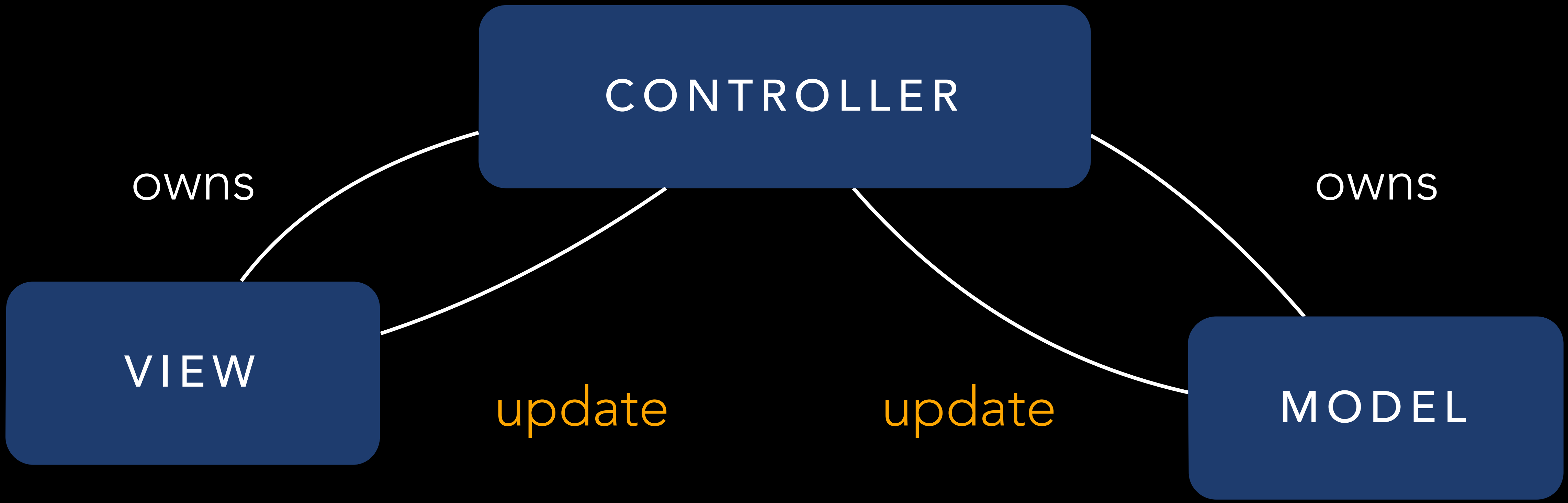
INTRODUCTION TO IOS ARCHITECTURE

MODEL VIEW CONTROLLER

MVC ARCHITECTURE



CONTROLLER

owns

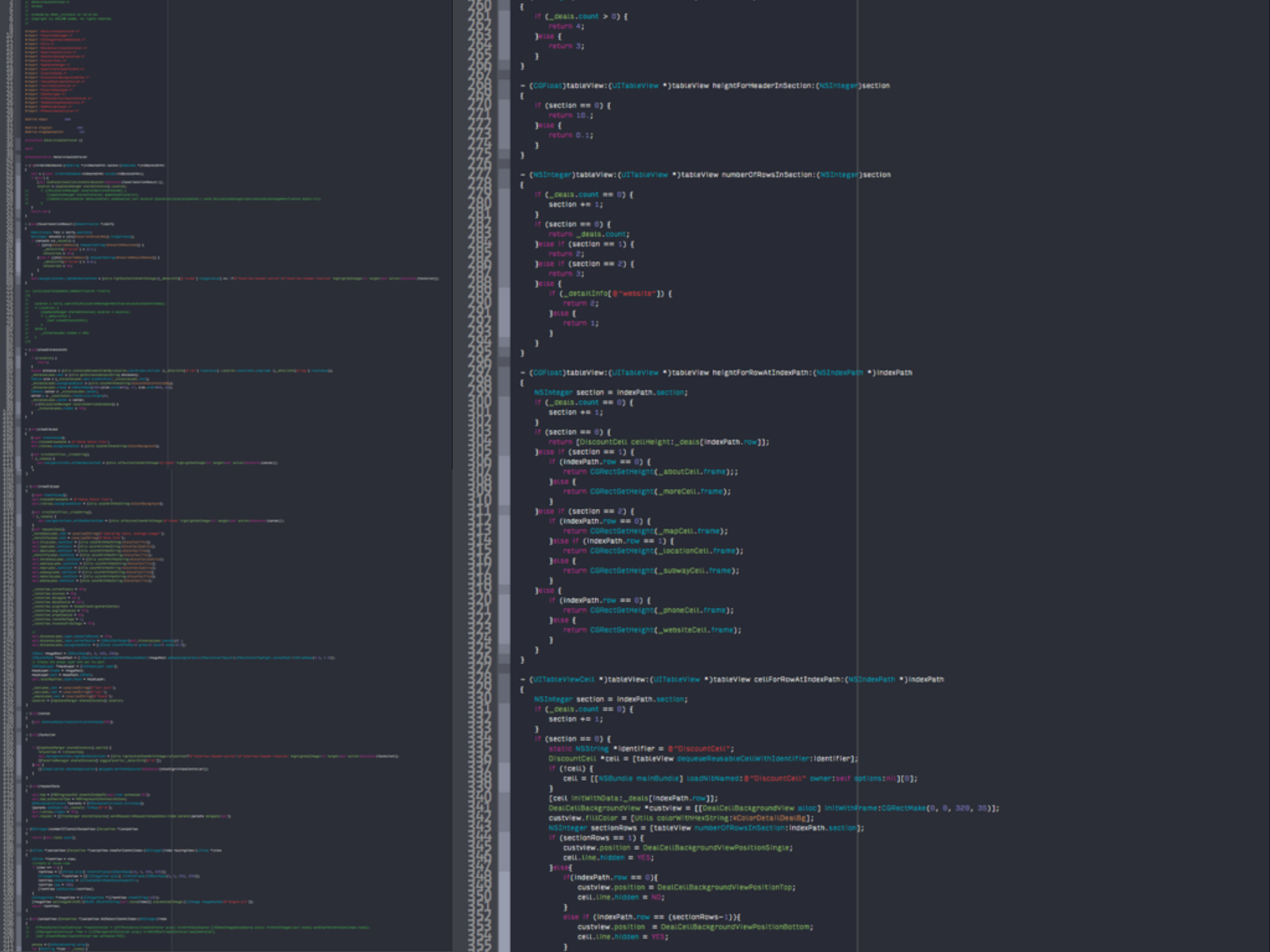
owns

VIEW

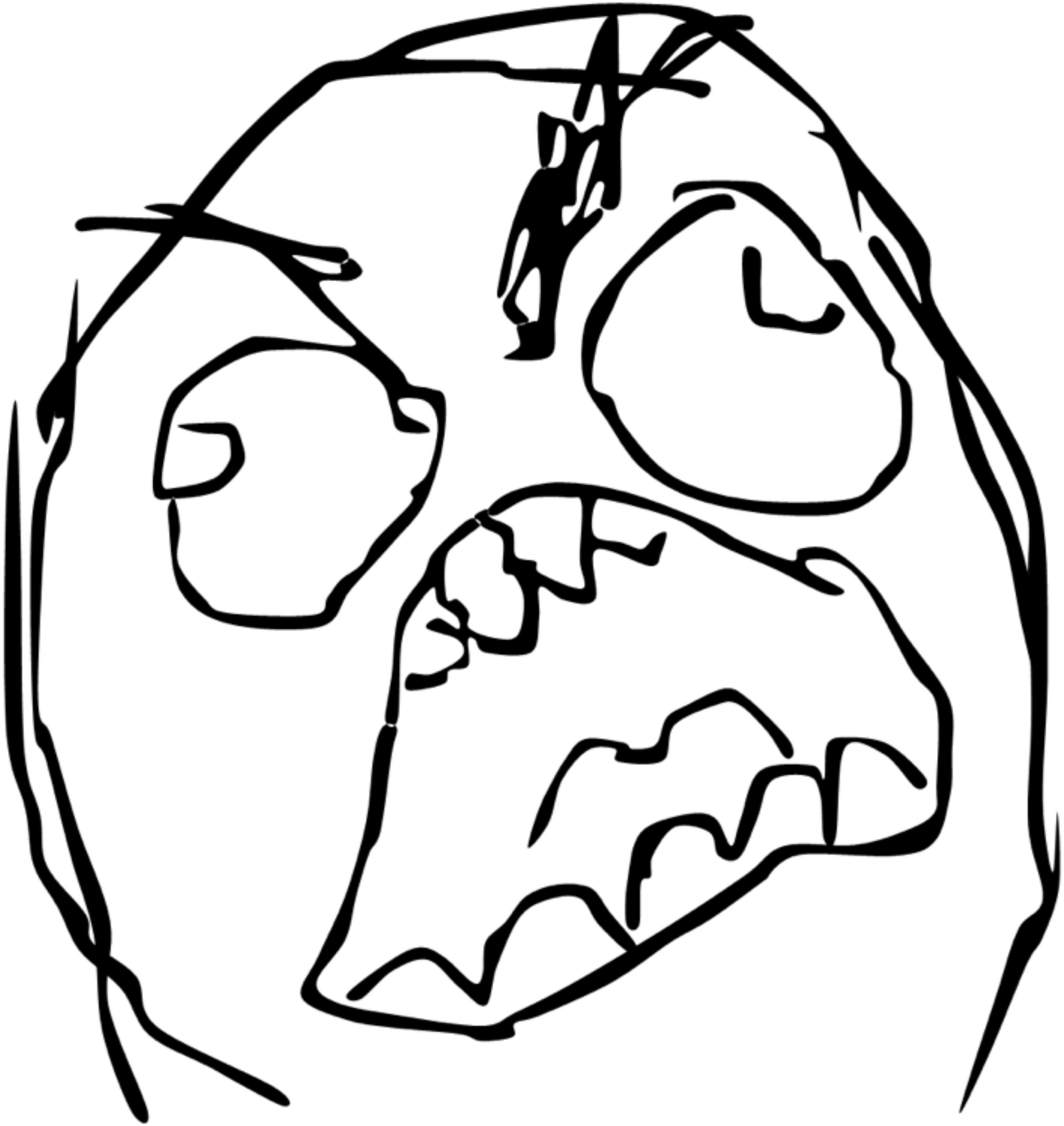
update

update

MODEL



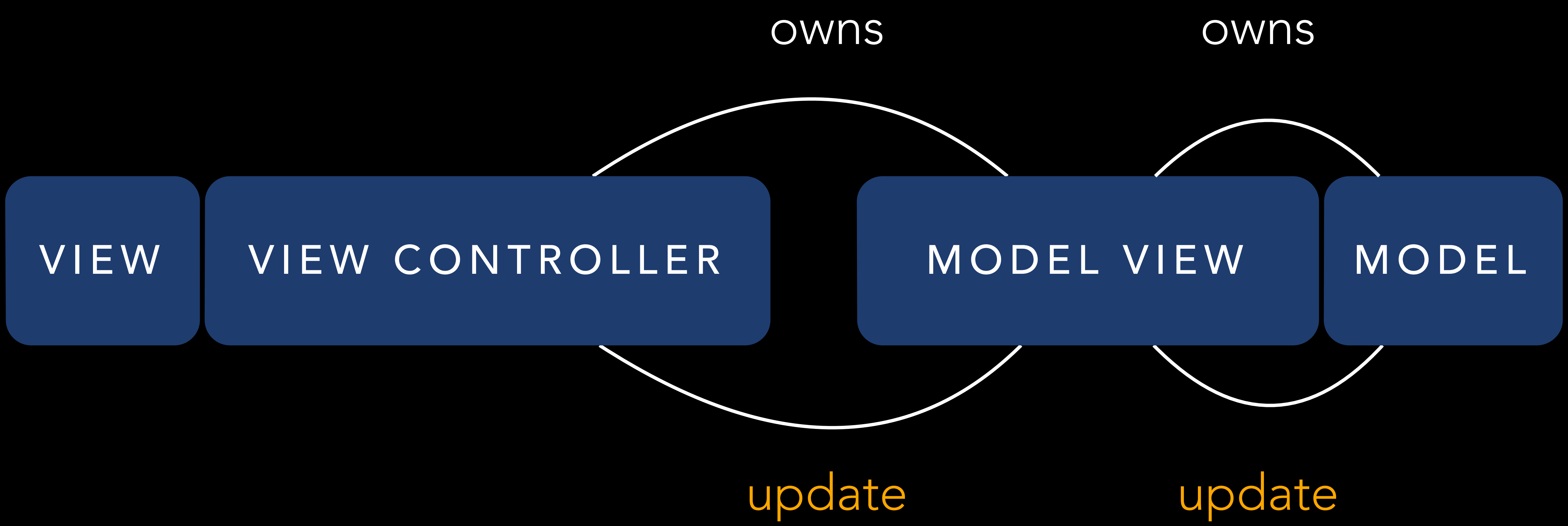
```
{
    if (_deals.count > 0) {
        return 4;
    }else {
        return 3;
    }
}

- (CGFloat)tableView:(UITableView *)tableView heightForHeaderInSection:(NSInteger)section
{
    if (section == 0) {
        return 10.;
    }else {
        return 0.1;
    }
}

- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
{
    if (_deals.count == 0) {
        section += 1;
    }
    if (section == 0) {
        return _deals.count;
    }else if (section == 1) {
        return 2;
    }else if (section == 2) {
        return 3;
    }else {
        if (_detailInfo[@"website"]) {
            return 2;
        }else {
            return 1;
        }
    }
}

- (CGFloat)tableView:(UITableView *)tableView heightForRowAtIndexPath:(NSIndexPath *)indexPath
{
    NSInteger section = indexPath.section;
    if (_deals.count == 0) {
        section += 1;
    }
    if (section == 0) {
        return [DiscountCell cellHeight:_deals[indexPath.row]];
    }else if (section == 1) {
        if (indexPath.row == 0) {
            return CGRectGetHeight(_aboutCell.frame);;
        }else {
            return CGRectGetHeight(_moreCell.frame);
        }
    }else if (section == 2) {
        if (indexPath.row == 0) {
            return CGRectGetHeight(_mapCell.frame);
        }else if (indexPath.row == 1) {
            return CGRectGetHeight(_locationCell.frame);
        }else {
            return CGRectGetHeight(_subwayCell.frame);
        }
    }else {
        if (indexPath.row == 0) {
            return CGRectGetHeight(_phoneCell.frame);
        }else {
            return CGRectGetHeight(_websiteCell.frame);
        }
    }
}

- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
{
    NSInteger section = indexPath.section;
    if (_deals.count == 0) {
        section += 1;
    }
    if (section == 0) {
        static NSString *identifier = @"DiscountCell";
        DiscountCell *cell = [tableView dequeueReusableCellWithIdentifier:identifier];
        if (!cell) {
            cell = [[NSBundle mainBundle] loadNibNamed:@"DiscountCell" owner:self options:nil][0];
        }
        [cell initWithData:_deals[indexPath.row]];
        DealCellBackgroundView *custview = [[DealCellBackgroundView alloc] initWithFrame:CGRectMake(0, 0, 320, 35)];
        custview.fillColor = [Utils colorWithHexString:kColorDetailDealBg];
        NSInteger sectionRows = [tableView numberOfRowsInSection:indexPath.section];
        if (sectionRows == 1) {
            custview.position = DealCellBackgroundViewPositionSingle;
            cell.line.hidden = YES;
        }else{
            if(indexPath.row == 0){
                custview.position = DealCellBackgroundViewPositionTop;
                cell.line.hidden = NO;
            }
            else if (indexPath.row == (sectionRows-1)){
                custview.position  = DealCellBackgroundViewPositionBottom;
                cell.line.hidden = YES;
            }
```



MASSIVE VIEW CONTROLLER

MVVM OR MVC++

MVVM ARCHITECTURE



WITHOUT MVVM

```
override func viewWillAppear(animated: Bool)
{
    super.viewWillAppear(animated)

    self.contentLabel.text = data.text

    let calendar = NSCalendar.currentCalendar();
    let unit:NSCalendarUnit = NSCalendarUnit.CalendarUnitMinute
    let dateComponent = calendar.components(unit, fromDate:
data.createdAt, toDate: NSDate(), options: nil)
    self.descriptionLabel.text = "\(data.firstname) \(data.lastname),
\(dateComponent.minute) ago"

    self.commentButton.setTitle("\(data.numberOfComments)
comments", forState: UIControlState.Normal)
}
...
```

WITH MVVM

Create a viewModel class

```
class DataViewModel: NSObject
{
    var contentText = ""
    var descriptionText = ""
    var commentTitle = ""

    func initWithData(data: Data) -> DataViewModel {
        let dataViewModel = DataViewModel()

        dataViewModel.contentText = data.text

        let calendar = NSCalendar.currentCalendar();
        let unit:NSCalendarUnit = NSCalendarUnit.CalendarUnitMinute
        let dateComponent = calendar.components(unit, fromDate: data.createdAt, toDate:
NSDate(), options: nil)
        dataViewModel.descriptionText = "\(data.firstname) \(data.lastname), \
(dateComponent.minute) ago"

       dataViewModel.commentTitle = "\(data.numberOfComments)"

        return dataViewModel
    }
}
```

WITH MVVM

After you initialized viewModel

```
override func viewWillAppear(animated: Bool)
{
    super.viewWillAppear(animated)

    self.contentLabel.text = viewModel.contentText
    self.descriptionLabel.text = viewModel.descriptionText
    self.commentButton.setTitle(viewModel.commentTitle, forState:
UIControlState.Normal)
}
...
```

WHY MVVM ?

- MVVM is compatible with your existing MVC architecture.
- MVVM makes your apps more testable
- Because Microsoft

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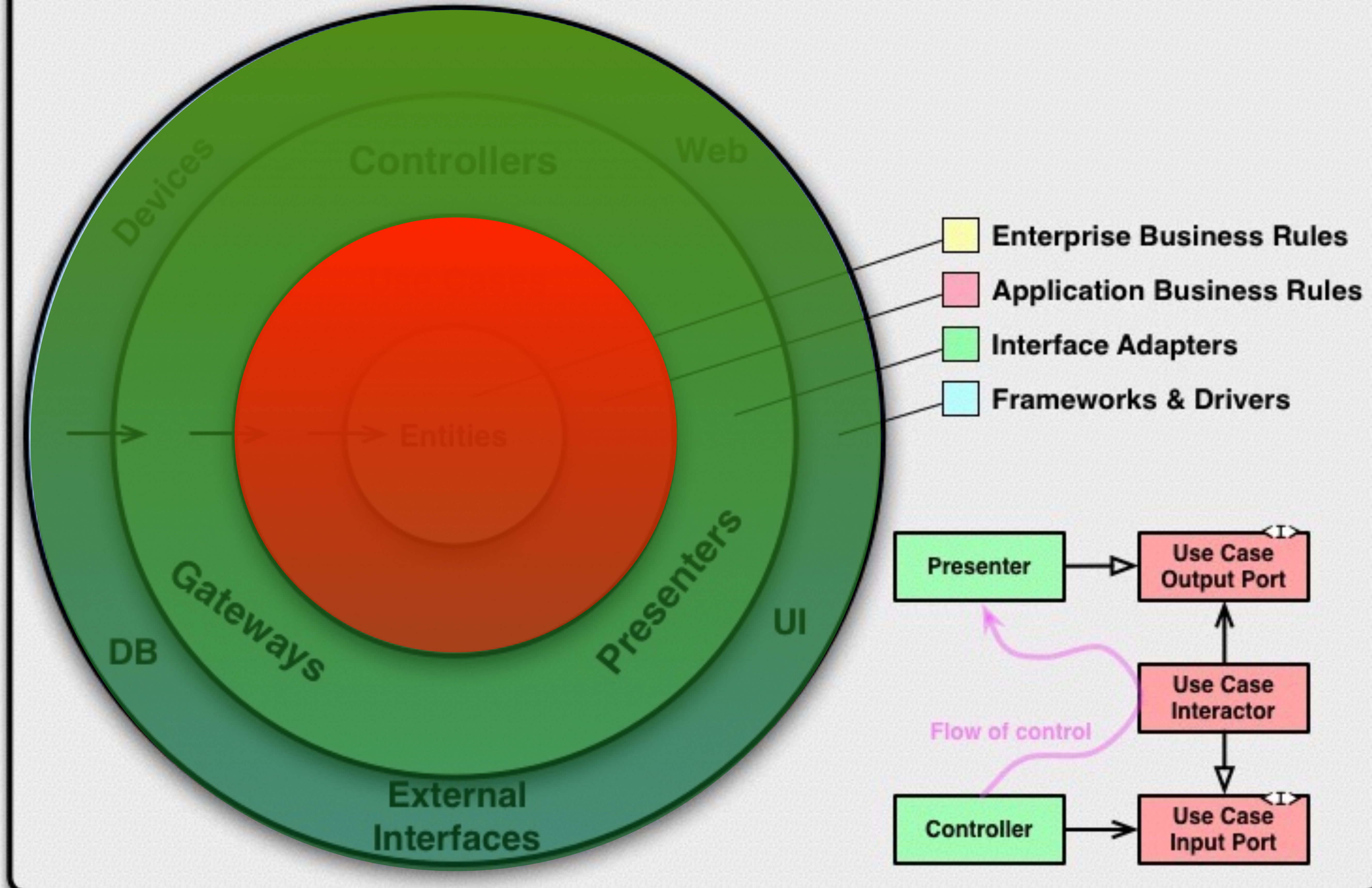
The Single Responsibility Principle

VIPER

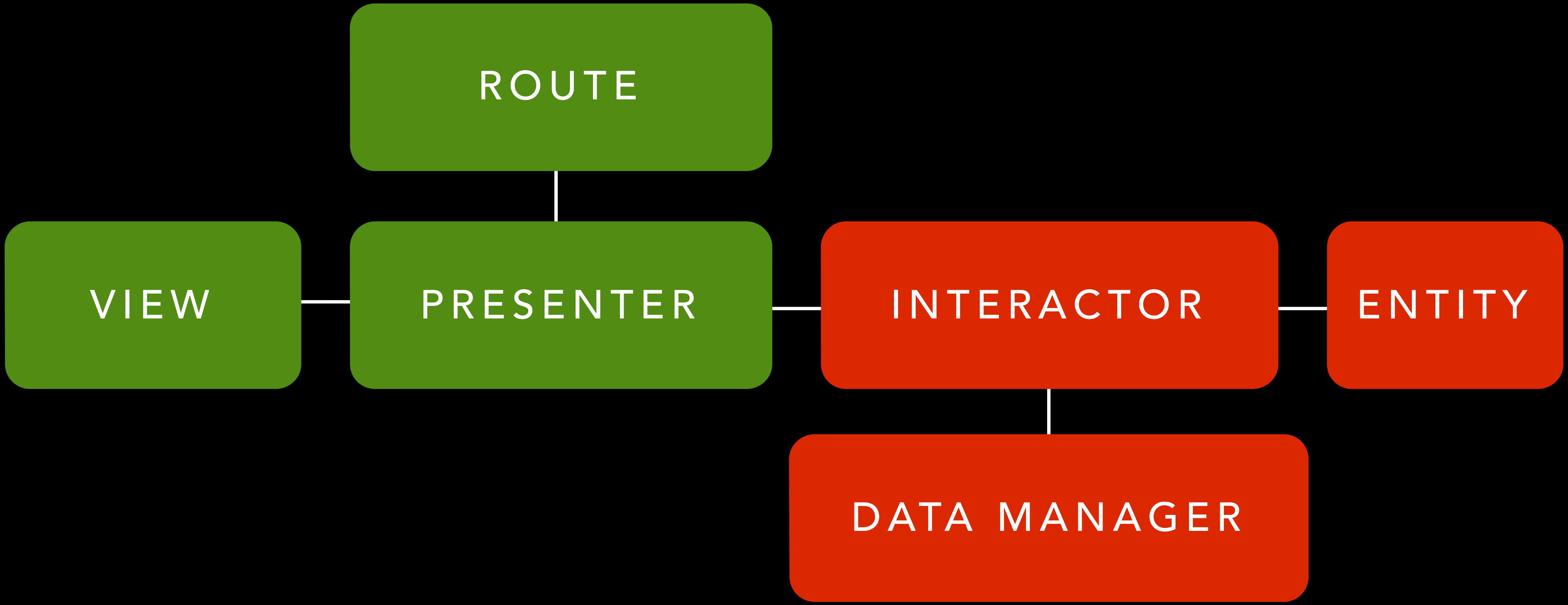
The Clean Architecture



Business logic

User Interface

VIPER ARCHITECTURE



ROUTE

VIEW

PRESENTER

INTERACTOR

ENTITY

DATA MANAGER

🟩 UI Interface

🟥 Business Logic

DEMO

https://github.com/romsi/VIPERXCodeTemplate

RESOURCES

- Introduction to MVVM
http://www.objc.io/issue-13/mvvm.html

- The Clean Architecture
http://blog.8thlight.com/uncle-bob/2012/08/13/the-clean-architecture.html

- The Principles of OOD
http://www.butunclebob.com/ArticleS.UncleBob.PrinciplesOfOod

- Introduction to VIPER
http://mutualmobile.github.io/blog/2013/12/04/viper-introduction/

THANK YOU

My email is romain.asnar@gmail.com if you would like to chat. Follow me @romsi94 because I like tweeting about dishes. I know that you prefer reading my slide, that's why I wrote a lot. But first, I would like to say thanks to my parents. As developer you should know that 80% of your product development takes as much effort as the last 20%, prepare yourself for those detail challenge ahead. You can imagine how much time I spent to write all of these. I forget to tell you that if you continue to read this I can tell you another story but in French. C'est l'histoire d'un petit garçon qui avait eu un ordinateur pour son anniversaire. Il était très heureux et il apprit le développement. Bon, j'en ai marre d'écrire et si vous continuez de lire meme si c'est en français, je ne peux plus rien pour vous. Thank you for reading it.

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