More swift

MVC

Q&A

Link for enrolling to our course on iTunes U

FHM-MLC-WXK

(only from iOS)

Road Map

- MVC
- structures
- enums
- *demo*

Model View Controller

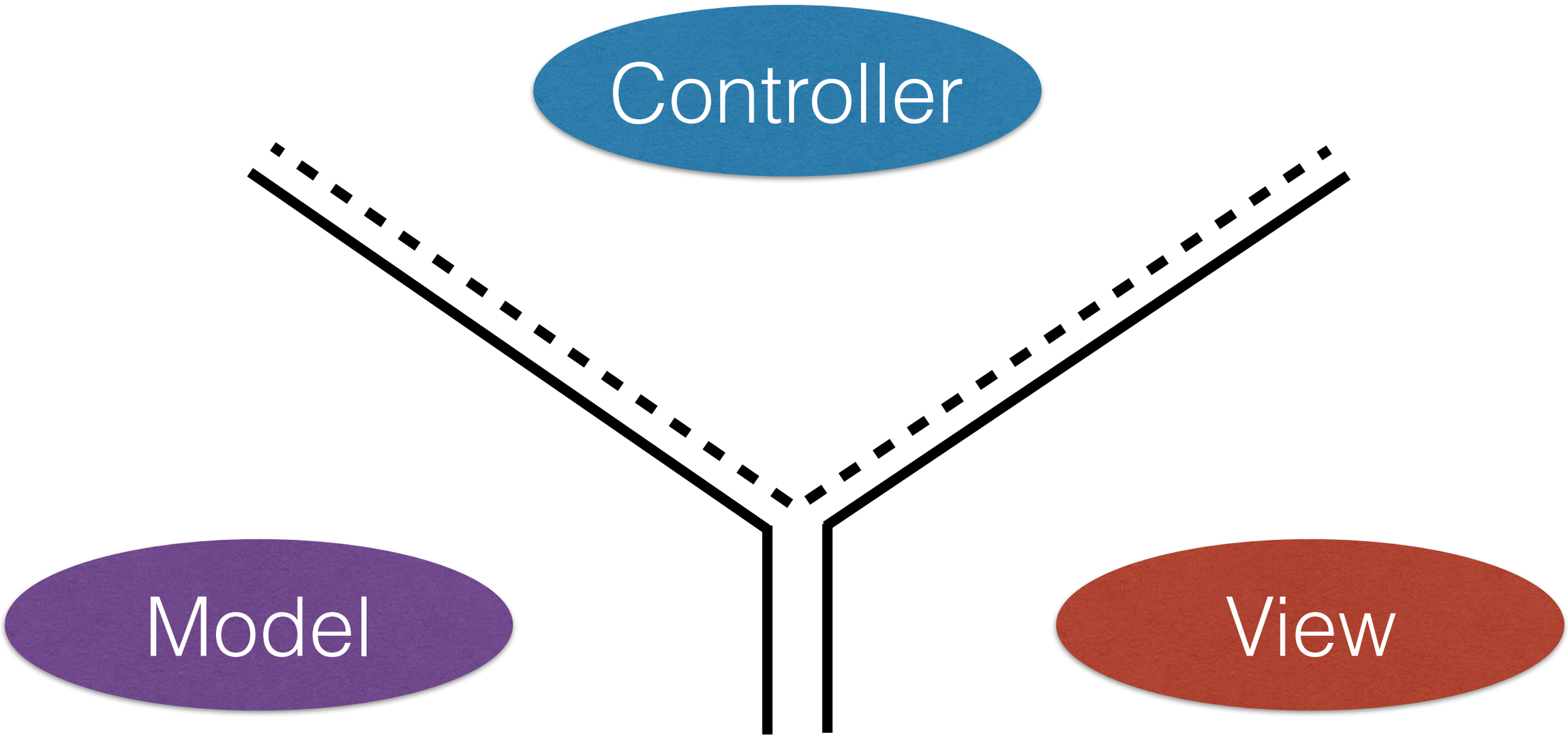
MVC

Controller

Model

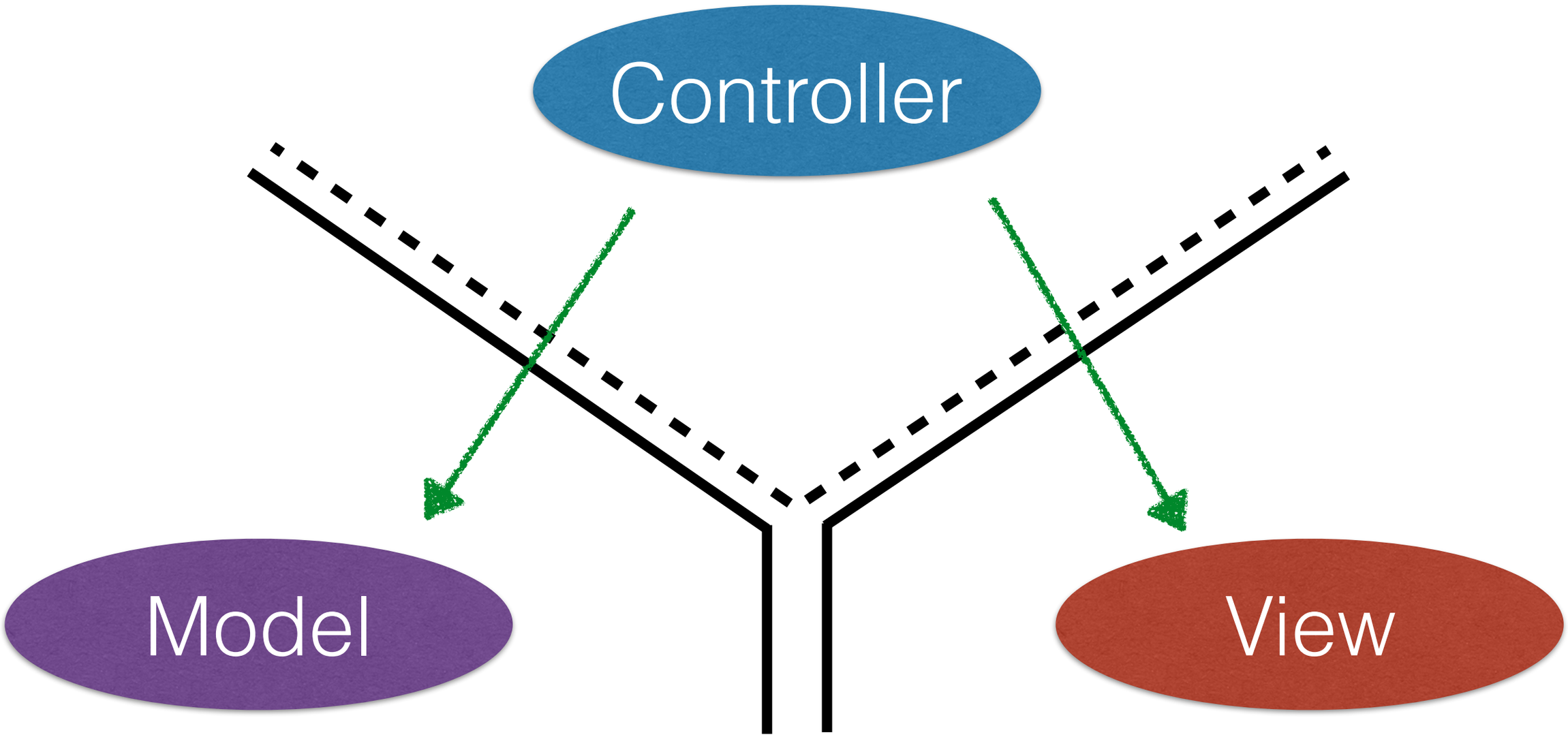
View

MVC

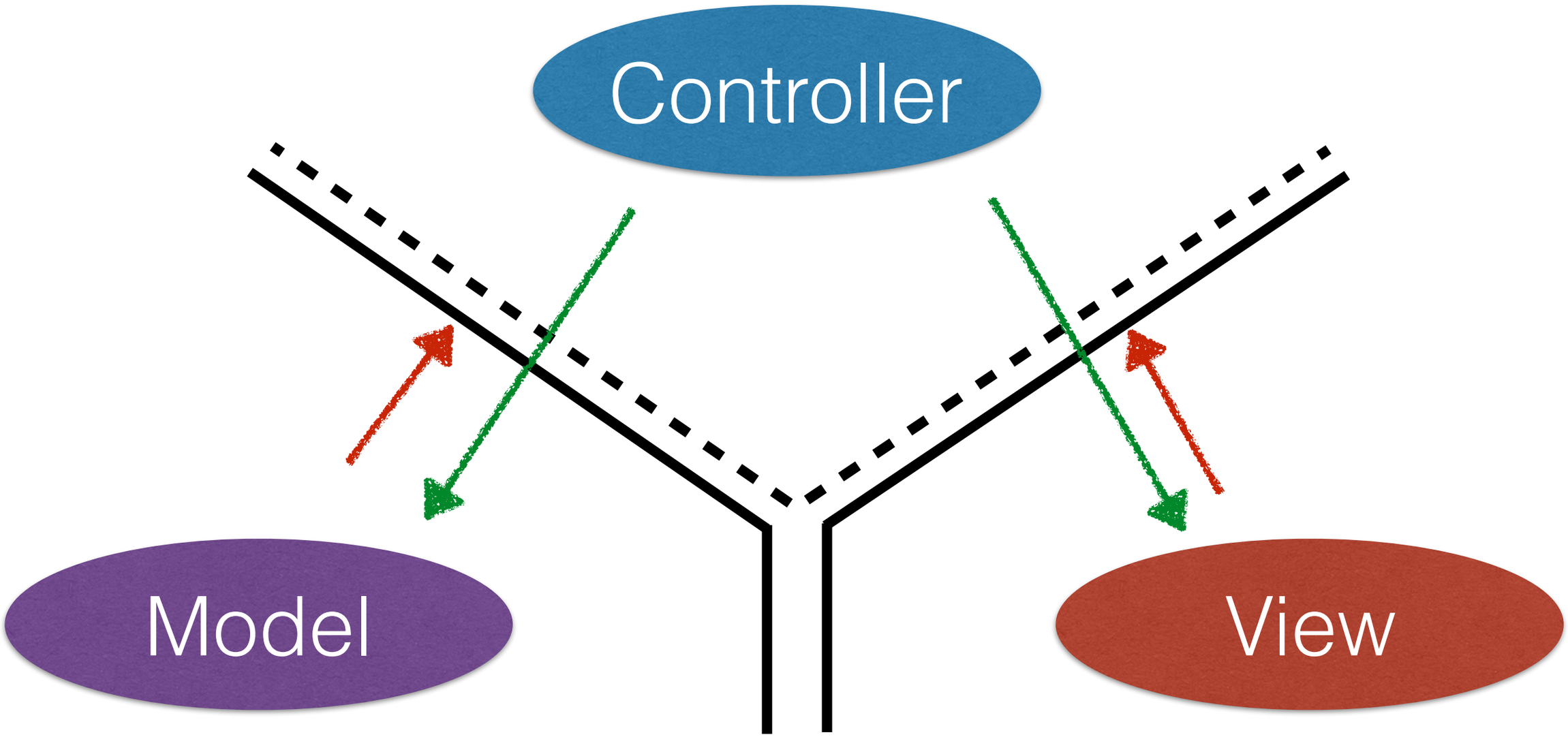


* This example (here and below) is taken from Stanford University CS193P

MVC



MVC



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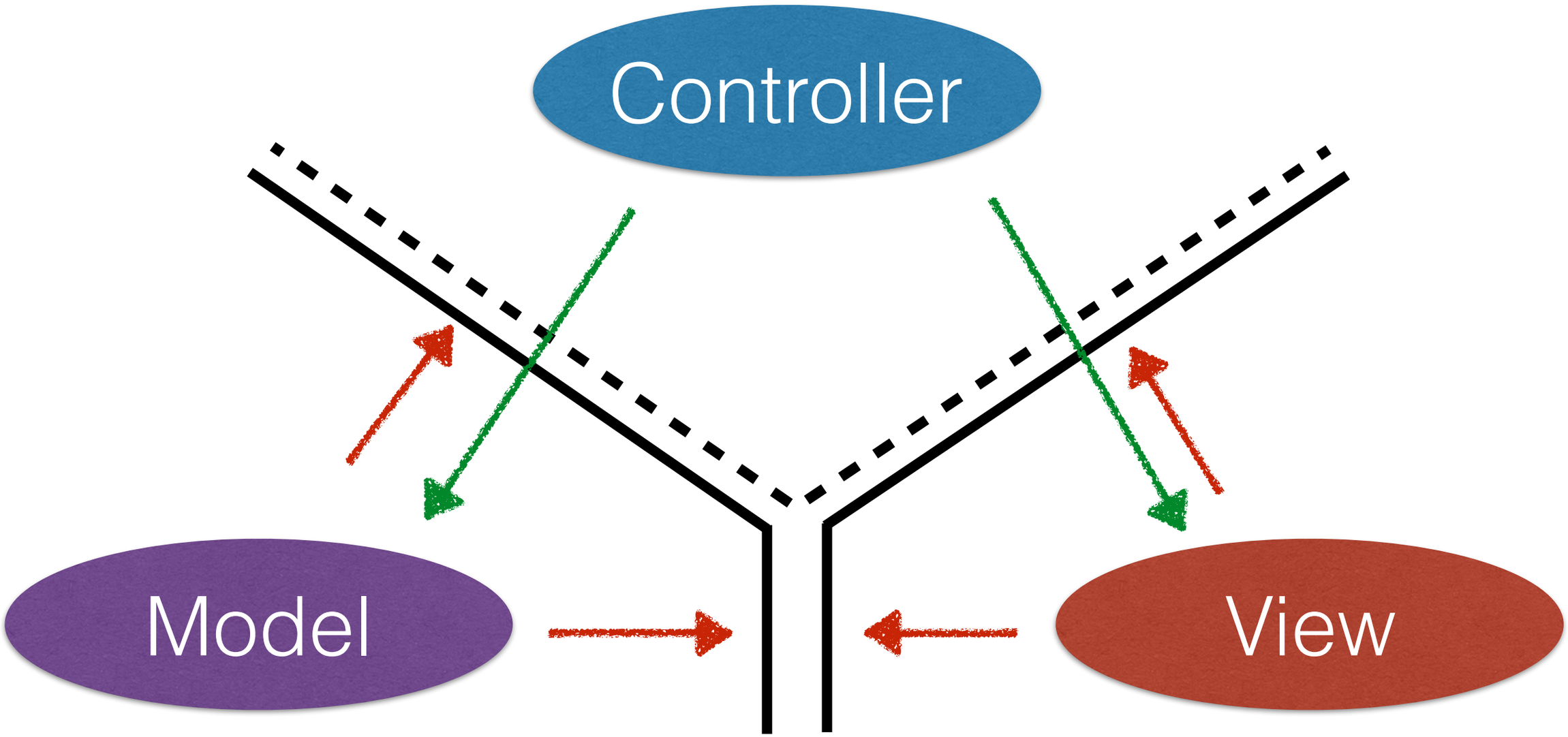
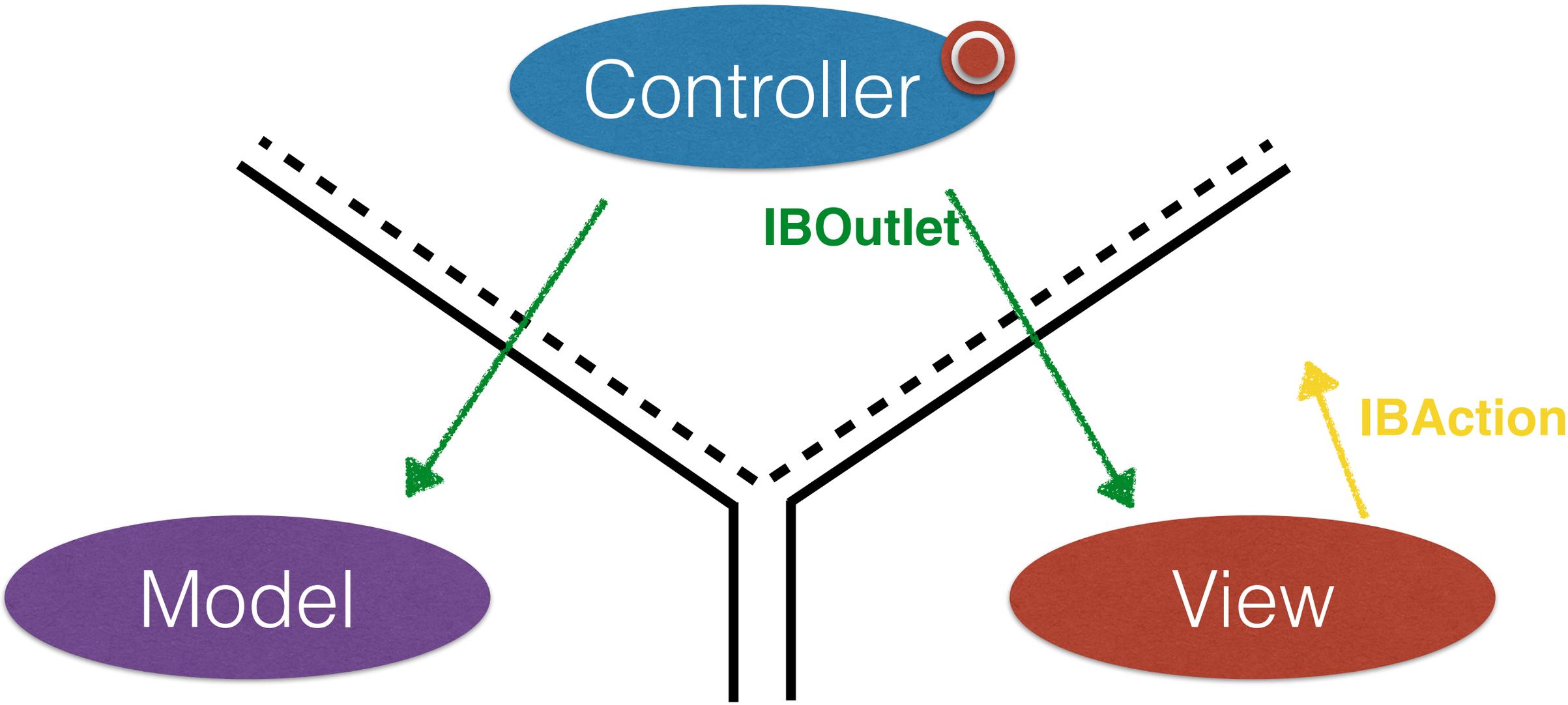


MVC



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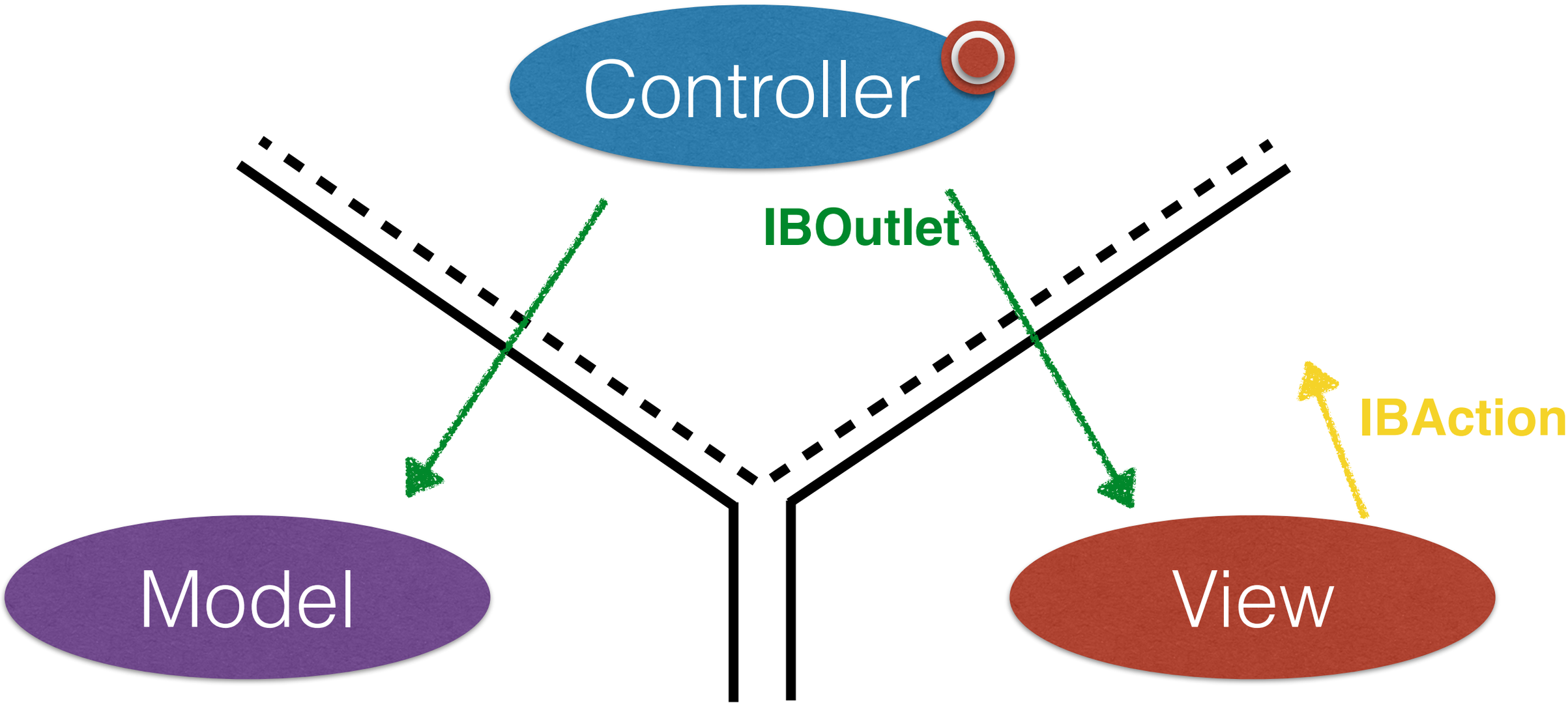

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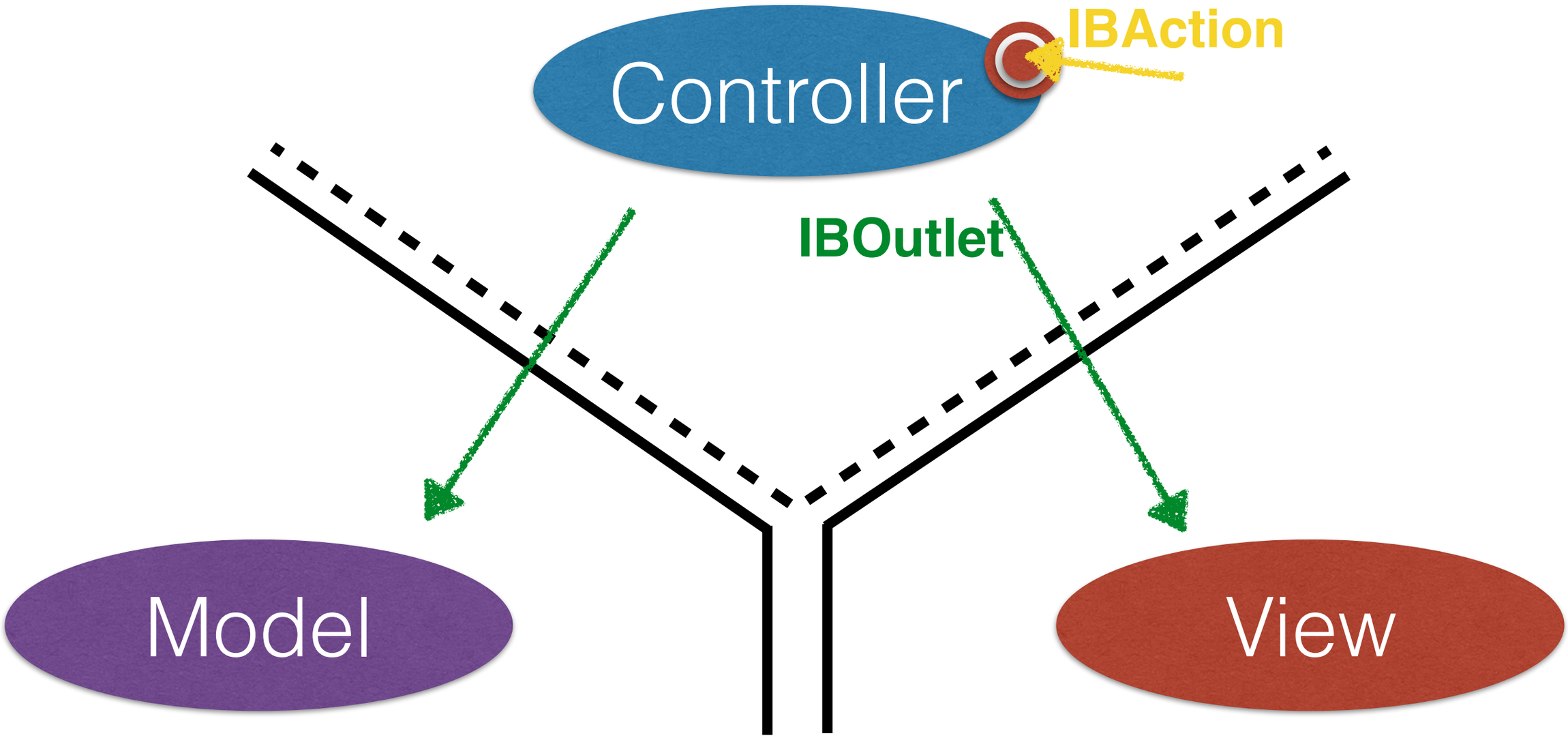
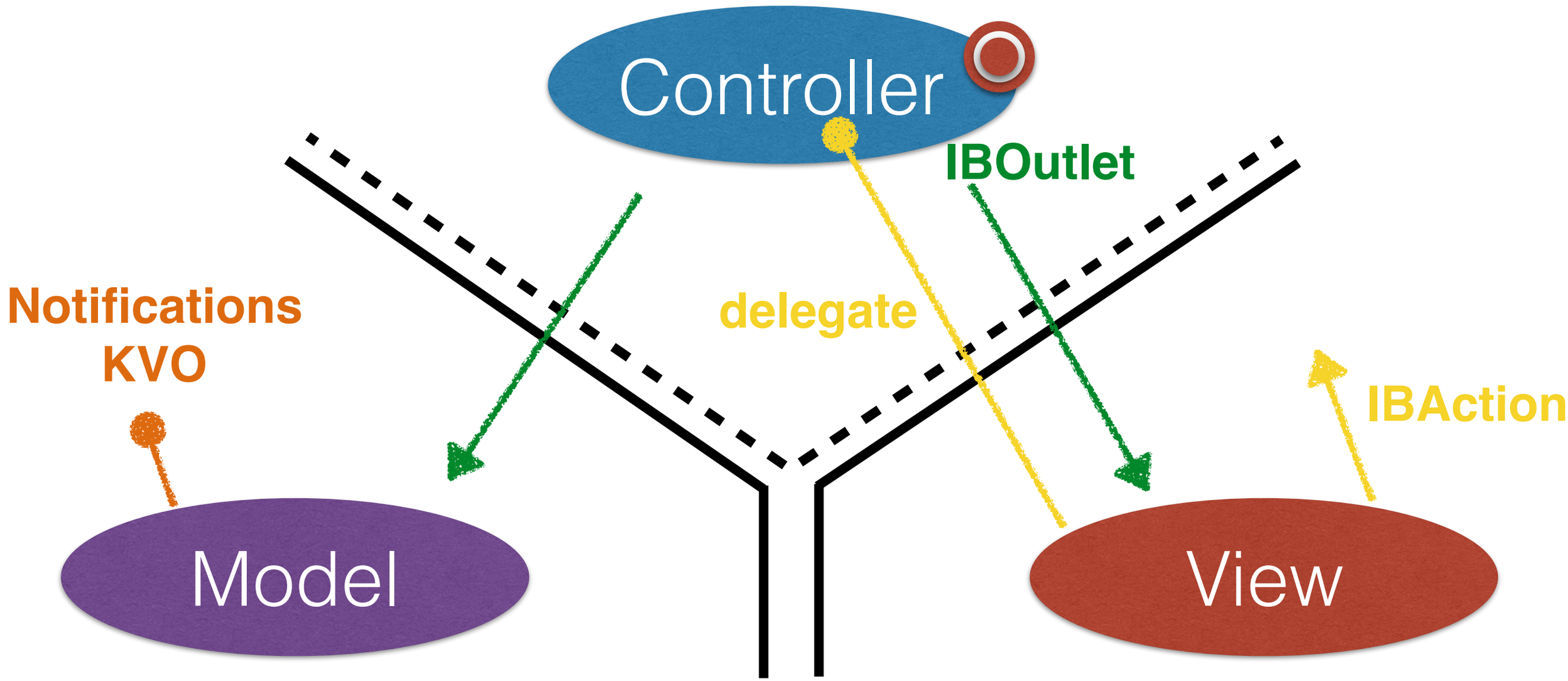
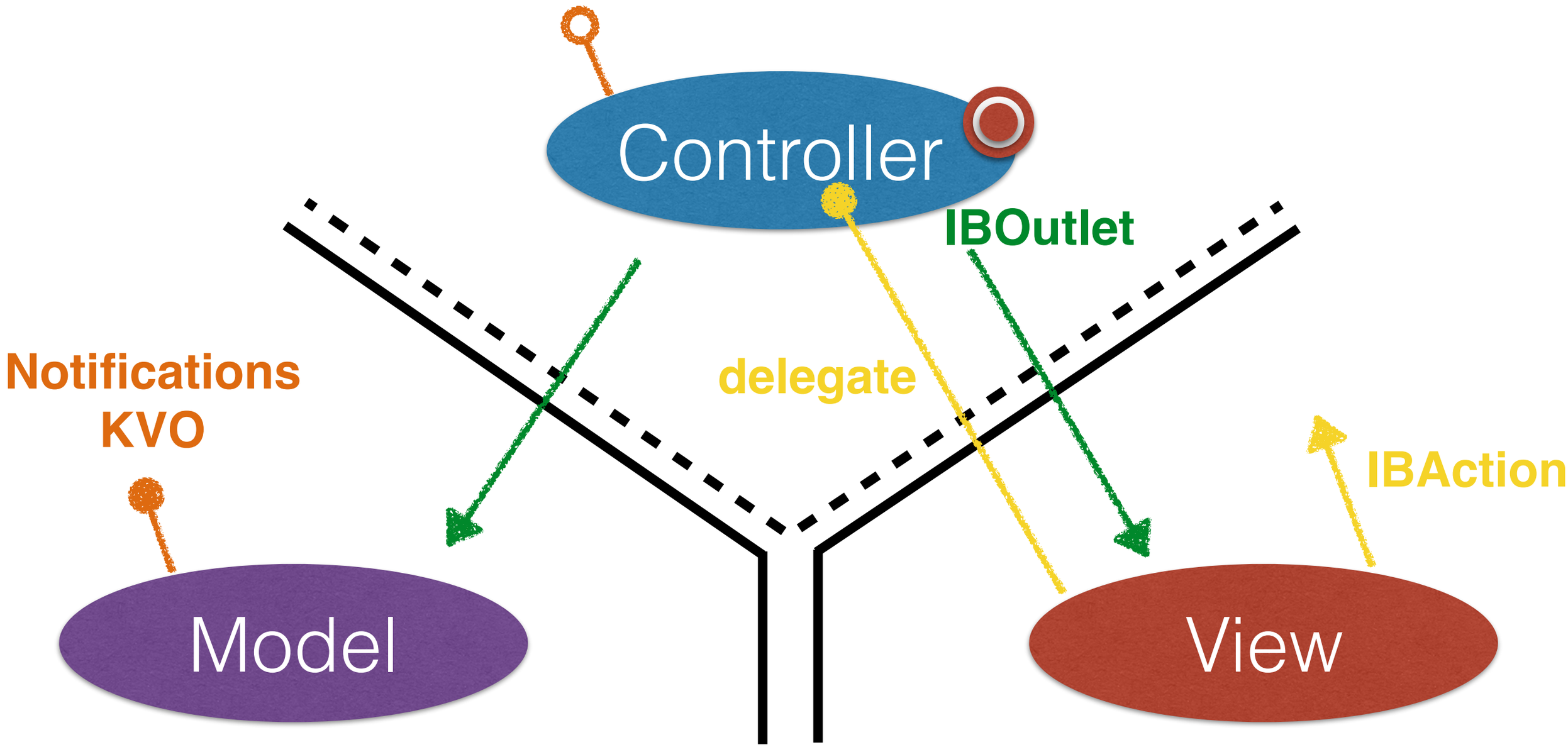


MVC


Controller
IBOutlet
Notifications
KVO
delegate
IBAction
Model
View

MVC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Structures and Classes

- Define properties
- Define methods
- Have initialisers
- Can be extended (via extension)*
- Conform to protocols*

* Later in the course

Structures

- Super light-weight classes
- Almost all std types are structures
- Copied by value (=> do not use ARC)
- Near C structures performance
- Default initialiser
- Do not inherit

Structures example

```
struct Location {
    let latitude: Float
    let longitude: Float
}

struct University {
    let name: String
    let acronim: String
    let location: Location

    var fullName: String {
        return "University with \(name), acronim \(acronim)"
    }
}

let ttuLocation = Location(latitude: 59.394868, longitude: 24.661387)
let ttu = University(name: "Tallinn ", acronim: "TTÜ", location: ttuLocation)
```

enum - Swift's superhero

- Computed properties
- Methods

```
struct Location {
    let latitude: Float
    let longitude: Float
}

enum ParallelsDevelopmentOffice {
    case moscow, tallinn, malta

    var location: Location {
        switch self {
        case .moscow: return Location(latitude: 55.756151, longitude: 37.61727)
        case .tallinn: return Location(latitude: 59.436960, longitude: 24.753574)
        case .malta: return Location(latitude: 35.909072, longitude: 14.506489)
        }
    }

    func distance(to location: Location) -> Float {
        //the body here
    }
}
```

enum - Swift's superhero

- Raw values

```
enum ParallelsDevelopmentOffice: String {
    case moscow = "Moscow", tallinn = "Tallinn", malta = "Malta"
}
```

- Associated values

```
enum ServerResponse {
    case error(String)
    case success
}
```

- Default initializer

- Conform to protocols, can be extended, value type

Nested types

- You can declare a type inside another type, which is inside third type
- Resulting type will be GrandParent.Parent.Child

```
struct Layout {

    enum Direction {
        case horizontal, vertical
    }

    let direction: Direction

}
let horizontalDirectionOutside = Layout.Direction.horizontal
```

Demo...