Mobile Development

What's different?

- Design is (more) challenging

- Platform differences

- Screen size variation

- Fantastic open source community

- Importance of integrations

- Must be lightweight

Design Challenges

- Text is very expensive

- Icons are king

- Inferred functionality

- Negative space

- Staying away from stock

Back to Code

- iOS: Objective-C and/or Swift
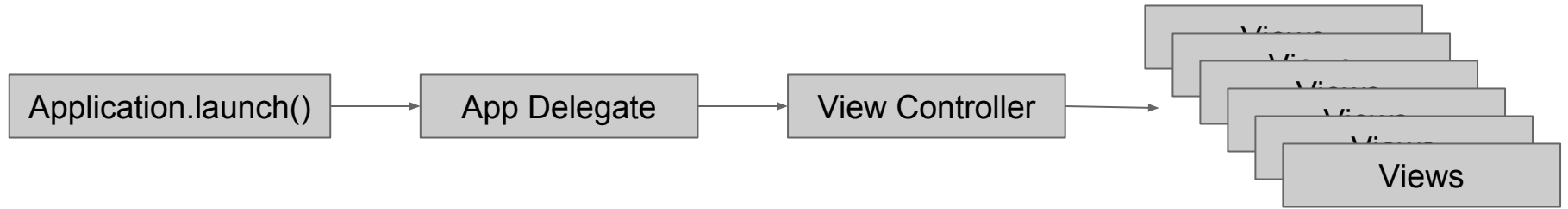
- Android: Java + XML

- Windows Phone: No one cares

iOS vs Android

- Xcode
- Simulator
- Runs on metal
- Cocoapods or Carthage

- Android Studio w/ Gradle
- Emulator
- Virtualization
- Maven

iOS Architecture

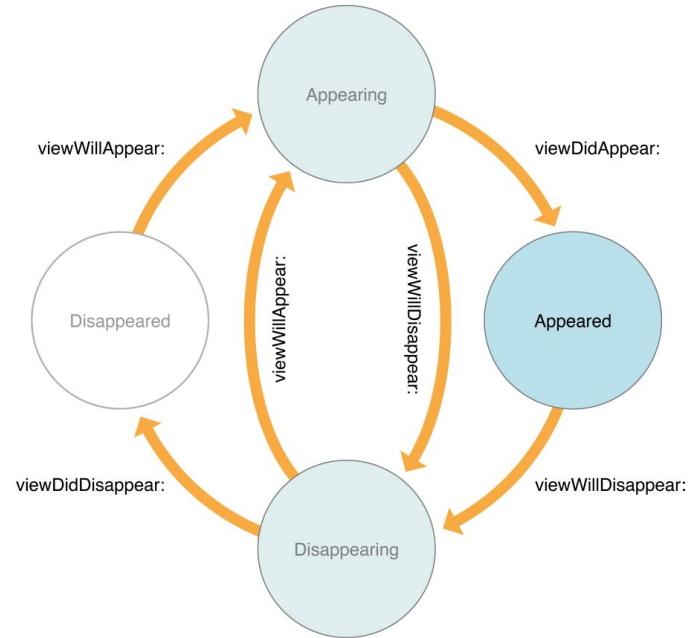- Model View Controller
    - Controller is king
- Model View View-Model
    - Separation of responsibilities

iOS Structure

Application.launch() → App Delegate → View Controller → Views

View Controllers

1. Allocation & Instantiation
2. Loading
3. Appearing
4. Usage
5. Disappearing
6. De-loading
7. Memory Release

Delegation

- An object needs answers or needs definitions
- That's the delegate's job
- Delegate implements a protocol defined by the object which requires delegation

1. TableView needs to know what its cells are
2. Asks the data source (a delegate)
3. Data source provides each cell as a return value for the TableView
4. TableView can now render cells

Objective-C and Swift

- Specialized languages

- *[Object method];*

- *[Object methodWithParameter:variable];*

- *Object.method(parameter:variable)*

Blocks

```objc
[titleLabel mas_makeConstraints:^(MASConstraintMaker *make) {
    make.left.equalTo(self.view.mas_left).with.offset(padding.left);
    make.top.equalTo(self.view.mas_top).with.offset(padding.top);
    make.bottom.equalTo(submissionImageView.mas_top).with.offset(padding.bottom);
}];
```

Blocks

```swift
ALSession.sharedInstance.loginWithSocialAccessToken(.Facebook, tokenString) { (result) in
    if (result) {
        self.navigationController?.popToRootViewControllerAnimated(true)
    } else {
        self.errorLabel.text = "Unable to login with Facebook"
        self.errorLabel.hidden = false
    }
    ALProgressHUD.hide()
}
```

Blocks

```objc
[[AXAPI API] getImageAtPath:[submission[@"images"] firstObject] completion:^(UIImage *image) {
    dispatch_async(dispatch_get_main_queue(), ^{
        [UIView transitionWithView:submissionImageView
                          duration:0.2
                           options:UIViewAnimationOptionTransitionCrossDissolve
                        animations:^{
                            [submissionImageView setImage:image];
                        } completion:nil];
    });

}];
```

Picking up Mobile Development

- Don't be scared of it, it can smell fear

- Learn the language first, then the framework

- Code changes fast in this paradigm, be prepared for that