

Hello, world!



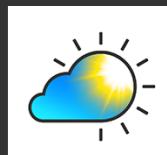
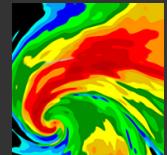
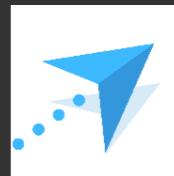
Maks Kurpa
Lead iOS Engineer @ Apalon Apps



who am I:

Apalon Apps

10+ years in mobile
50+ active products in portfolio
600M+ installs worldwide
40M+ MAU



UI Decomposition.

Почему UI тоже нужна архитектура

Why UI decomposition is important?

1. Reusing -> delivery faster
2. Easy to change only part of UI
3. Easier to find where a problem is
4. Work parallelization

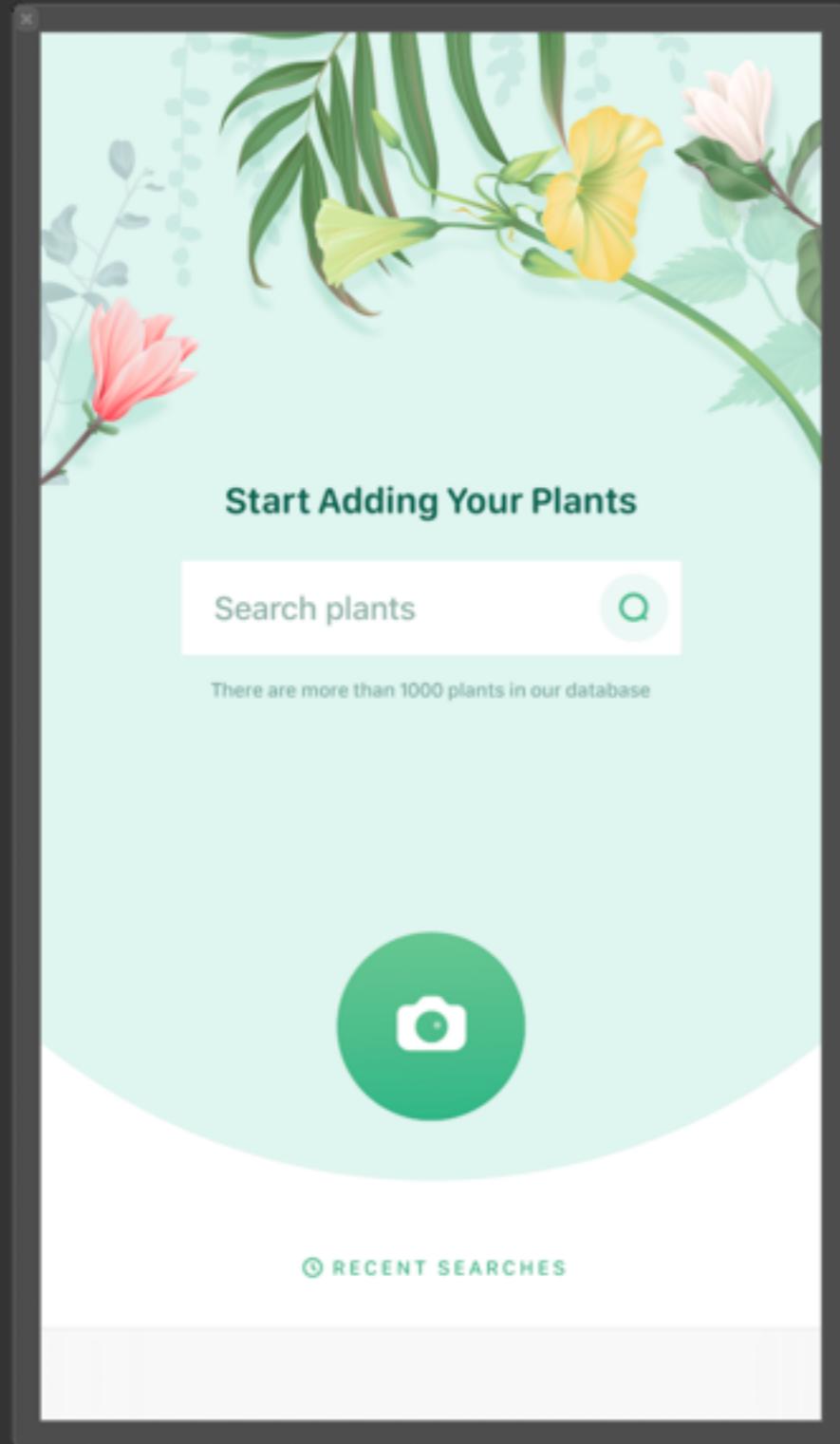
Terminology

A **user flow** is a series of steps a user takes to achieve a meaningful goal.

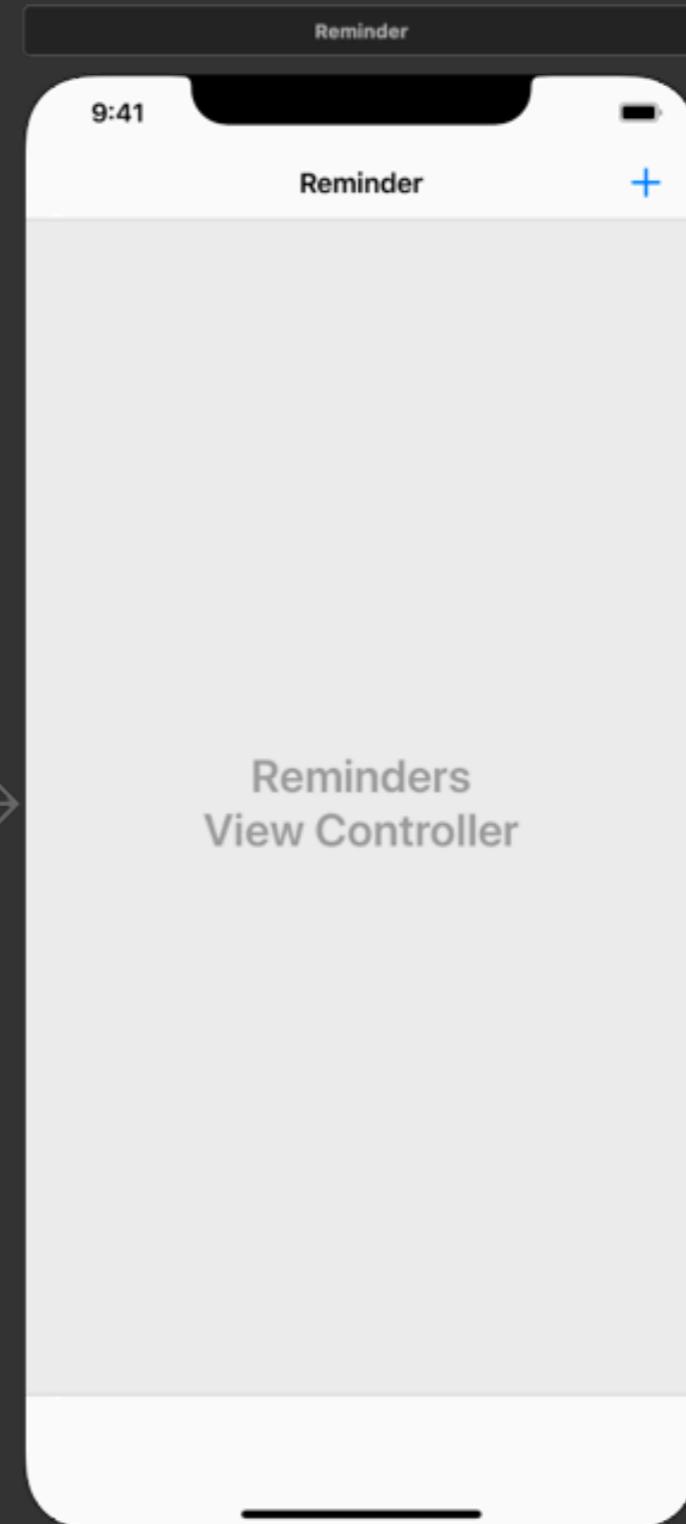
Scene - is a VC without children with all dependencies

Flow - is set of **scenes**, connected to each other and represented some **indivisible user flow**.

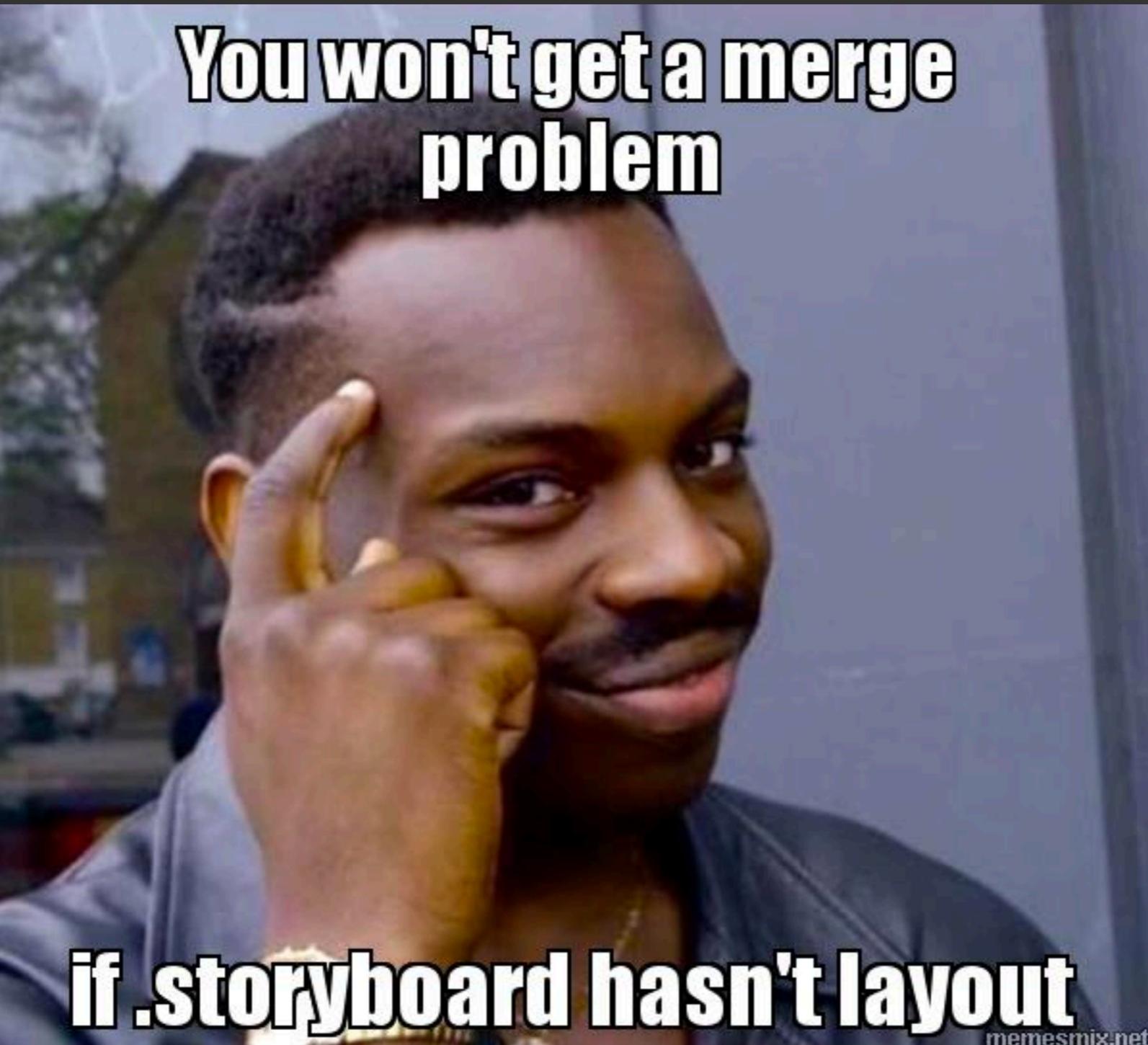
Scene



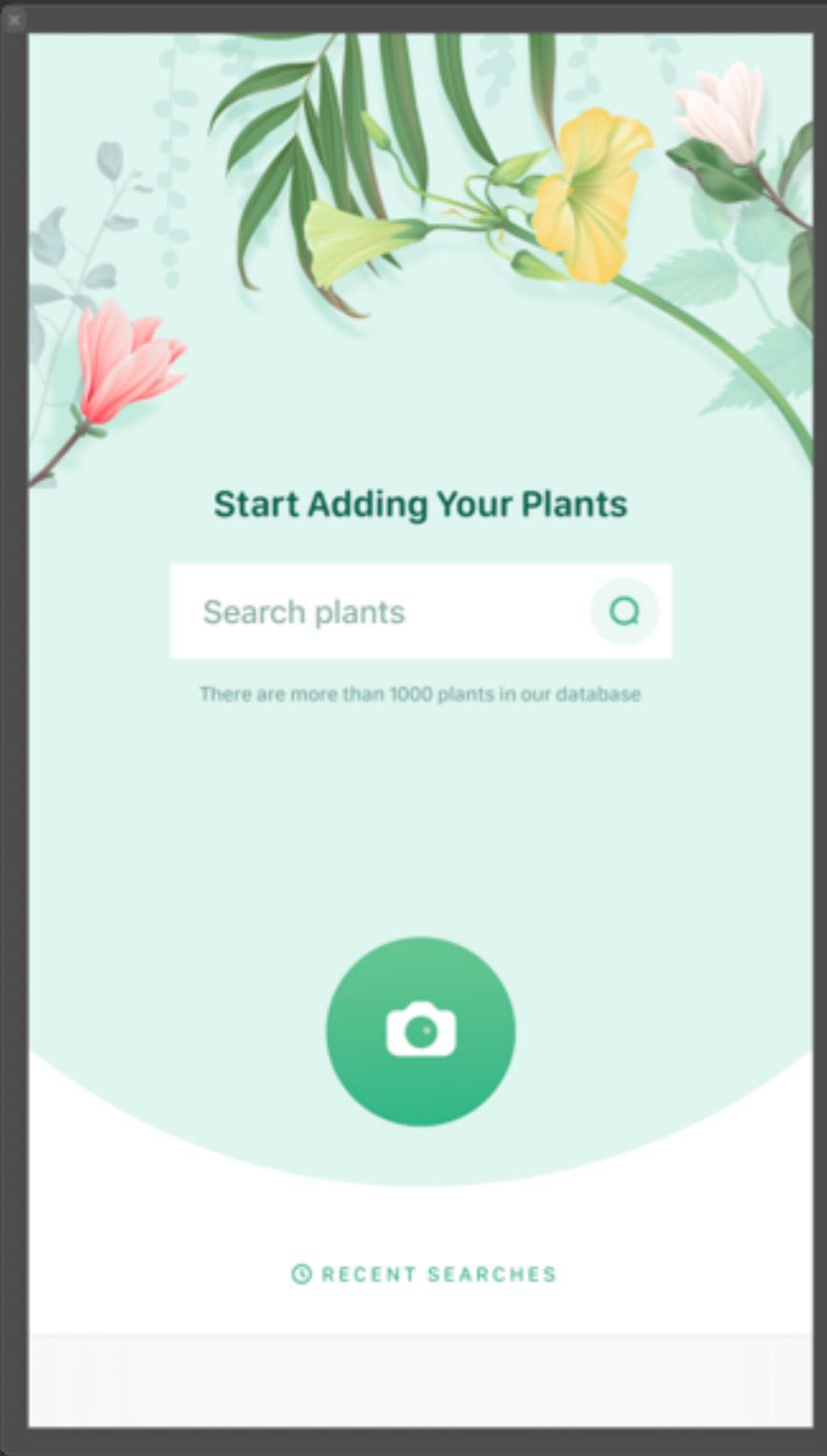
Flow



Tip #1 - No Merge Problems anymore



How to do it

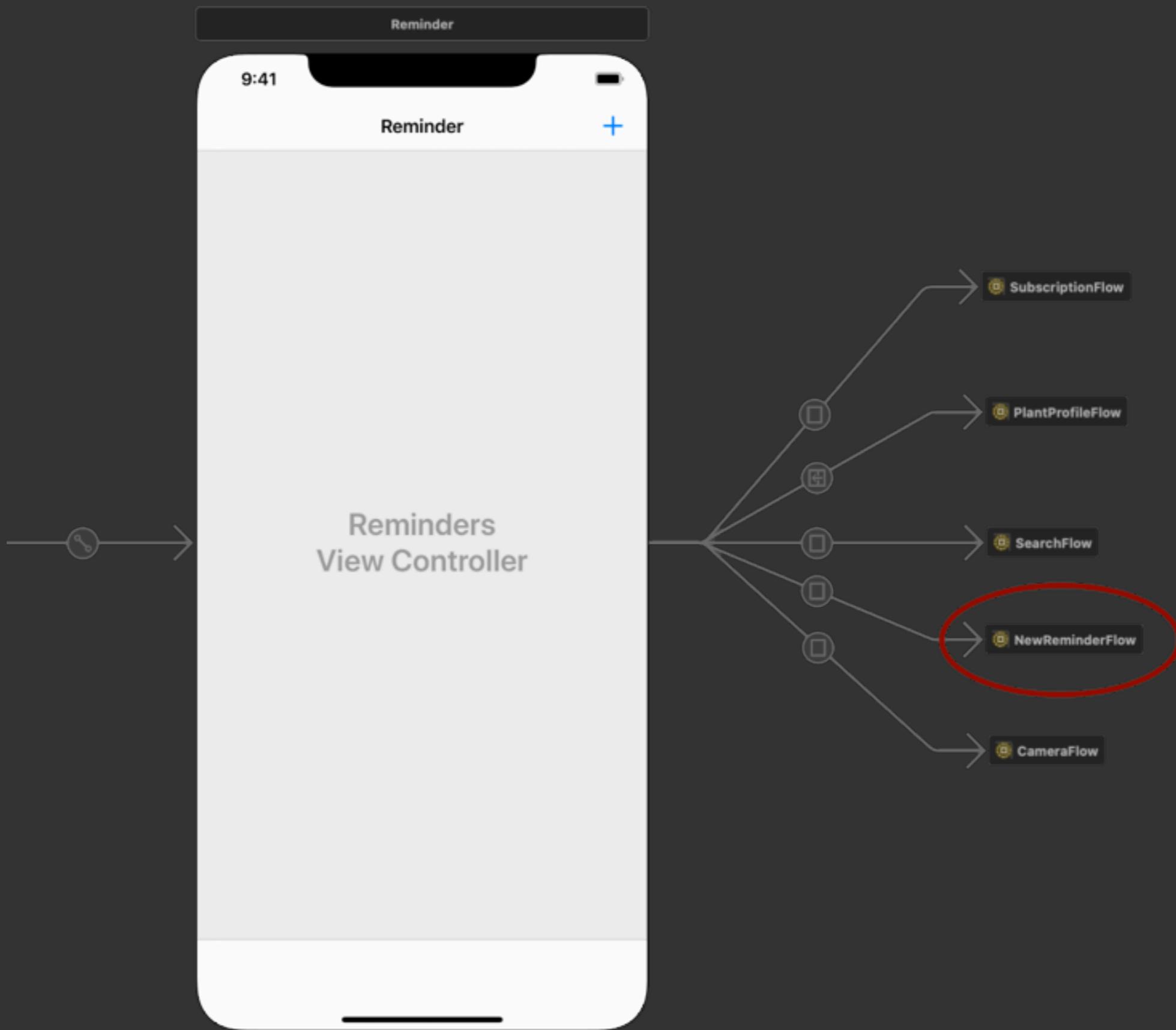


1. Use .storyboard only for Routing inside “Flow”

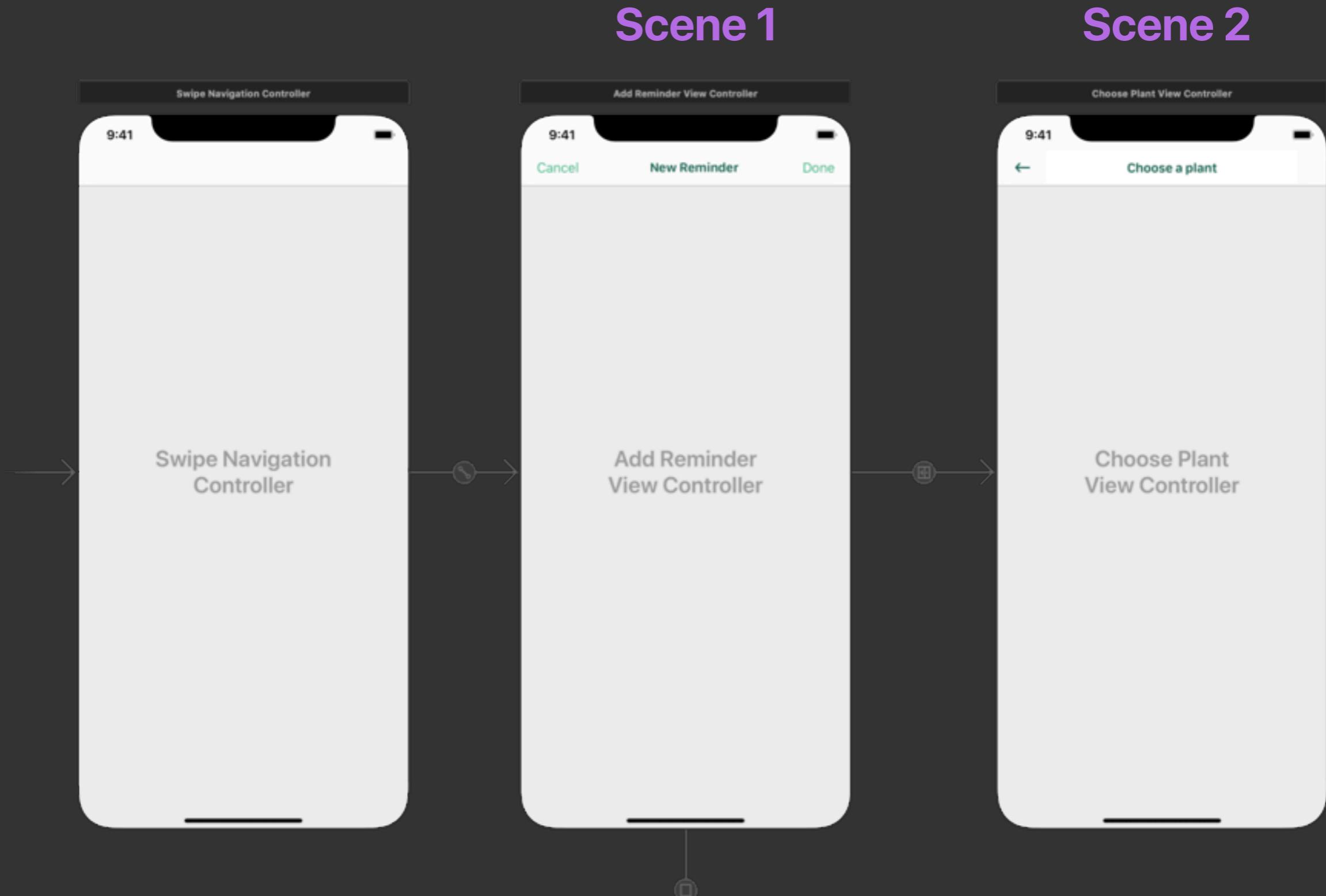
2. Use .xib or code to build UI Layout for “Scene”

```
class SomeViewController: UIViewController {  
  
    public required init?(coder aDecoder: NSCoder) {  
        super.init(coder: aDecoder)  
  
        func nibname() -> String {  
            //implementation  
        }  
  
        self.view = UINib(nibName: nibname(), bundle: nil)  
            .instantiate(withOwner: self, options: nil)  
            .first(where: { (something) -> Bool in  
                return type(of: something) == UIView.self  
            }) as? UIView  
    }  
}
```

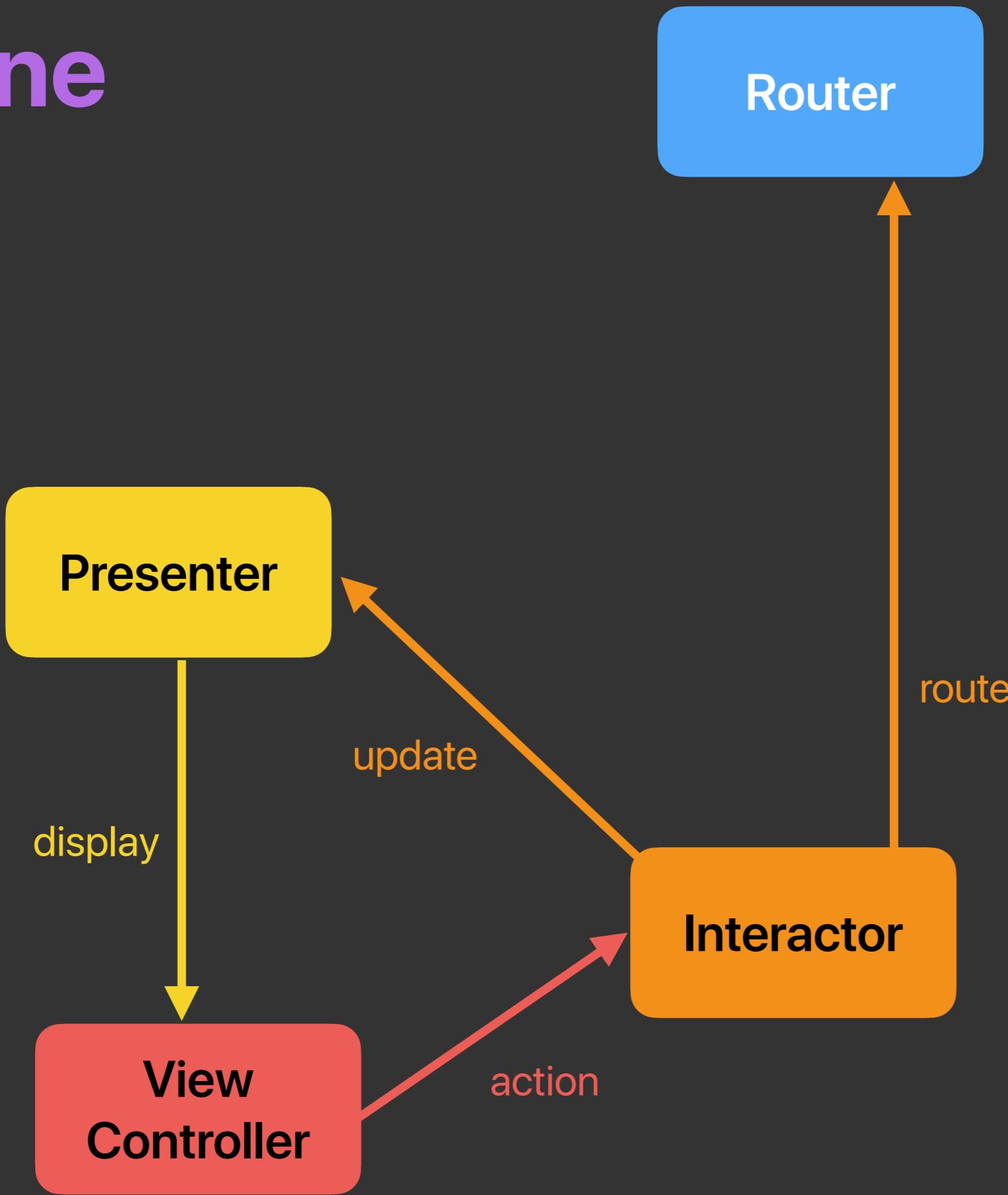
Flow in storyboard



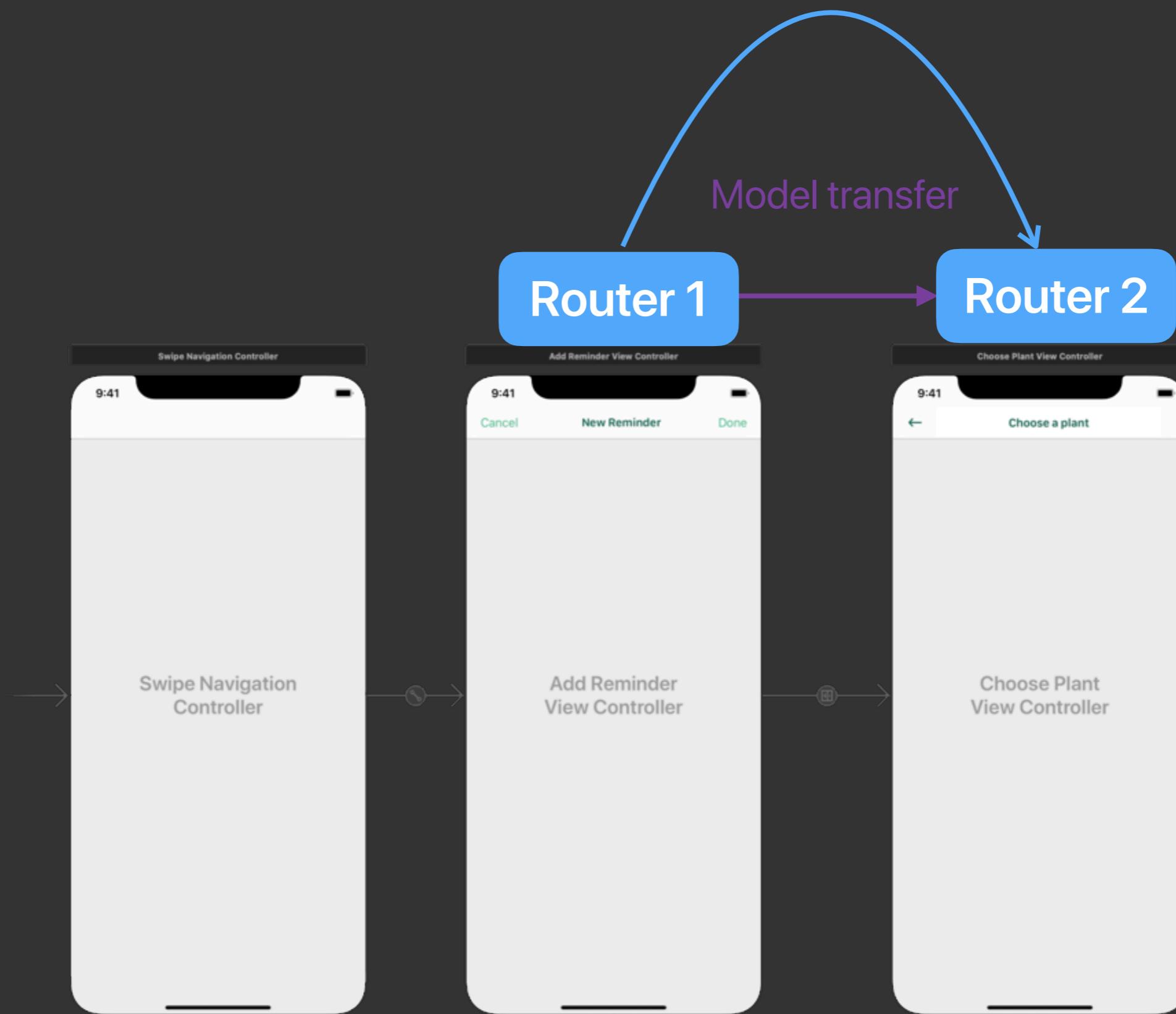
Flow in storyboard



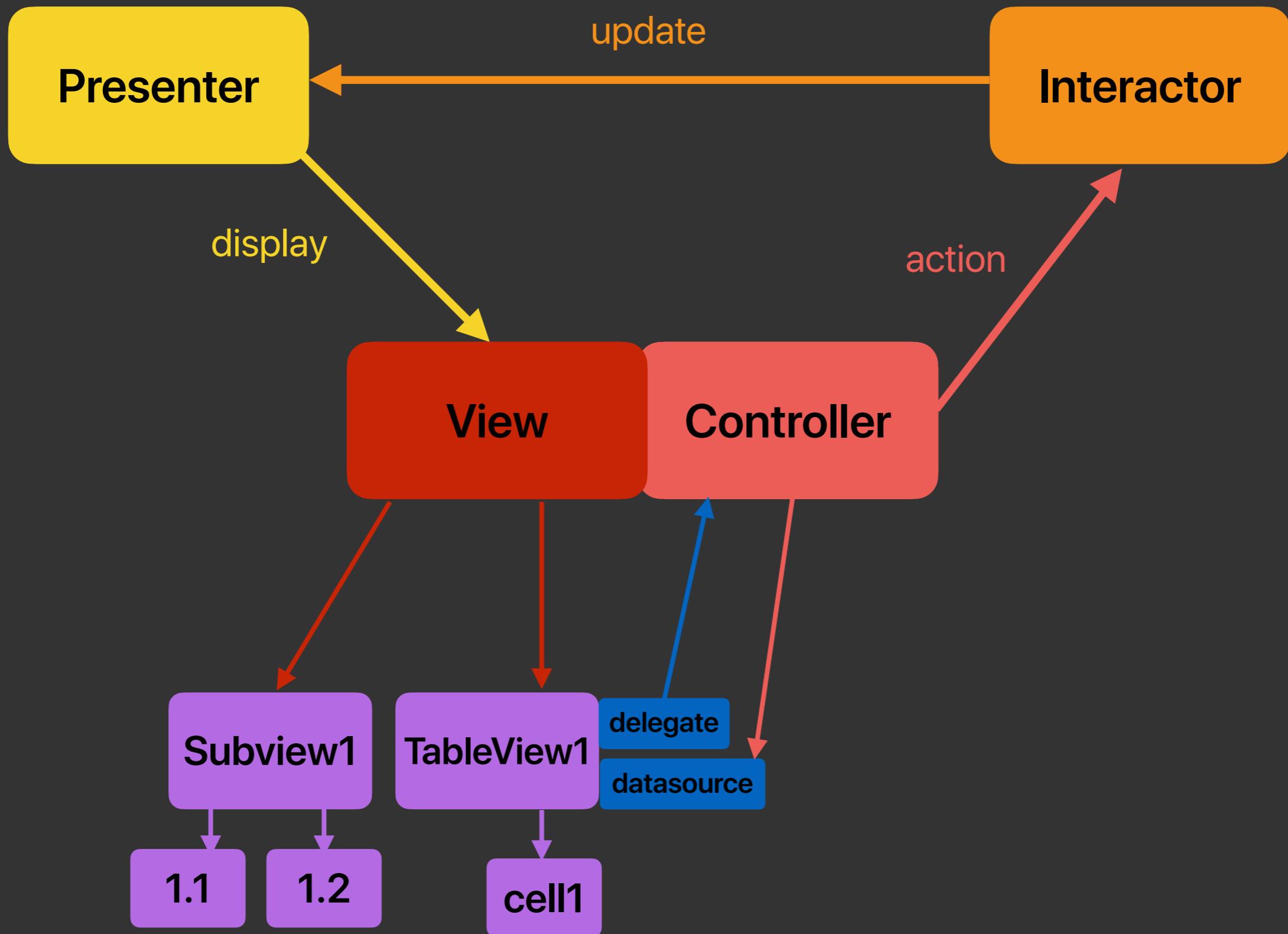
Scene



routing(push, present, etc.)



Interaction



View Controller -> View Router

- to Show
1. What
 2. How
 3. When
 4. Callbacks



- routing
- view lifecycle events
- other controllers relations
- ...

You can go father...

1. Generate/Create child UIView for your scene
2. override `func loadView()` / rename Class in .xib or .storyboard
3. Do all outlets of subviews and other in this View
4. Do all actions target your ViewController

But should you?



Ghost Plant Profile

Botanical Name: Taraxacum

Common Name: Ghost Plant, mother-of-pearl plant

Plant Care

About Plant

Photo Gallery

BLOSSOM 10 photos

Botanical Name: Bellis perennis

Common Name: Ghost Plant, mother-of-pearl plant

Plant Type: Perennial succulent

Mature Size: Six to 12 inches tall; 20 inches wide

Sun Exposure: Full to partial sun

Soil Type: Sandy or a light potting mix

Native Area: Mexico

How to Grow Dandelion

Like most succulents, the ghost plant is a low maintenance specimen when you meet its basic growing requirements. Sharp drainage, abundant sunlight, and scant irrigation are the keys to a healthy ghost plant that will soon be producing new offshoots for you to propagate.

Light

Ghost plants will be at their most handsome or full sun or bright dappled shade. Plants that don't receive enough light will be leggy, and may experience leaf drop. When growing as a houseplant, keep the ghost plant in a south or east-facing window.

MORE READ ↓

UIStackView

Let's decompose it!

UIView

SomeView 1

UIView

UISegmentControl

cell type #1

SomeView 2

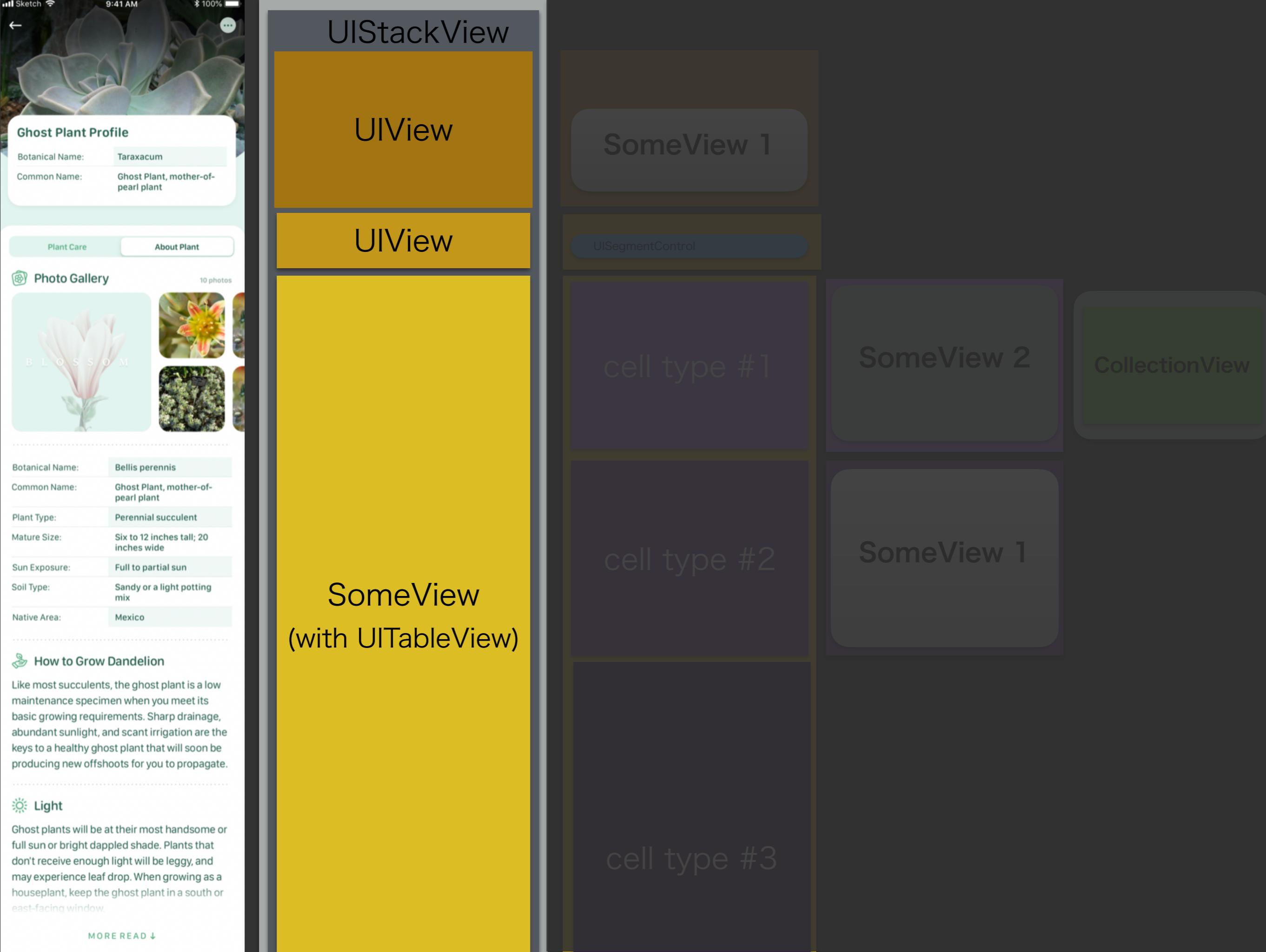
CollectionView

cell type #2

SomeView 1

UITableView

cell type #3





| Ghost Plant Profile | |
|---------------------|------------------------------------|
| Botanical Name: | Taraxacum |
| Common Name: | Ghost Plant, mother-of-pearl plant |

Plant Care About Plant

Photo Gallery



| | |
|-----------------|---------------------------------------|
| Botanical Name: | Bellis perennis |
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UIStackView

UIView

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UIView

UISegmentControl

cell type #1

SomeView
(with UITableView)

cell type #2

SomeView 2

cell type #3

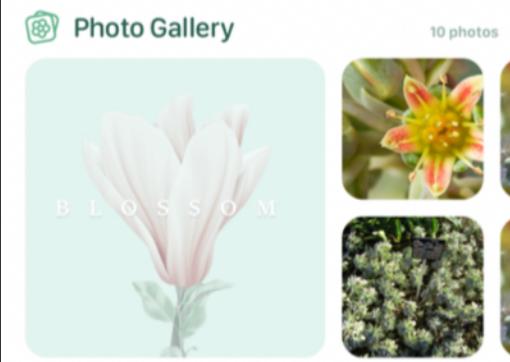
SomeView 1

CollectionView



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SomeView
(with UITableView)

cell type #2

SomeView 1

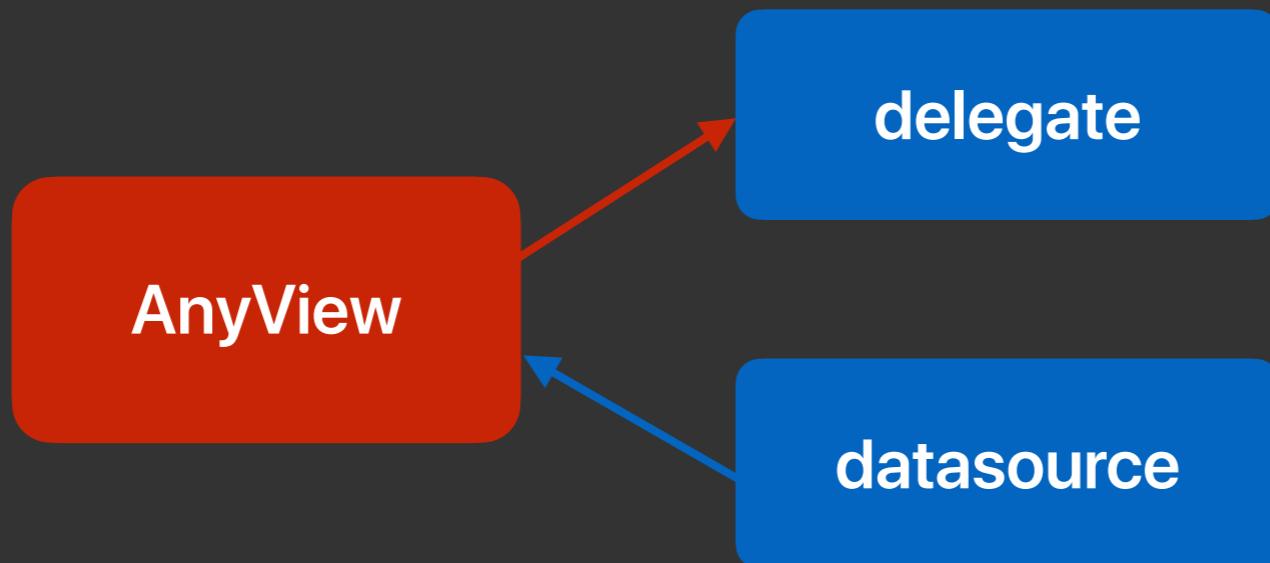
cell type #3

How to decompose UI?

Which patterns all of us known? Of course:

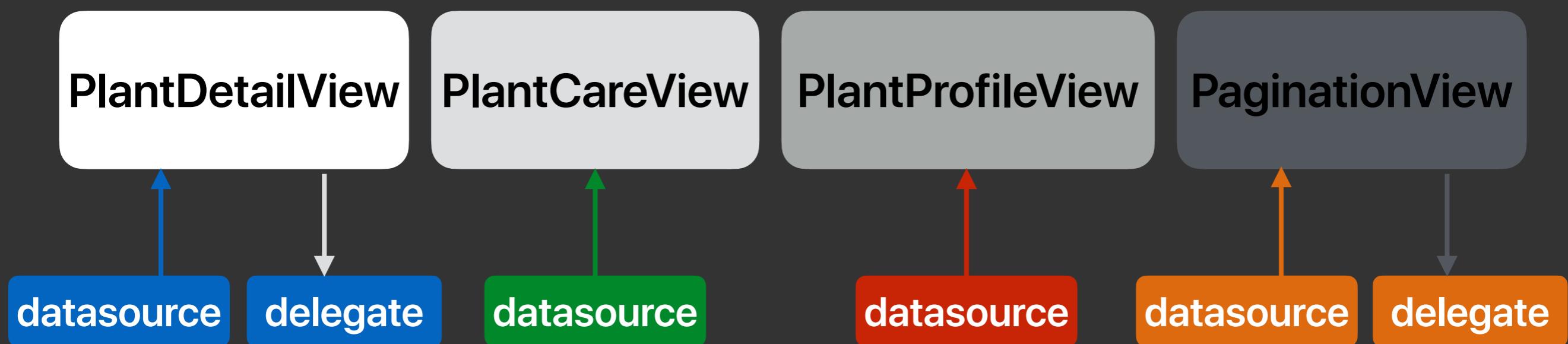
1. UITableView has dataSource and delegate
2. UICollectionView has dataSource and delegate
3. So many UI components from UIKit has a delegate

Solution: We should almost do the same.

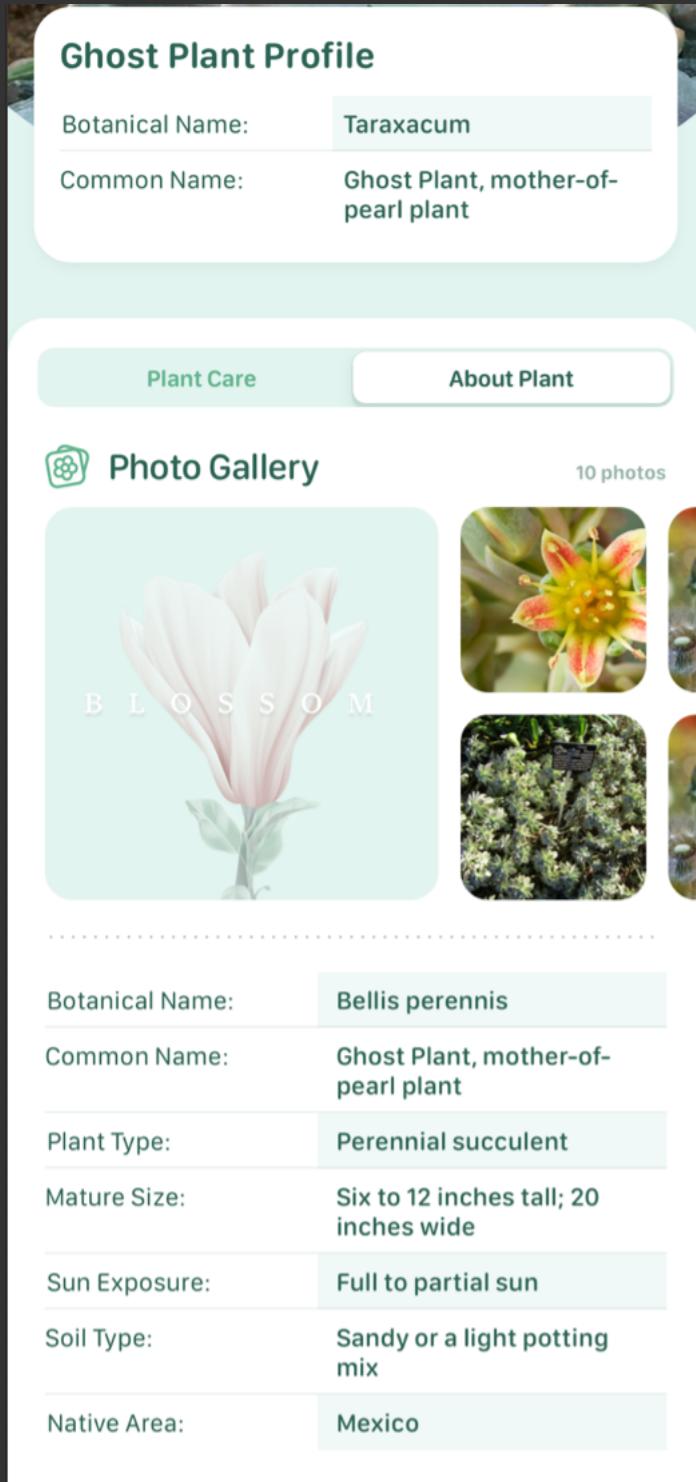


How to decompose UI?

```
class ProfileViewController: UIViewController {  
  
    @IBOutlet private weak var contentInformationView: PlantDetailView!  
    @IBOutlet private weak var contentCareView: PlantCareView!  
    @IBOutlet private weak var profileView: PlantProfileView!  
  
    @IBOutlet private weak var paginationView: PaginationView!  
  
    ...  
}
```

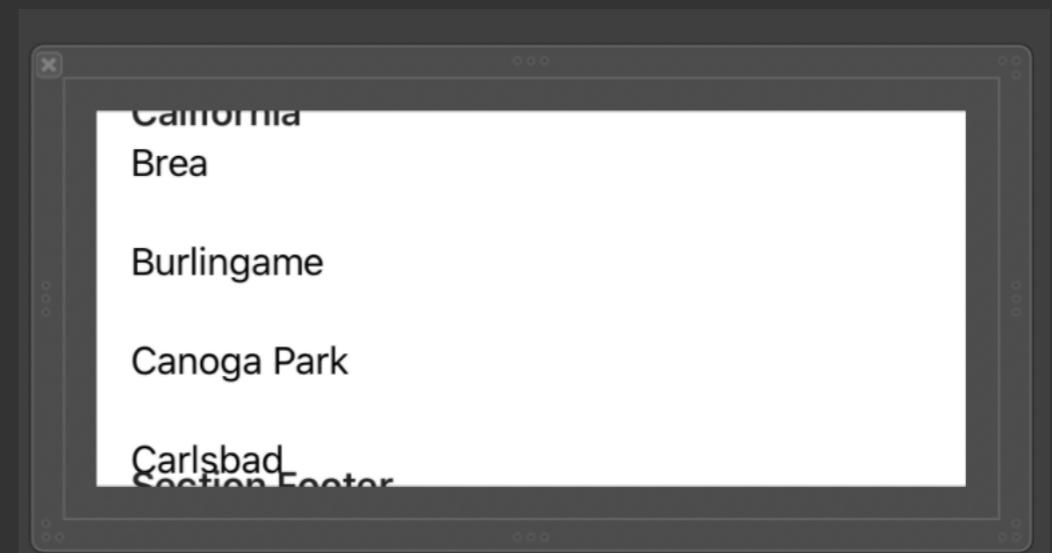


How to do UI component?



SomeView 1

```
class SomeView1: NibLoadedView {  
    public weak var dataSource: SomeView1DataSource?  
    @IBOutlet private weak var tableView: UITableView!  
    ...  
    extension SomeView1: UITableViewDataSource {  
        ...  
    }  
    extension SomeView1: UITableViewDelegate {  
        ...  
    }  
}
```

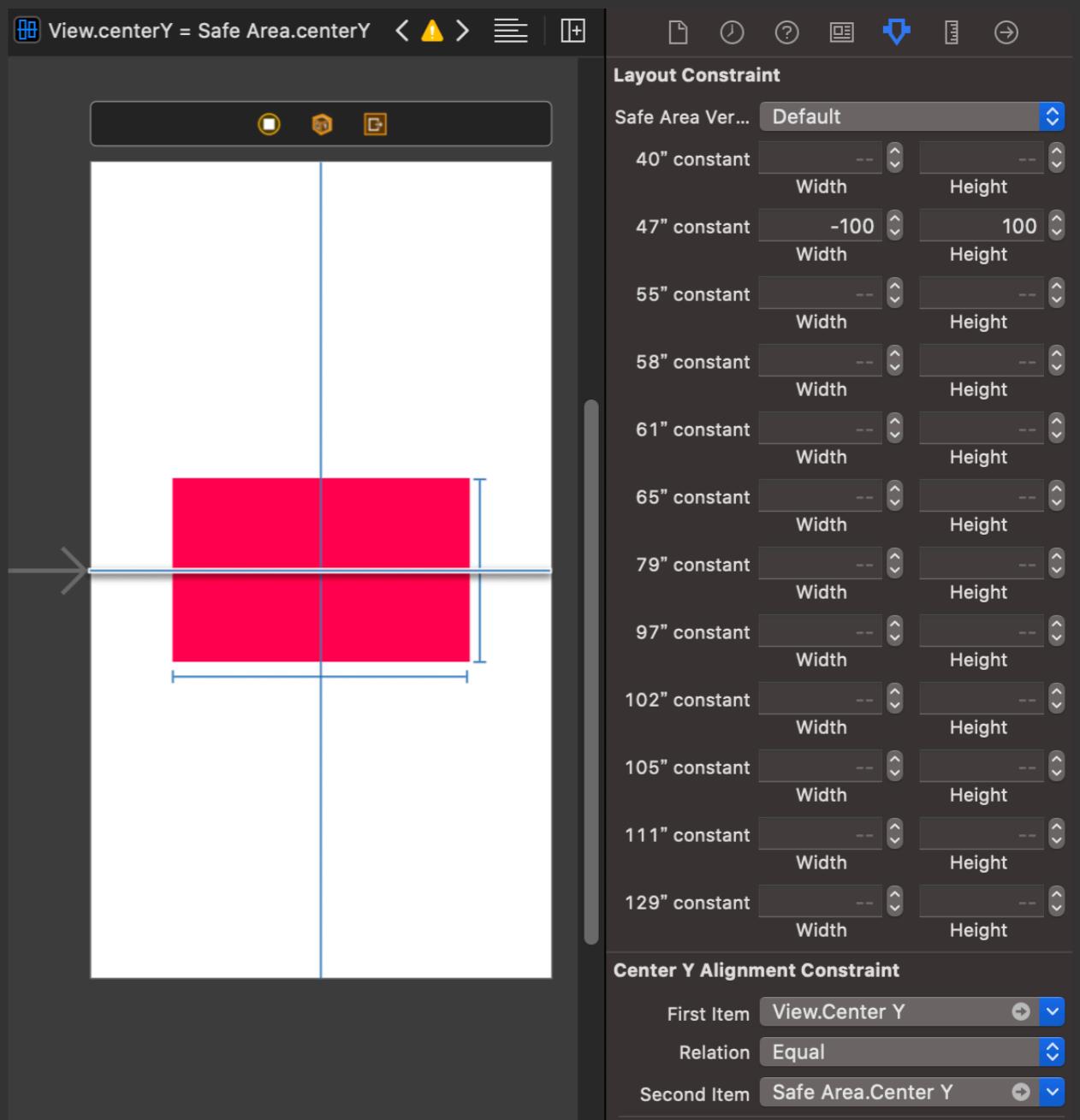


Tip #2 - use pod 'IBLayoutConstraint'

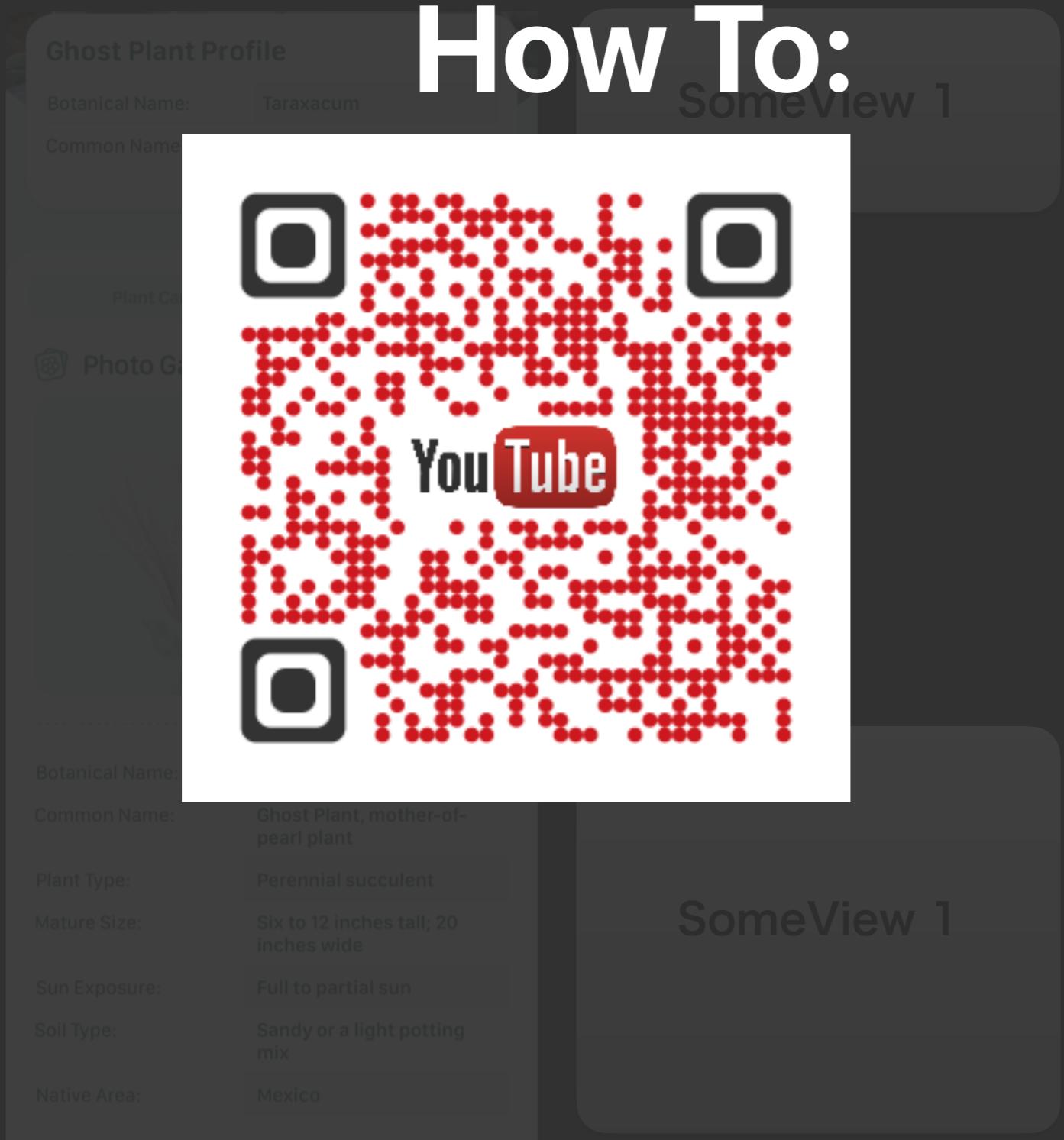


```
var offset: CGFloat = 33

if UIDevice.current.isiPhone5() {
    offset = 2
} else if UIDevice.current.isiPhone6() {
    offset = 16
}
```



How to reuse UI?

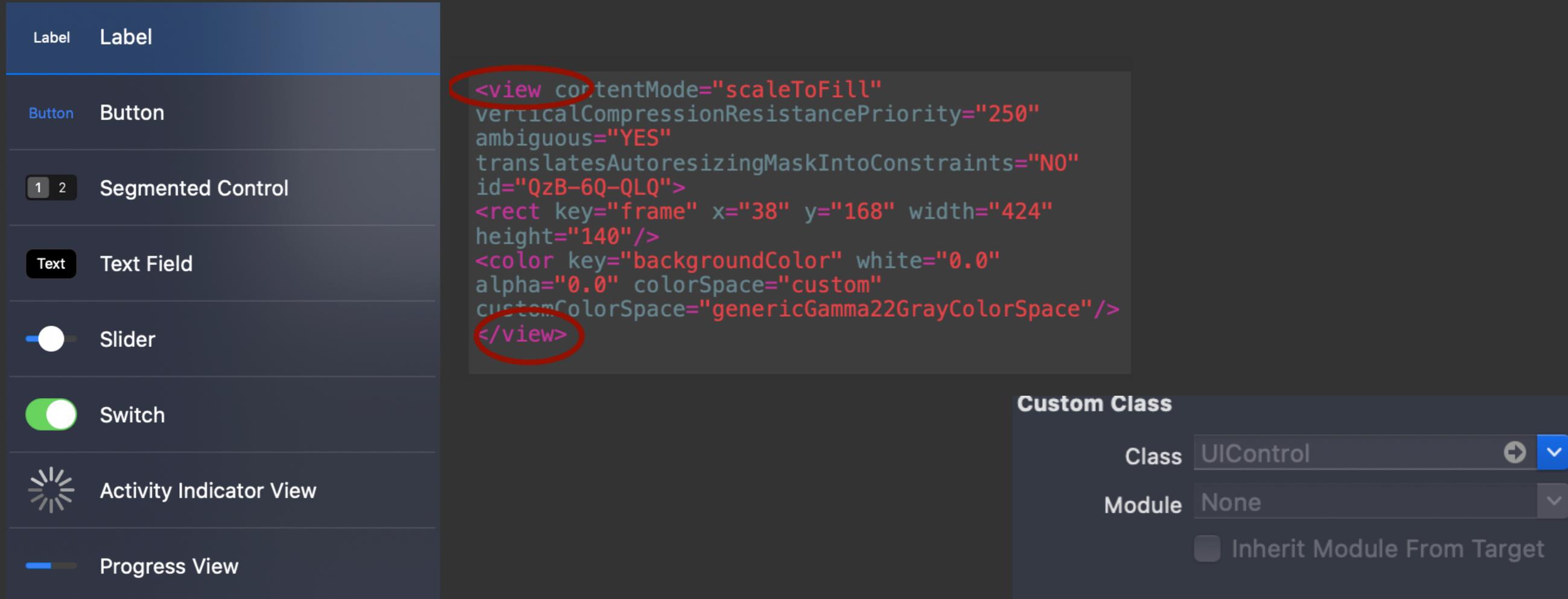


```
class SomeView1: NibLoadedView
    public weak var dataSource: SomeView1DataSource?
    @IBOutlet
    private weak var tableView: UITableView!
    ...
extension SomeView1: UITableViewDataSource {
}
...
extension SomeView1: UITableViewDelegate {
}
```

Example:



Tip #3 - use UIControl



1. No **UIControl** for IB

2. Change "view" in IB
XML to "control"

3. Done

Thank you!

feel free to contact me:



AFTERPARTY:

