



IOS ESSENTIALS

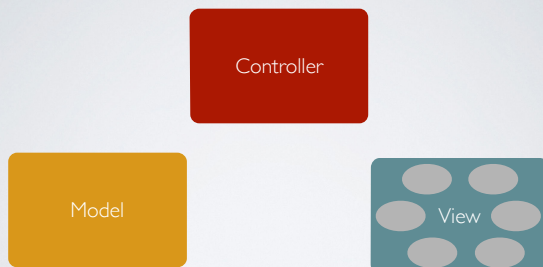
Lecture 04
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TOPICS

- Model / View / Controller
- Understanding ViewControllers and their life cycle.
- Overview of commonly used iOS ViewControllers

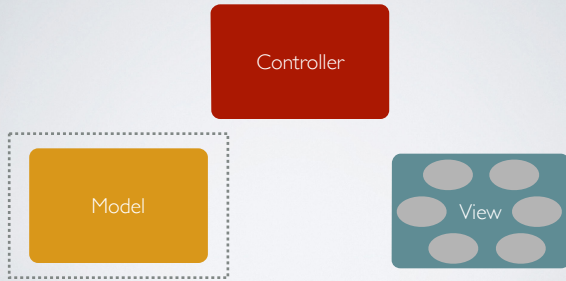


MODEL/VIEW/CONTROLLER



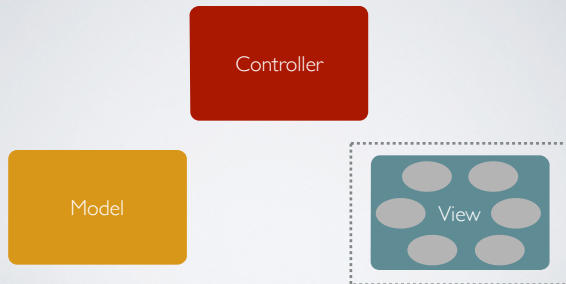
Our iOS code is broken up into 3 different components
(Inspired by Paul Hegarty's very excellent MVC lecture.)

MODEL/VIEW/CONTROLLER



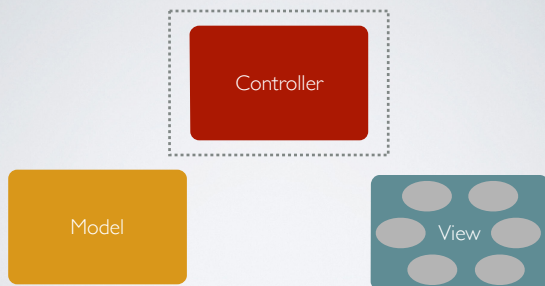
The **MODEL** is the data our app produces/consumes.

MODEL/VIEW/CONTROLLER



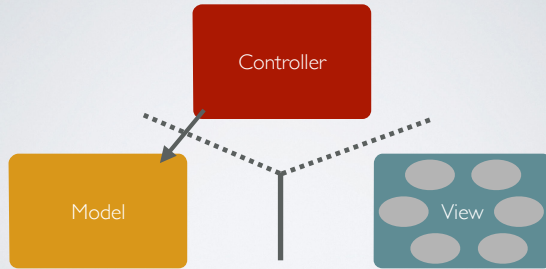
The **VIEW** is what the user sees and interacts with on screen.

MODEL/VIEW/CONTROLLER



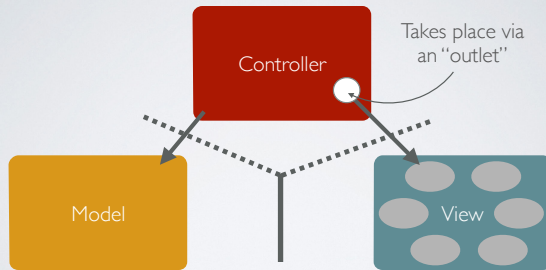
The **CONTROLLER** manages the model and the view.

MODEL/VIEW/CONTROLLER



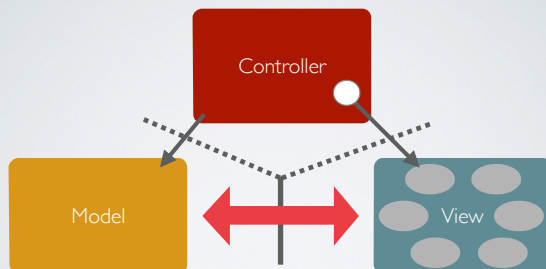
Controller can manipulate the model directly.

MODEL/VIEW/CONTROLLER



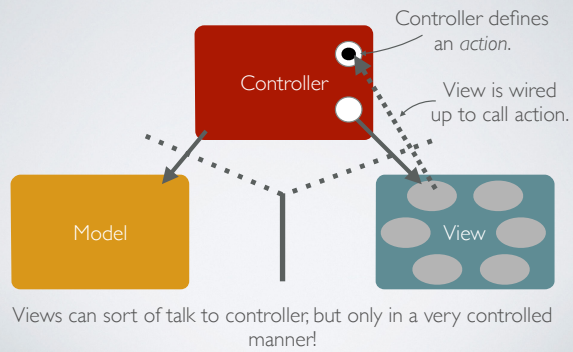
Controller can manipulate the view directly.

MODEL/VIEW/CONTROLLER

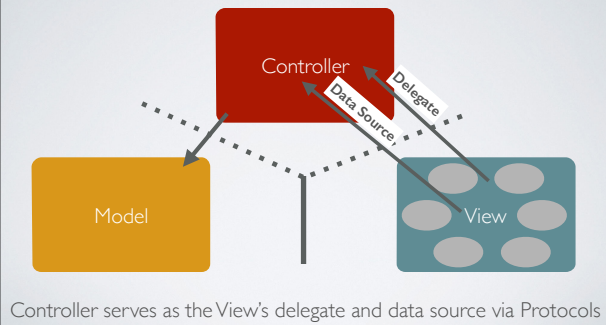


Model /View should **NEVER** talk directly to each other!

MODEL/VIEW/CONTROLLER



MODEL/VIEW/CONTROLLER



GREETING DEMO



DEMO!!

VIEW CONTROLLERS

- View controllers manage a screen's view hierarchy and the segues between view controllers.
- The “glue” between views and models in MVC.
- View controllers:
 - initialize and setup models
 - populate the view hierarchy with views
 - coordinate with the view hierarchy (delegate)
 - format data for the views (data source)

VIEW CONTROLLER LIFECYCLE

- Recall the methods generated when we created our first app:

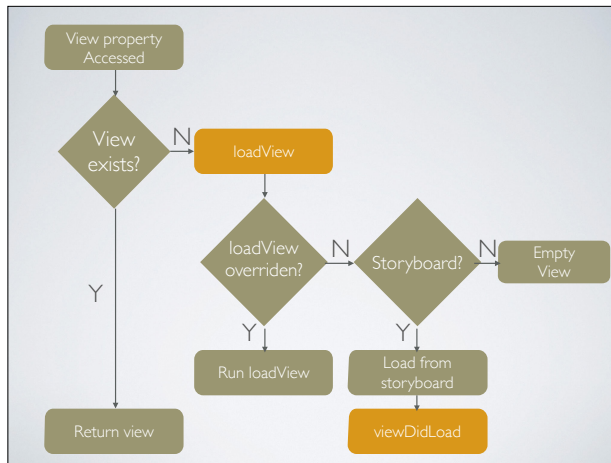
```
override func viewDidLoad() {  
    super.viewDidLoad()  
    // Do any additional setup after loading the view, typically from a nib.  
    self.configureView()  
}  
  
override func didReceiveMemoryWarning() {  
    super.didReceiveMemoryWarning()  
    // Dispose of any resources that can be recreated.  
}
```

- These are methods that help us coordinate with the controller's lifecycle.

VIEW CONTROLLER LIFE CYCLE

- Understanding the view controller life cycle allows us to properly manage the controller's models and views.
- Whenever a view controller's view property is accessed a chain of events is triggered.

<https://developer.apple.com/library/ios/technotes/ViewControllerPGforiPhoneOS/ViewLoadingandUnloading/ViewLoadingandUnloading.html>



VIEW CONTROLLER METHODS

Method Name	Description
viewDidLoad	View has finished loading.
viewWillAppear	View is about to appear.
viewDidAppear	View just appeared.
viewWillDisappear	View is about to disappear.
viewDidDisappear	View just disappeared.
didReceiveMemoryWarning	Low memory conditions detected.





READING ASSIGNMENT

- Chapter 6: Programming iOS8 (Neuburg)



LIFECYCLE & STOPWATCH DEMOS



DEMO!!
