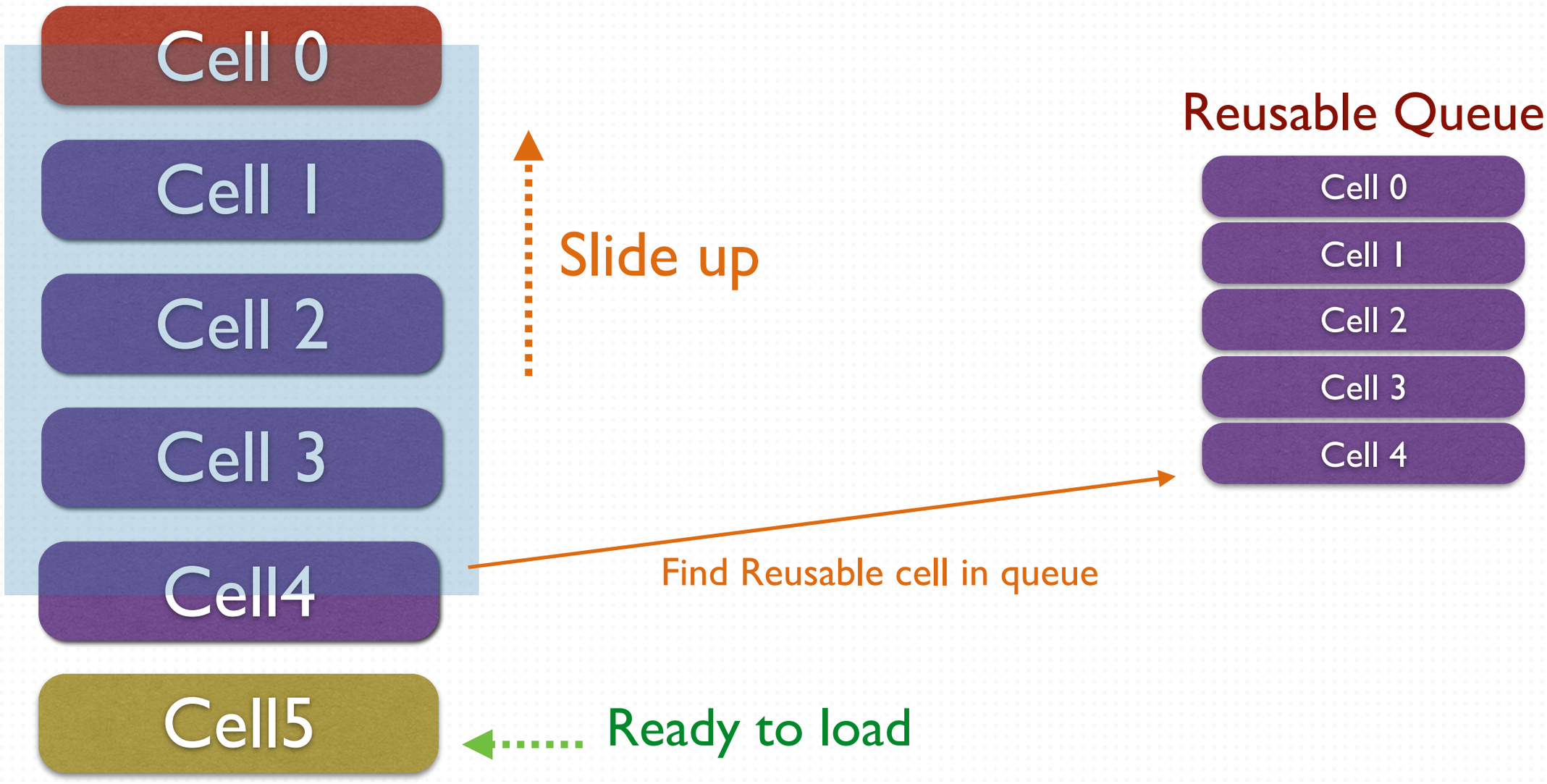
```
- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
{
    return 1;
}

- (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

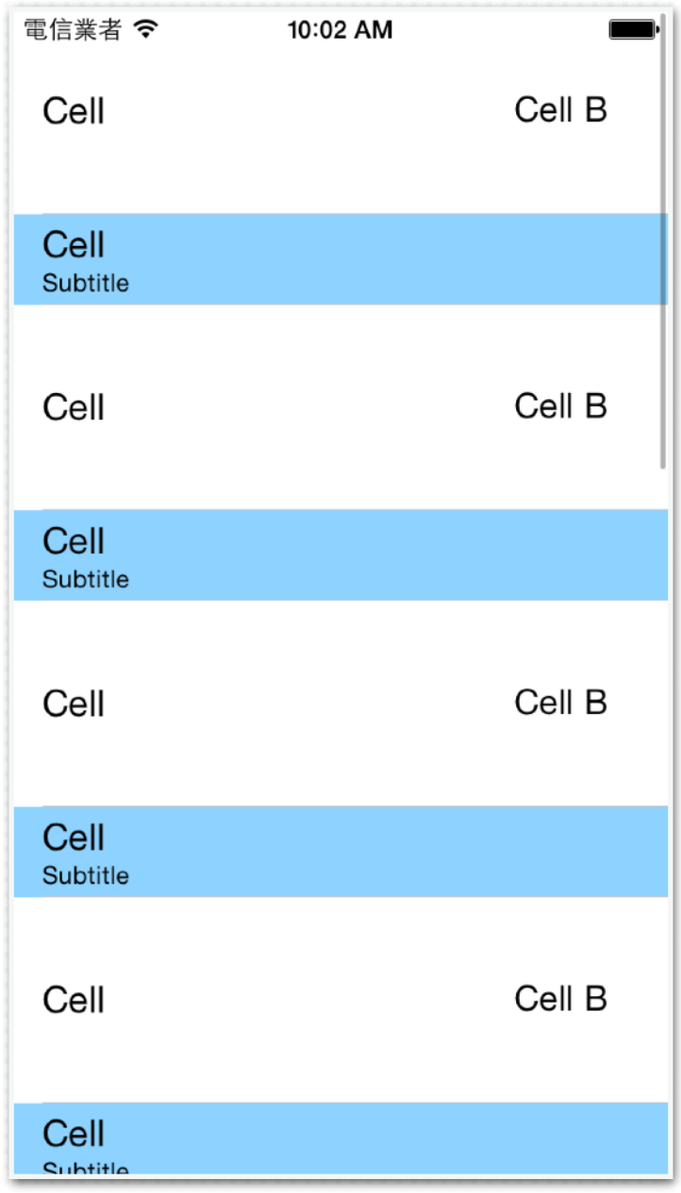


How the cell transition work

Default Cell Style

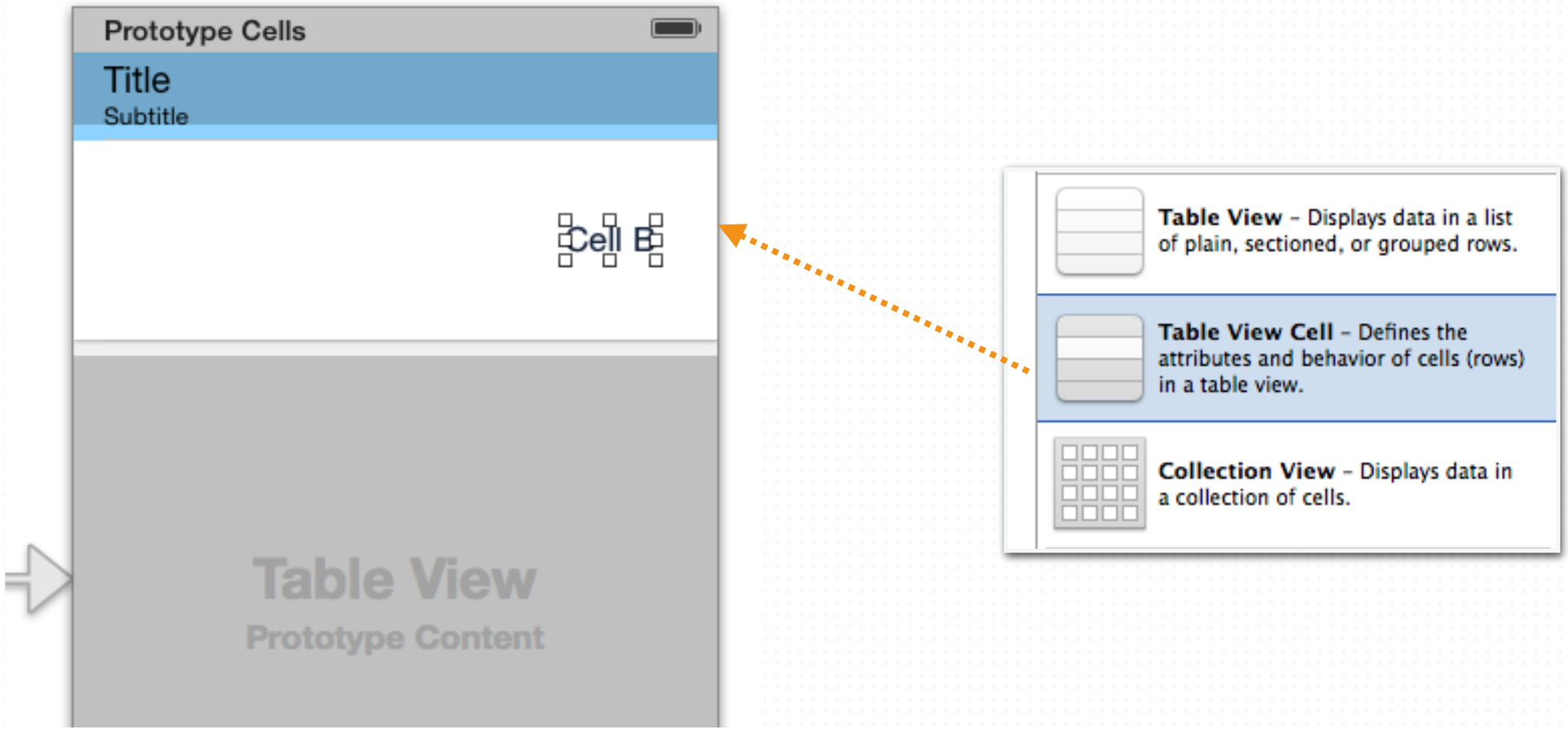
- Title
- Subtitle

UITableViewController



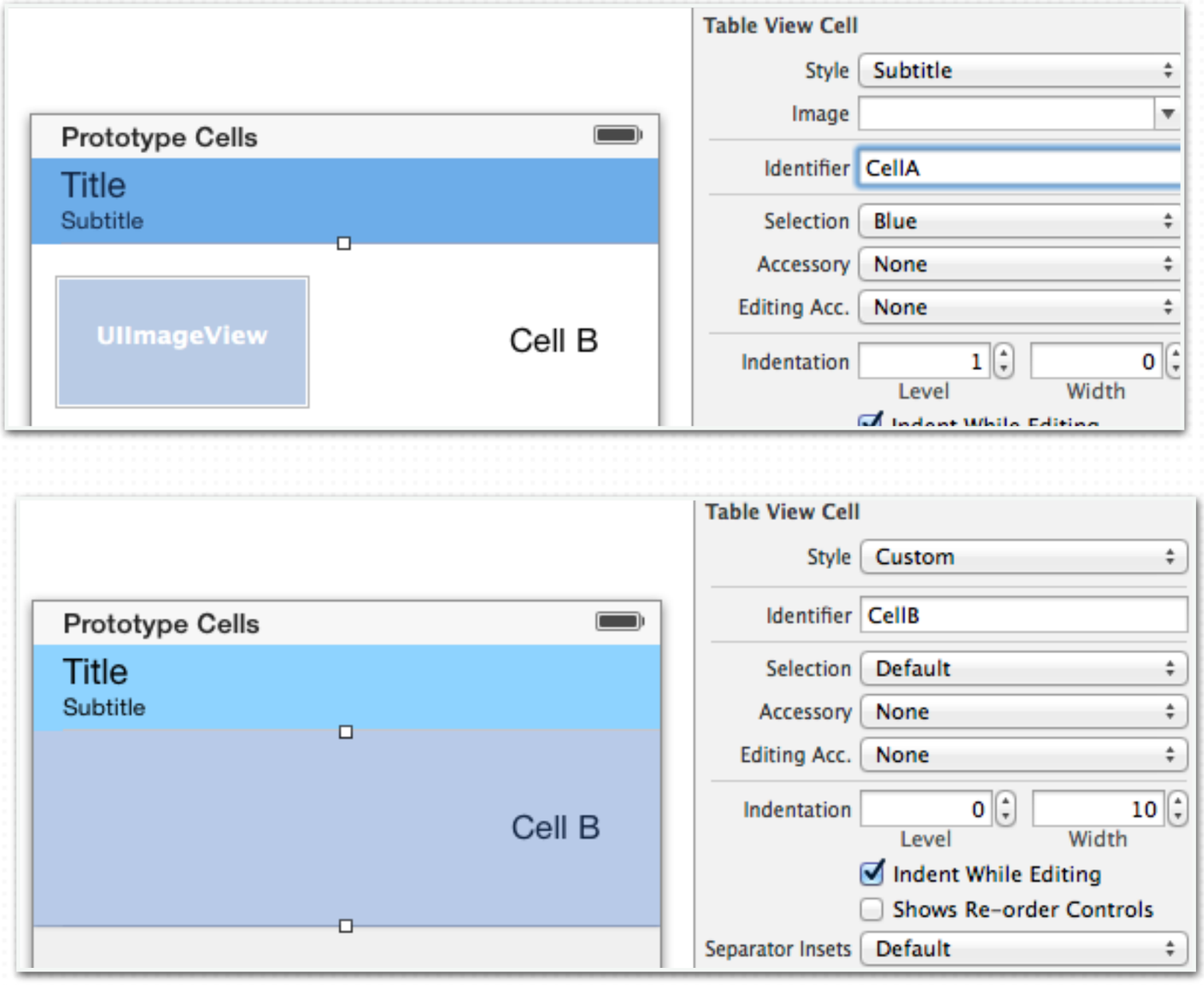
Use cell in different style

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;
    }
}
```

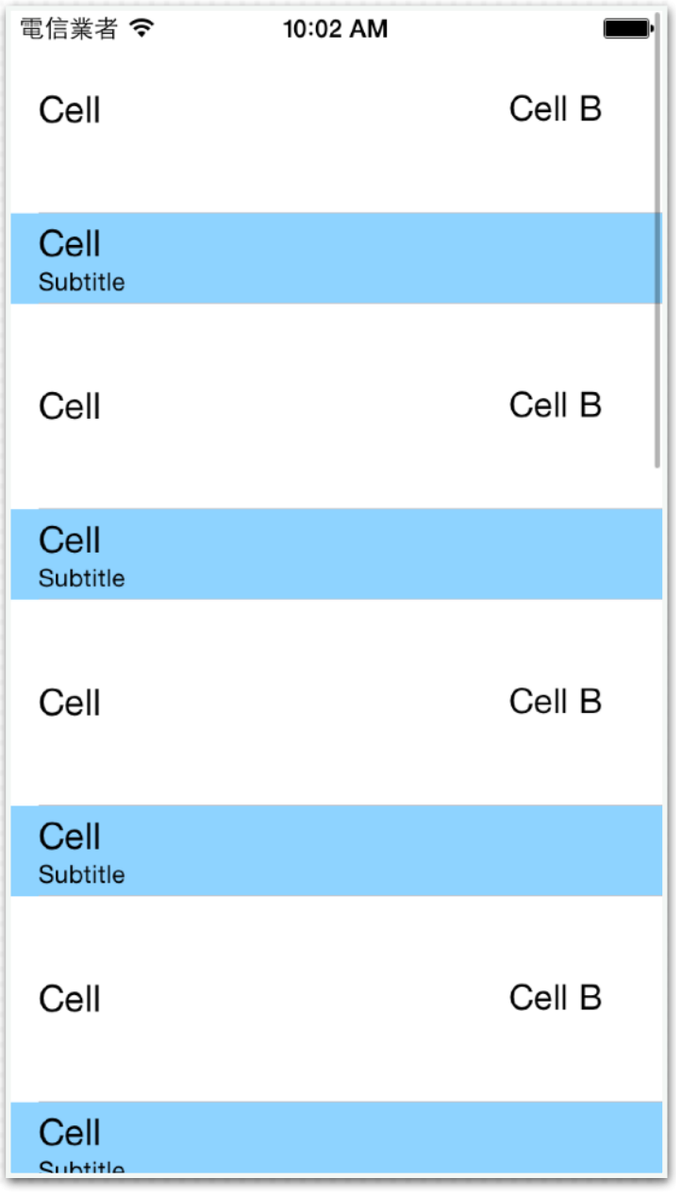
Assign different height of row with respect to indexPath

UITableViewController

- Exercise:

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

UITableViewController

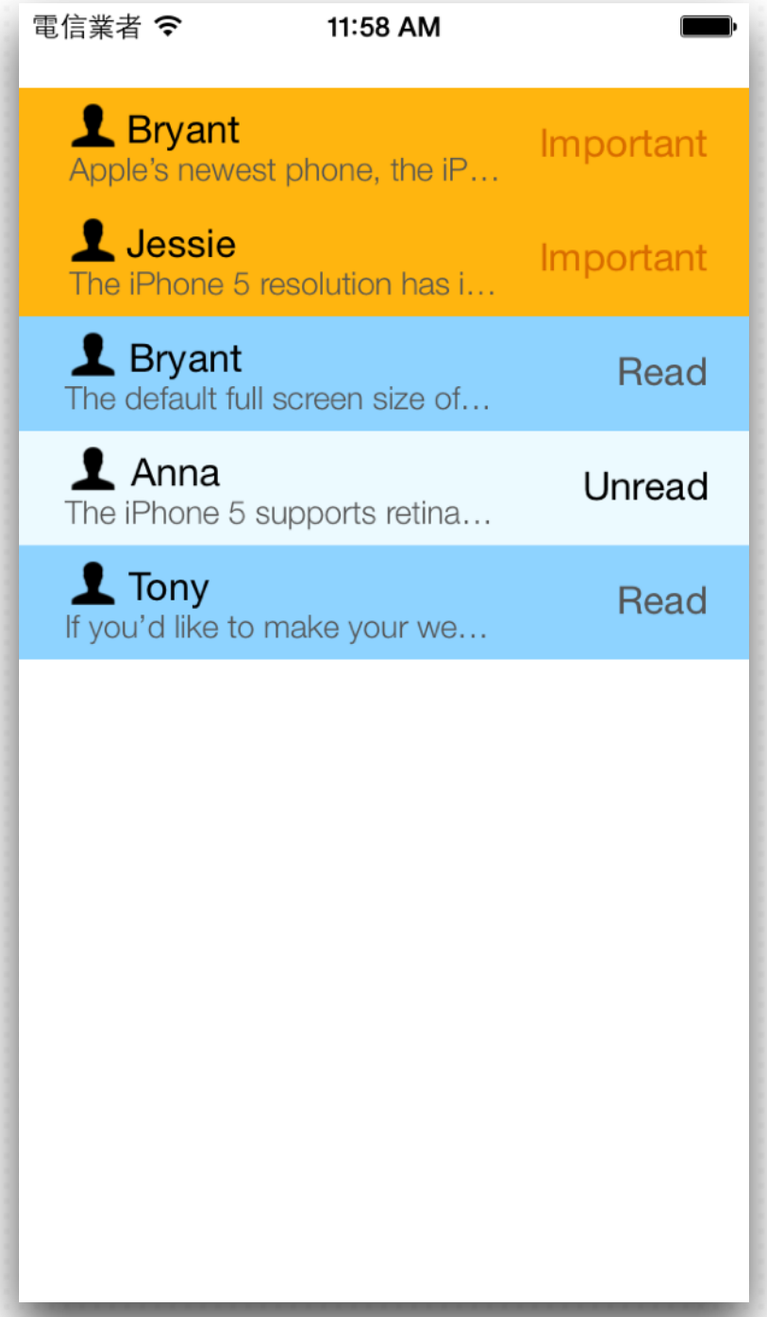


Use difference cell style in a Table View

Homework

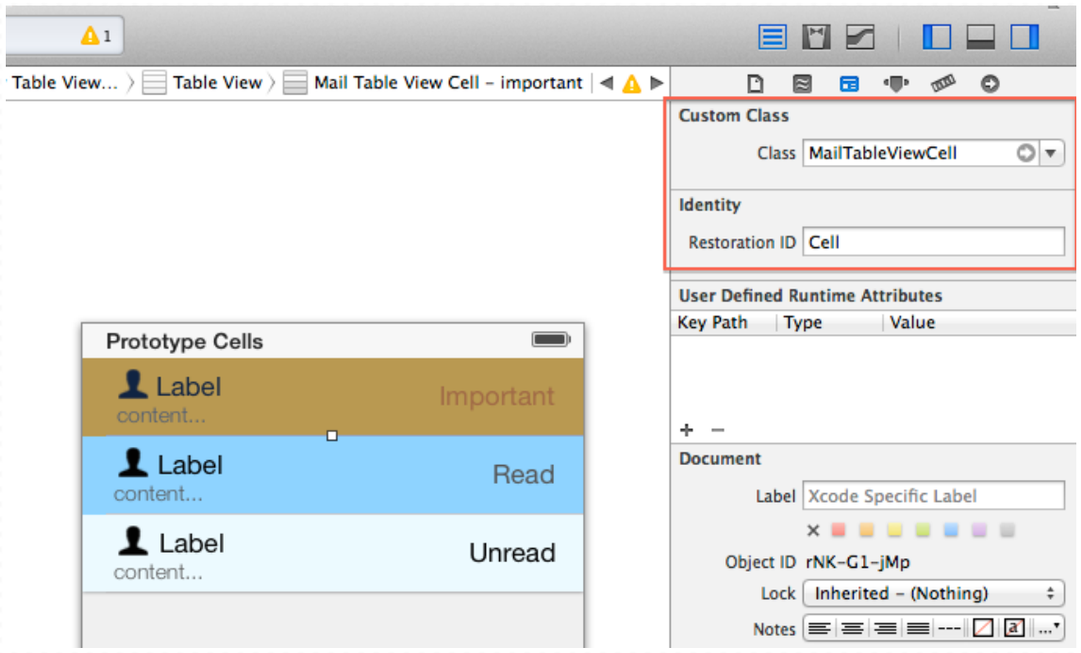
✓ Email List

- Custom Cell
- NSDictionary

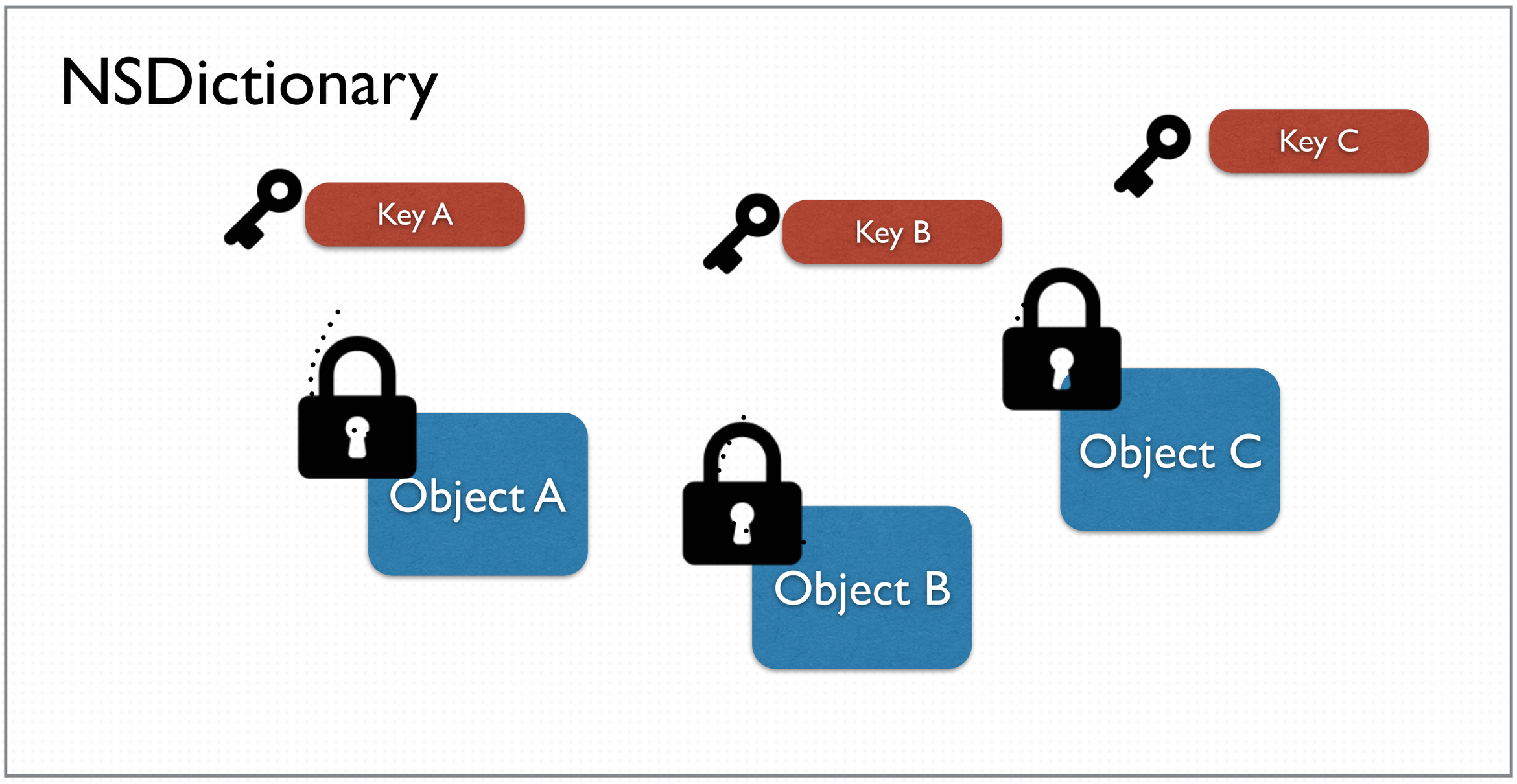


Custom cell

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

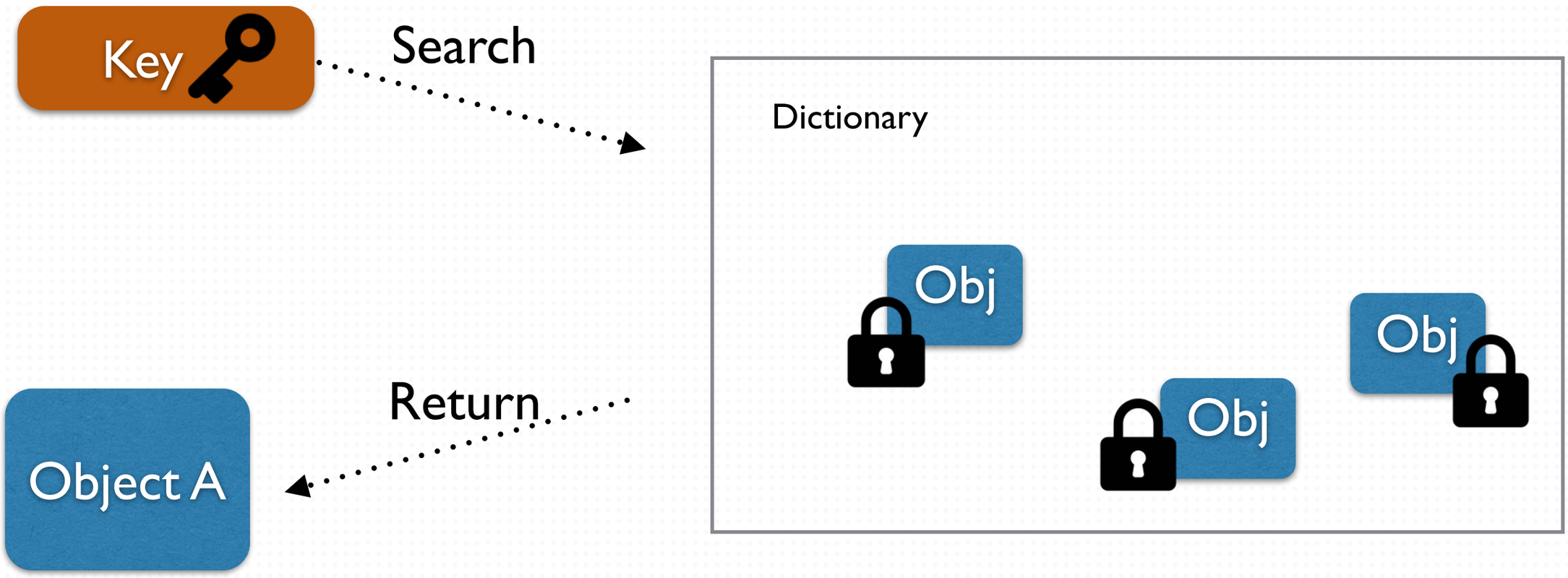


NSDictionary



NSDictionary

- 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];
```