

Level 3

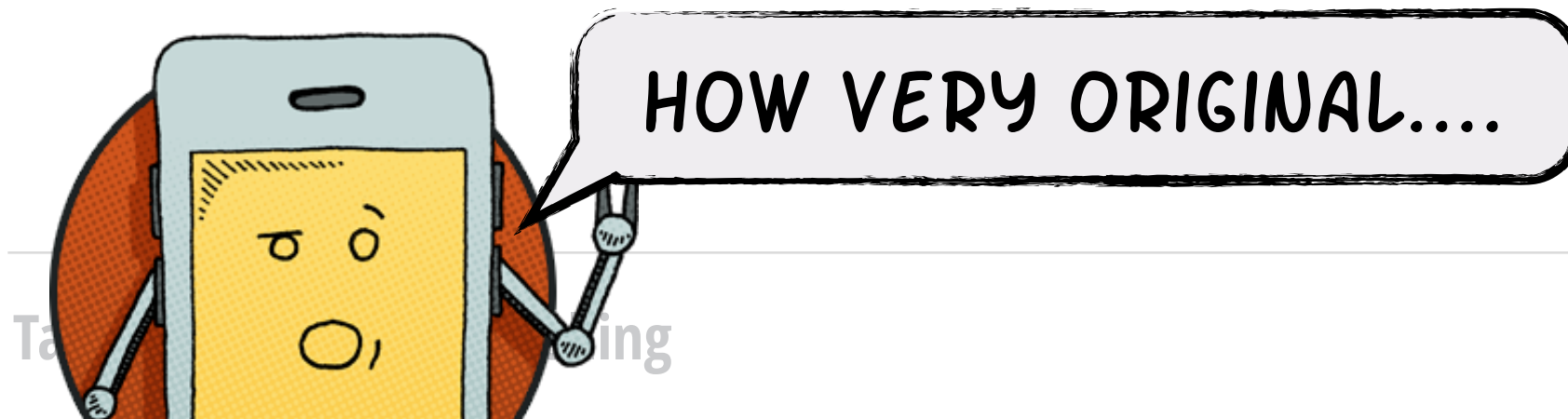
Tabs, Images, and Scrolling



Introducing InstaPhoto



- Photo Feed** Show most recent photos from the Internet
- Favorites** Show your personal favorite photos, from the feed
- Profile** Show/Edit personal information





01 Introduction to the UITabBarController

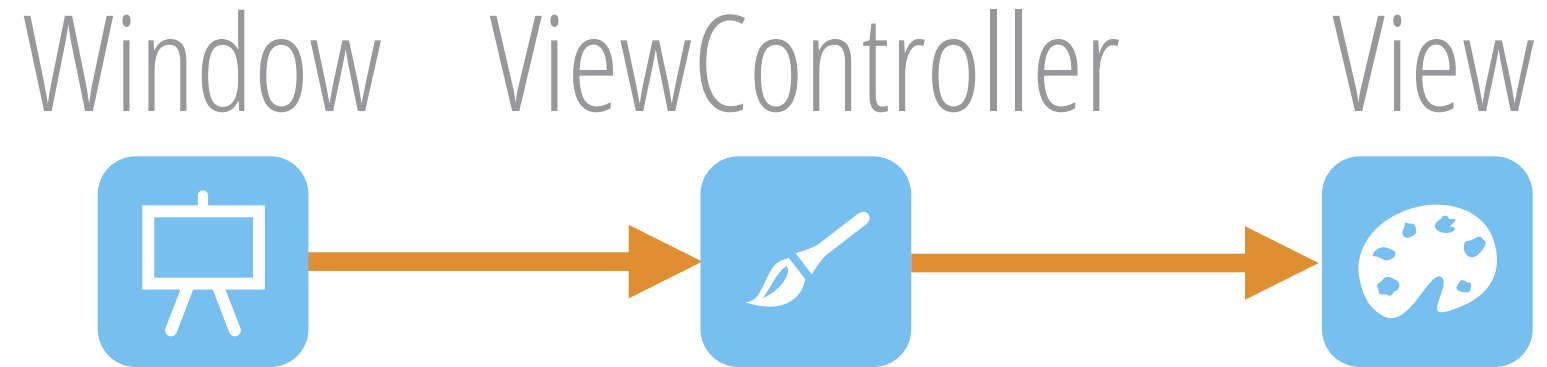
02 Adding Images to the Tabs

03 Refactoring Our View Controllers

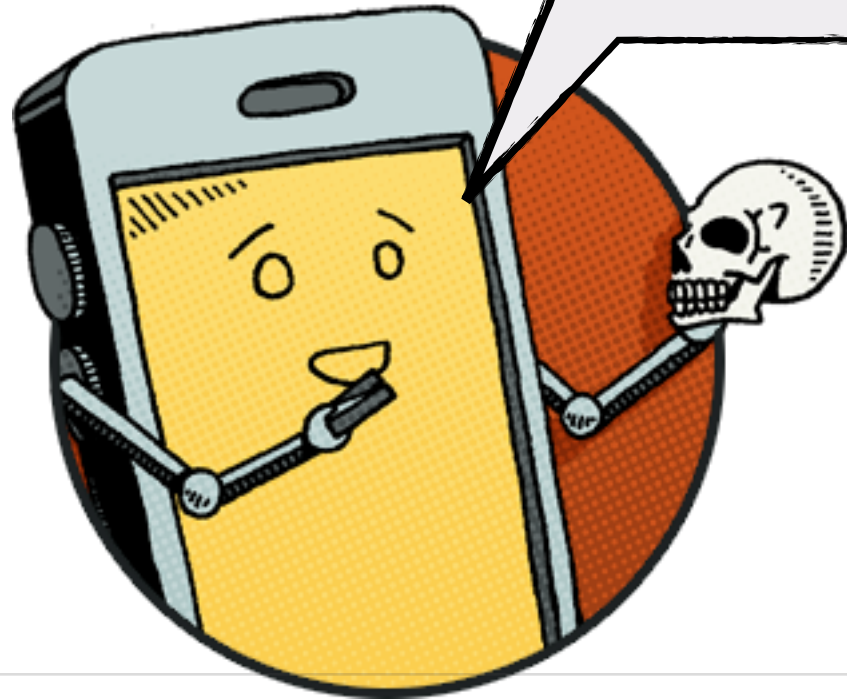
04 Adding Images to Our Application

05 Scroll View

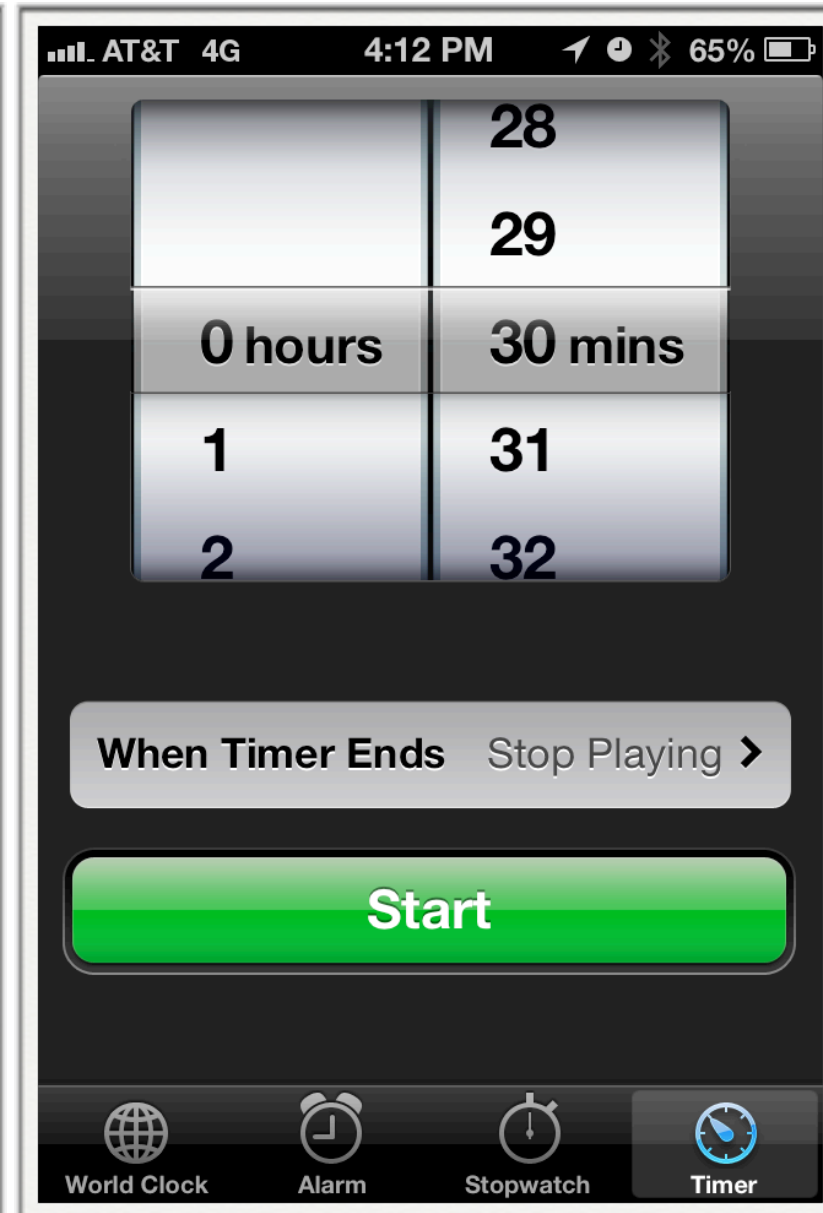
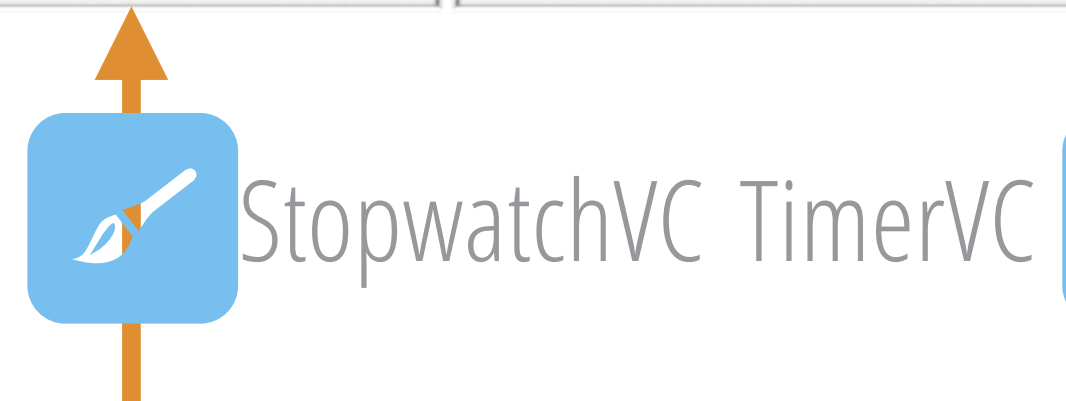
Our Lonely ViewController



A VIEW CONTROLLER SHOULD
ONLY HAVE ONE PRIMARY JOB.



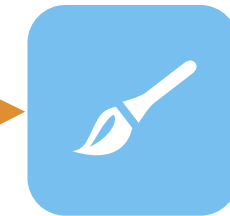
ViewControllers inside Clock app



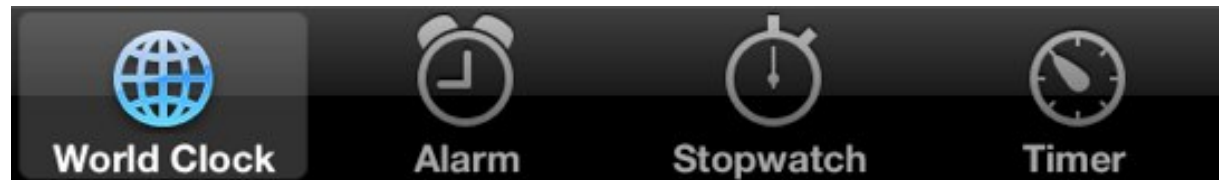
Introduction to the UITabBarController



Window UITabBarController



WorldClockVC



AlarmVC



StopwatchVC



TimerVC

Type of Container View Controller

When clicked displays the root view for that ViewController.

Creating a UITabBarController



AppDelegate.m

```
- (BOOL) application:(UIApplication *)application  
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions  
{
```

No need to create a subclass

```
UITabBarController *tabBarController = [[UITabBarController alloc] init];
```

```
self.window = [[UIWindow alloc] initWithFrame:[[UIScreen mainScreen] bounds]];  
self.window.rootViewController = tabBarController;  
[self.window makeKeyAndVisible];
```

```
return YES;
```

```
}
```

Next, we need to create ViewControllers & add them to the tab

Adding ViewControllers to our Tab



AppDelegate.m

```
- (BOOL) application:(UIApplication *)application  
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions  
{
```



```
UIViewController *feedViewController = [[UIViewController alloc] init];  
feedViewController.title = @"Feed";
```



```
UIViewController *favoritesViewController = [[UIViewController alloc] init];  
favoritesViewController.title = @"Favorites";
```

```
feedViewController.view.backgroundColor = [UIColor blueColor];  
favoritesViewController.view.backgroundColor = [UIColor redColor];
```

```
UITabBarController *tabBarController = [[UITabBarController alloc] init];
```

```
[tabBarController setViewControllers:@[feedViewController, favoritesViewController]];
```

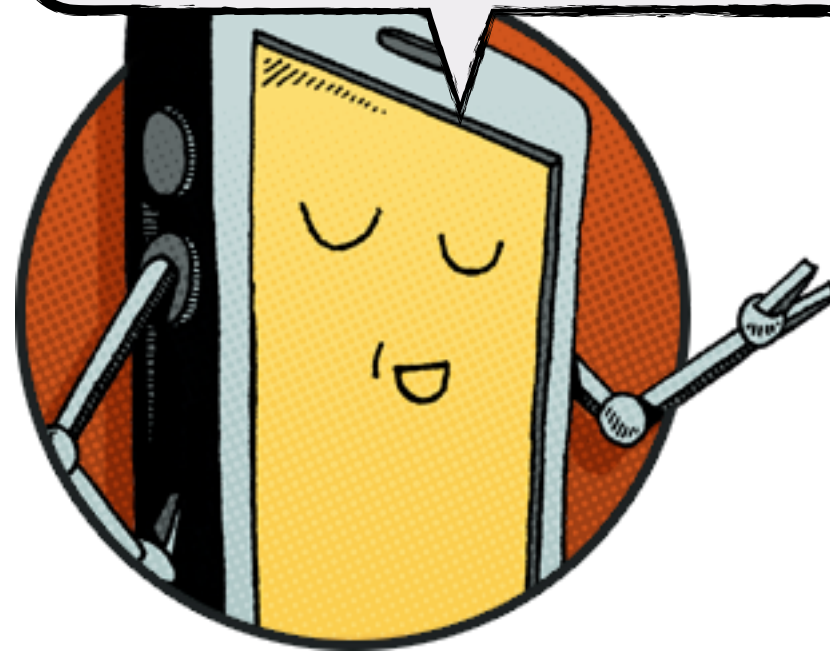
... Add ViewControllers to the tabBar, and default to first.



With our UITabBarController



JUST ADD A POLICE SIREN,
AND YOU COULD PULL
SOMEONE OVER WITH THIS APP.



Let's add some Icons to our Tab



These icons are:

Sized 30x30 points

Usually PNG with only the Alpha channel

Imported into XCode project



Let's add some Icons to our Tabs



AppDelegate.m

```
- (BOOL) application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
{
    UINavigationController *feedViewController = [[UINavigationController alloc] init];
    feedViewController.title = @"Feed";
    feedViewController.tabBarItem.image = [UIImage imageNamed:@"tab_icon_feed"];
    ...
}
```

A property of UINavigationController

Look in cache/filesystem for tab_icon_feed.png

Our AppDelegate is Cluttered

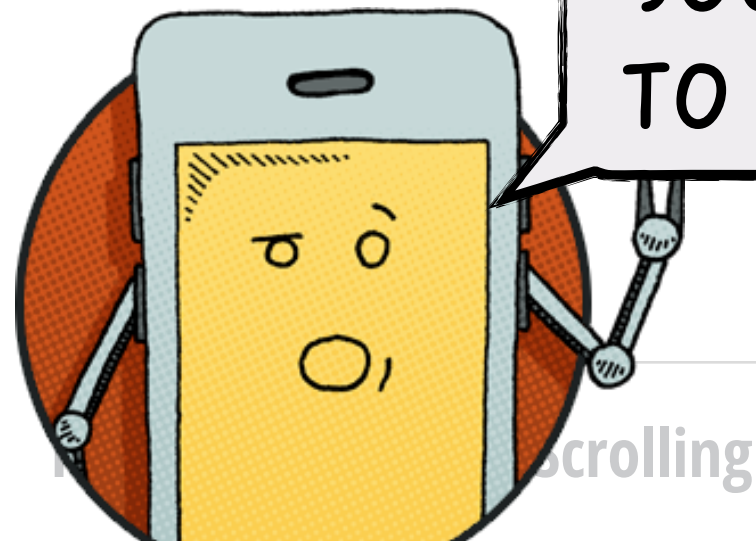


AppDelegate.m

```
- (BOOL) application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
{
    UINavigationController *feedViewController = [[UINavigationController alloc] init];
    feedViewController.title = @"Feed";
    feedViewController.tabBarItem.image = [UIImage imageNamed:@"tab_icon_feed"];
    ...
}
```

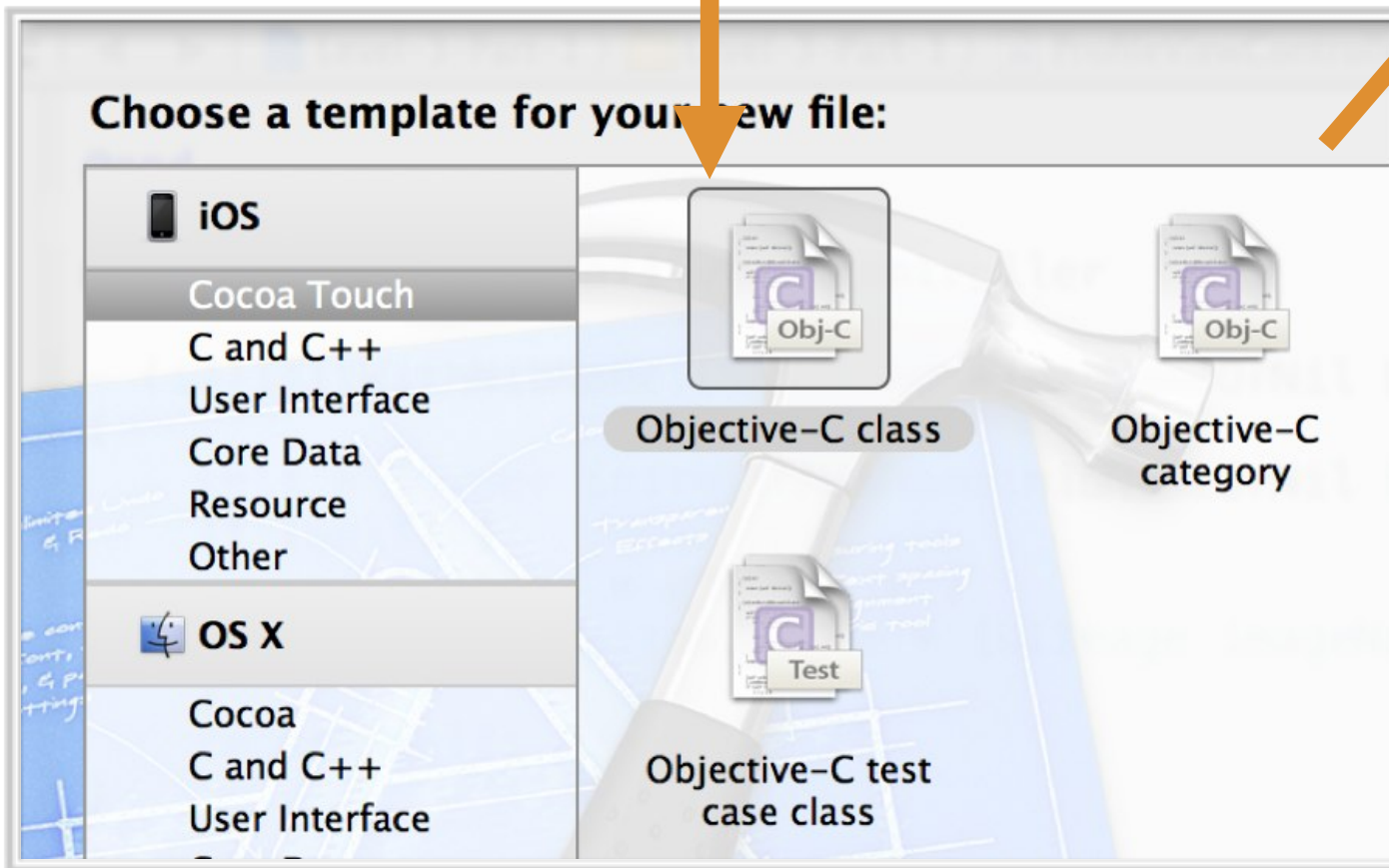
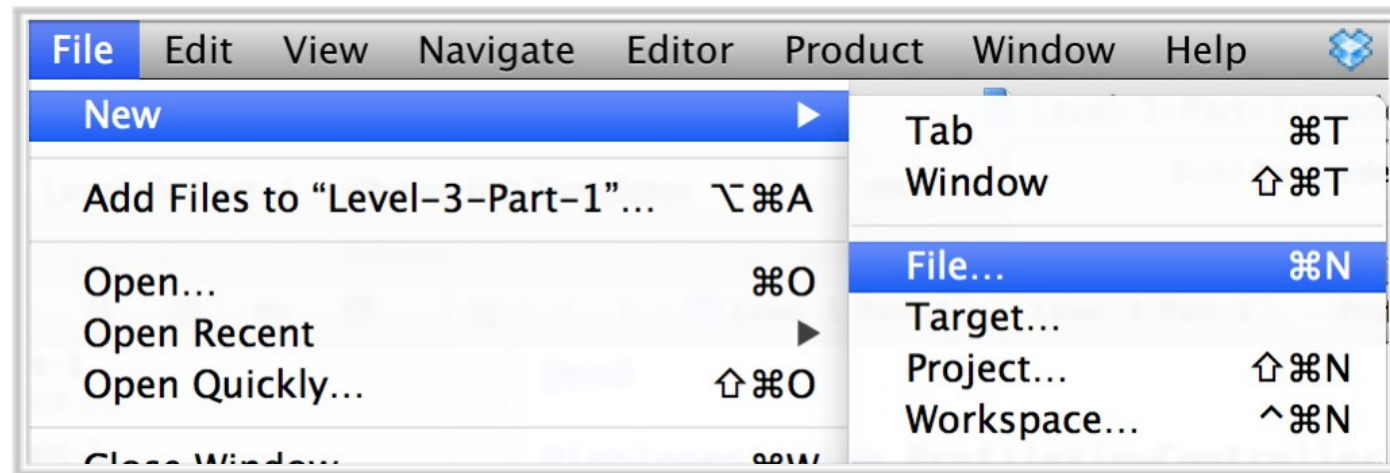


YOU NEED TO CREATE FEEDVIEWCONTROLLER
TO ENCAPSULATE THE BEHAVIOR.

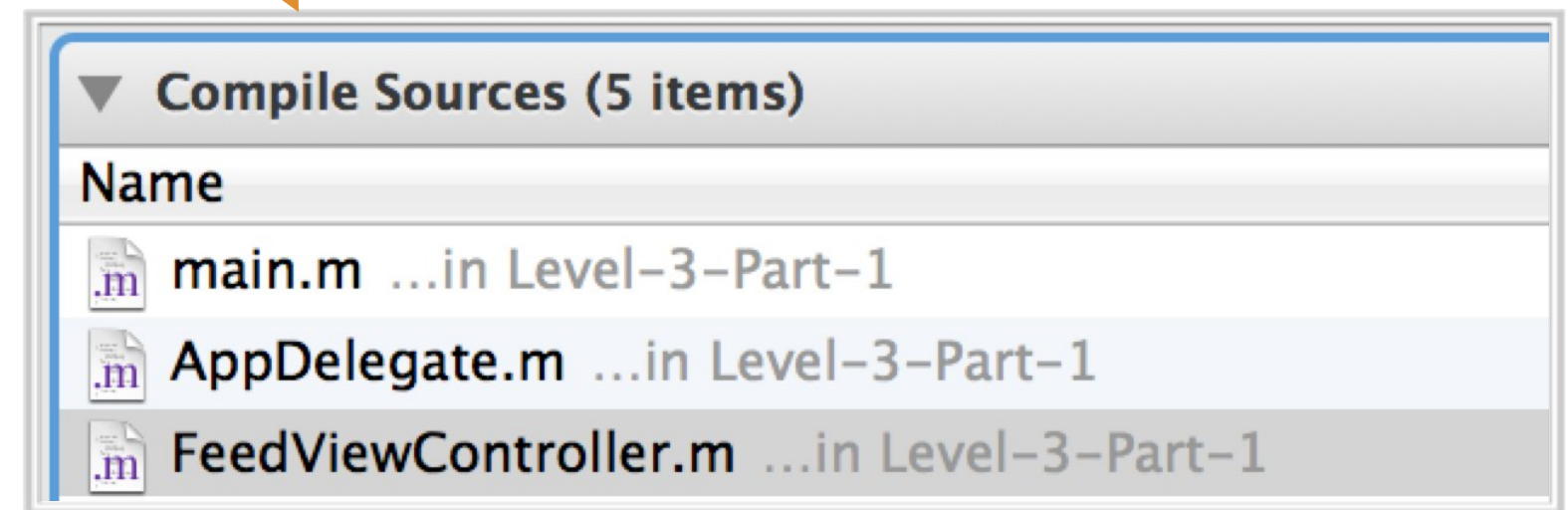


scrolling

Create a New Class



FeedViewController.m
FeedViewController.h



Automatically adds this to files
to compile when you build

Using our new FeedViewController




AppDelegate.m

old code

```
#import "AppDelegate.h"

@implementation AppDelegate

- (BOOL) application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
{
     UINavigationController *feedViewController = [[UINavigationController alloc] init];
    feedViewController.title = @"Feed";
    feedViewController.tabBarItem.image = [UIImage imageNamed:@"tab_icon_feed"];
}
```



We need to: **Import the new Class**
Use the new Class

Using our new FeedViewController



AppDelegate.m


```
#import "AppDelegate.h"
```

```
#import "FeedViewController.h"
```



```
@implementation AppDelegate
```

```
- (BOOL) application:(UIApplication *)application  
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions  
{
```

```
 FeedViewController *feedViewController = [[FeedViewController alloc] init];  
feedViewController.title = @"Feed";  
feedViewController.tabBarItem.image = [UIImage imageNamed:@"tab_icon_feed"];
```

Move ViewController behavior into the ViewController

Inside our new FeedViewController



FeedViewController.m

Initialization method (yeah, it's ugly)



```
...
@implementation FeedViewController

- (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
{
    self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
    if (self) {
        // Custom initialization
        self.title = @"Feed";
        self.tabBarItem.image = [UIImage imageNamed:@"tab_icon_feed"];
    }
    return self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view.
    self.view.backgroundColor = [UIColor blueColor];
}
```

Let's add a Picture In our Profile



ProfileViewController.m

...

```
- (void)viewDidLoad  
{
```

```
    [super viewDidLoad];
```

```
    // Do any additional setup after loading the view.
```

```
    self.view.backgroundColor = [UIColor blueColor];
```



```
    UIImageView *greggView = [[UIImageView alloc] initWithImage:  
        [UIImage imageNamed:@"gregg.jpg"]];  
    [greggView setContentMode:UIViewContentModeScaleAspectFit];  
    greggView.frame = self.view.frame;  
    [self.view addSubview:greggView];
```

Let's Break this Down



ProfileViewController.m

...

Creates a view for displaying an image



```
UIImageView *greggView = [[UIImageView alloc] initWithImage:  
[UIImage imageNamed:@"gregg.jpg"]];
```



If not a png we need to specify image extension

```
[greggView setContentMode:UIViewContentModeScaleAspectFit];
```

Determines how a view lays out its content

```
greggView.frame = self.view.frame;
```

The frame rectangle, which describes the view's location and size in its superview's coordinate system

```
[self.view addSubview:greggView];
```

Let's Build Out Our Profile



Profile Image



Name



City



Biography



Member Since

Resizing Our Picture



ProfileViewController.m

...

```
- (void) viewDidLoad  
{
```

```
    [super viewDidLoad];
```

```
    // Do any additional setup after loading the view.
```

```
    self.view.backgroundColor = [UIColor blueColor];
```



```
    UIImageView *greggView = [[UIImageView alloc] initWithImage:  
                               [UIImage imageNamed:@"gregg.jpg"]];
```

```
    [greggView setContentMode:UIViewContentModeScaleAspectFit];
```

```
    greggView.frame = self.view.frame;
```

```
    [self.view addSubview:greggView];
```

Old Code



We need a smaller Profile Image

Resizing Our Picture

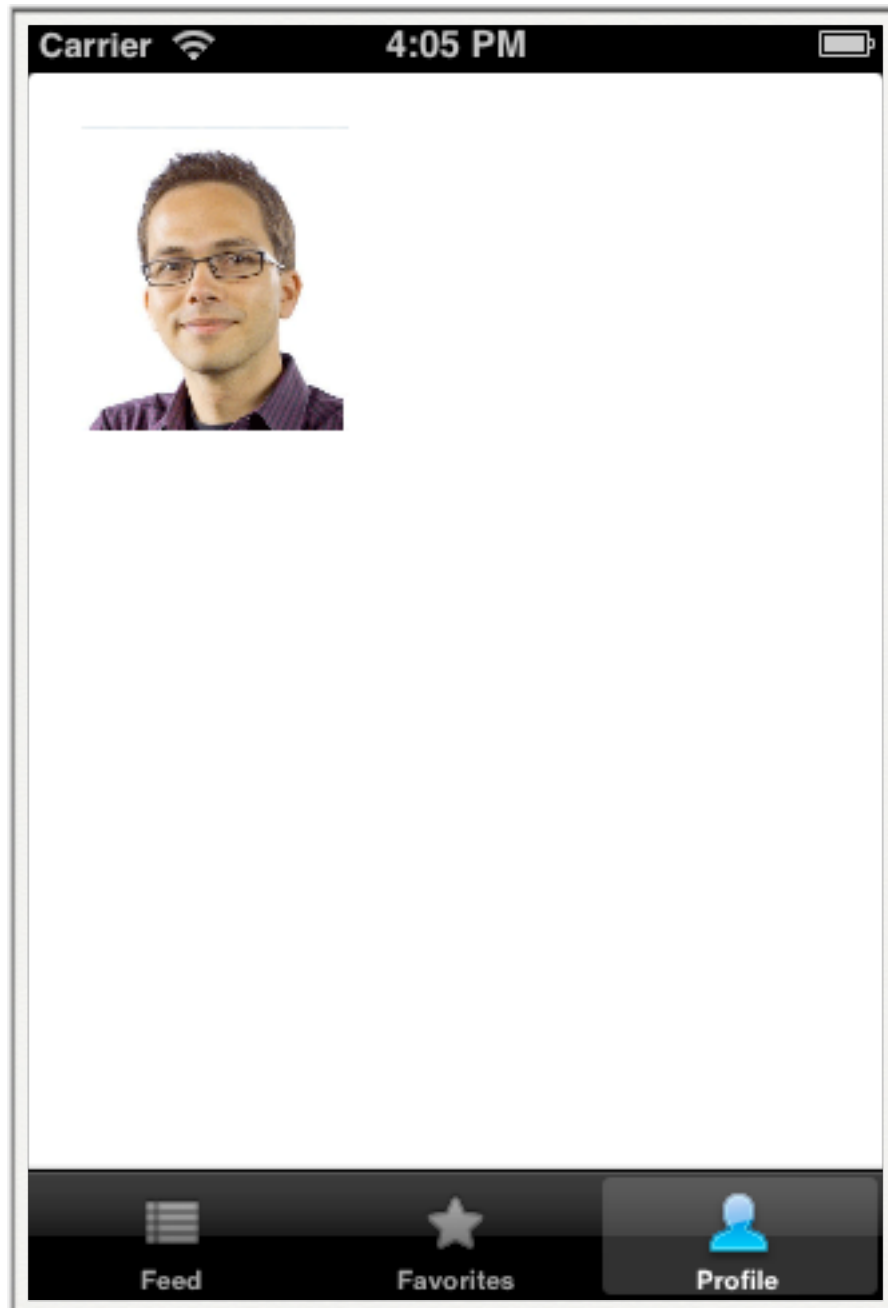


ProfileViewController.m

```
...  
- (void) viewDidLoad  
{  
    [super viewDidLoad];  
    // Do any additional setup after loading the view.  
    self.view.backgroundColor = [UIColor blueColor];  
  
    UIImageView *greggView = [[UIImageView alloc] initWithImage:  
        [UIImage imageNamed:@"gregg.jpg"]];  
    greggView.frame = CGRectMake(20, 20, 100, 114);  
    [self.view addSubview:greggView];  
}
```



Building Out Our Profile



Profile Image



Name

UILabel



City

UILabel



Biography

UITextView



Member Since

UILabel


Resizing Our Picture



ProfileViewController.m




...




```
UILabel *nameLabel = [[UILabel alloc] initWithFrame:CGRectMake(20,140,280,40)];
nameLabel.text = @"Name: Gregg Pollack";
[self.view addSubview:nameLabel];
```



```
UILabel *cityLabel = [[UILabel alloc] initWithFrame:CGRectMake(20,200,280,40)];
cityLabel.text = @"From: Orlando";
[self.view addSubview:cityLabel];
```



```
UITextView *biography = [[UITextView alloc] initWithFrame:CGRectMake(12,260,300,180)];
biography.font = [UIFont fontWithName:@"Helvetica" size:15];
biography.editable = NO;
biography.text = @"Gregg Pollack is the ...";
[self.view addSubview:biography];
```



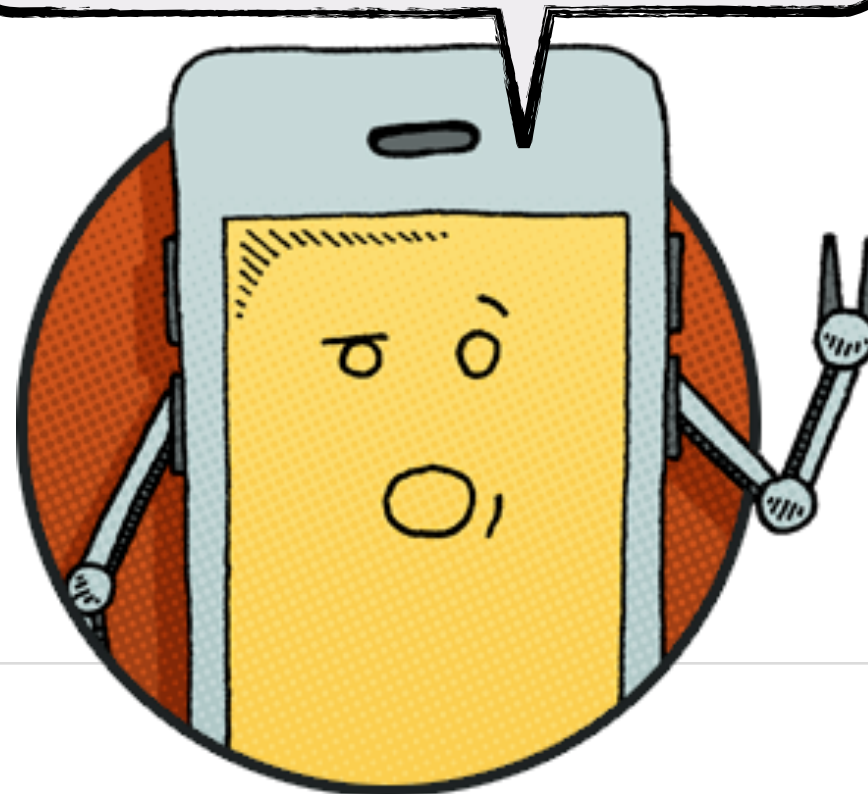
```
UILabel *memberSinceLabel = [[UILabel alloc] initWithFrame:CGRectMake(20,440,280,40)];
memberSinceLabel.text = @"November 2012";
[self.view addSubview:memberSinceLabel];
```

Our Profile Doesn't Scroll



Member Since

WHERE DID
MEMBER SINCE GO?



Resizing Our Picture



ProfileViewController.h

```
@property (weak, nonatomic) UIScrollView *scrollView;
```

ProfileViewController.m



```
self.scrollView = [[UIScrollView alloc] initWithFrame:self.view.bounds];  
self.scrollView.contentSize = CGSizeMake(320, 480);
```

...

```
[self.scrollView addSubview:biography];
```

Add Subviews into the scrollView

```
UILabel *memberSinceLabel = [[UILabel alloc] initWithFrame:CGRectMake(20, 440, 280, 40)];  
memberSinceLabel.text = @"November 2012";  
[self.scrollView addSubview:memberSinceLabel];
```

```
[self.view addSubview:self.scrollView];
```

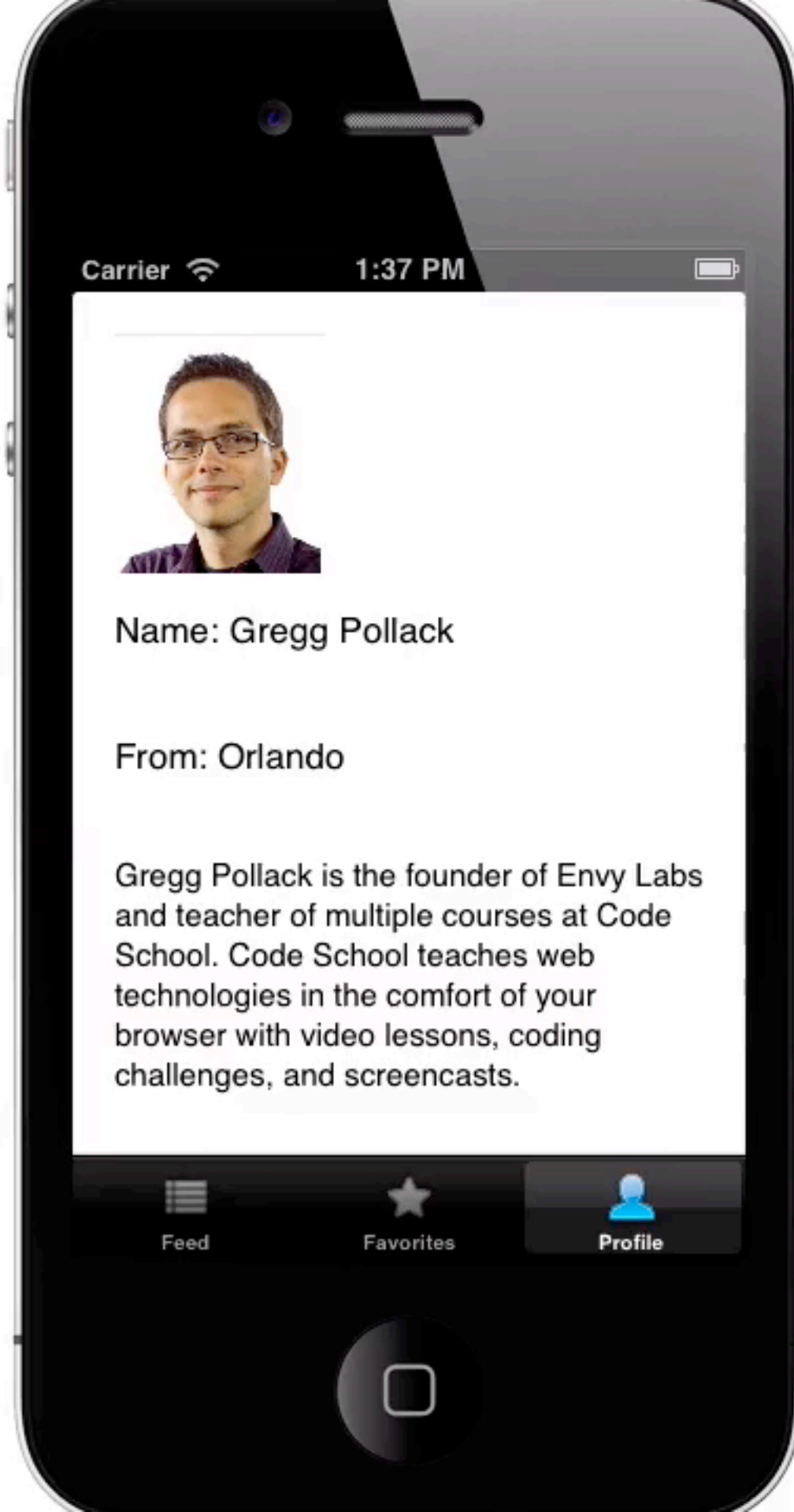
Add the scrollView onto the ViewController's View

440 + 40

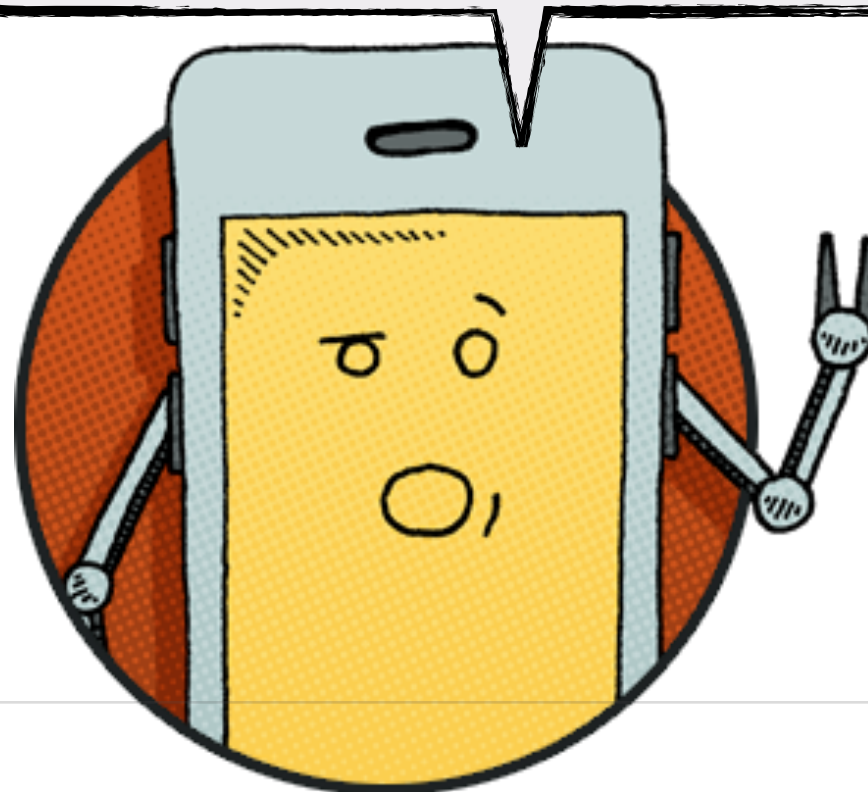
height

y

Now with Scroll View



WHERE DID WE GO WRONG?
THE SCROLL DOESN'T STICK!

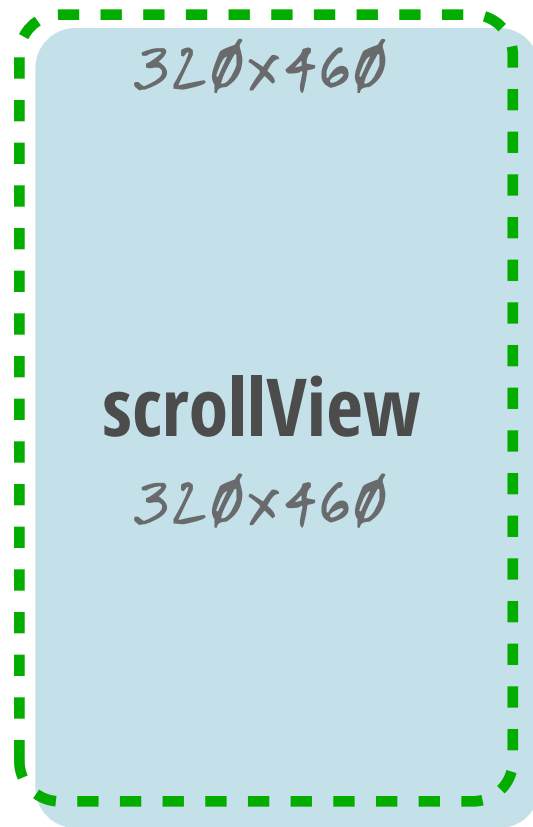


Resizing the ScrollView

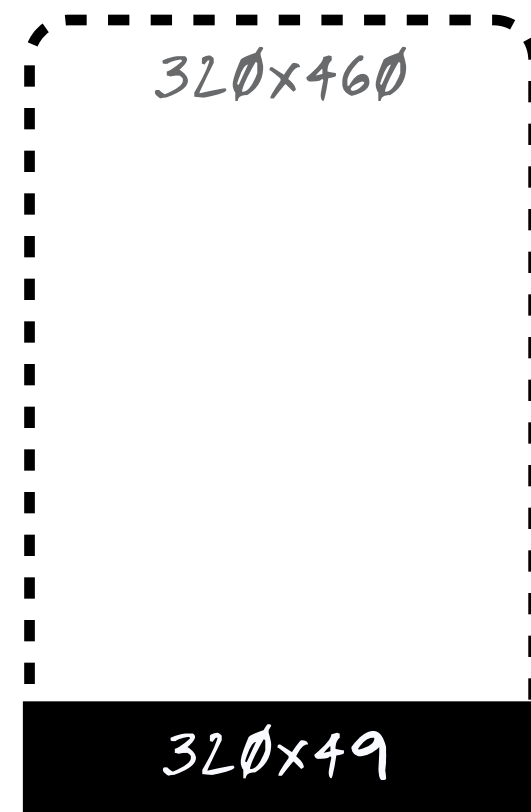


profileViewController

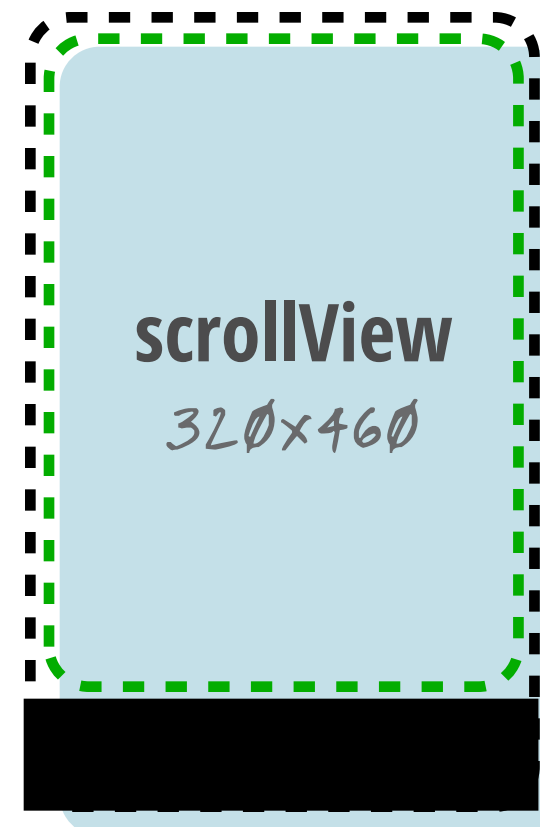
tabBarController



+



=



profileViewController gets
resized to 320x411

scrollView Does not!

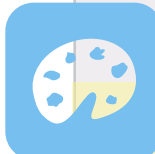


We need to tell scrollView what to do when it's superview resizes.

Setting the autoresizingMask



ProfileViewController.m



```
self.scrollView = [[UIScrollView alloc] initWithFrame:self.view.bounds];  
self.scrollView.autoresizingMask = UIViewAutoresizingFlexibleHeight;  
self.scrollView.contentSize = CGSizeMake(320, 480);
```

```
UIViewAutoresizingNone  
UIViewAutoresizingFlexibleLeftMargin  
UIViewAutoresizingFlexibleWidth  
UIViewAutoresizingFlexibleRightMargin  
UIViewAutoresizingFlexibleTopMargin  
UIViewAutoresizingFlexibleHeight  
UIViewAutoresizingFlexibleBottomMargin
```

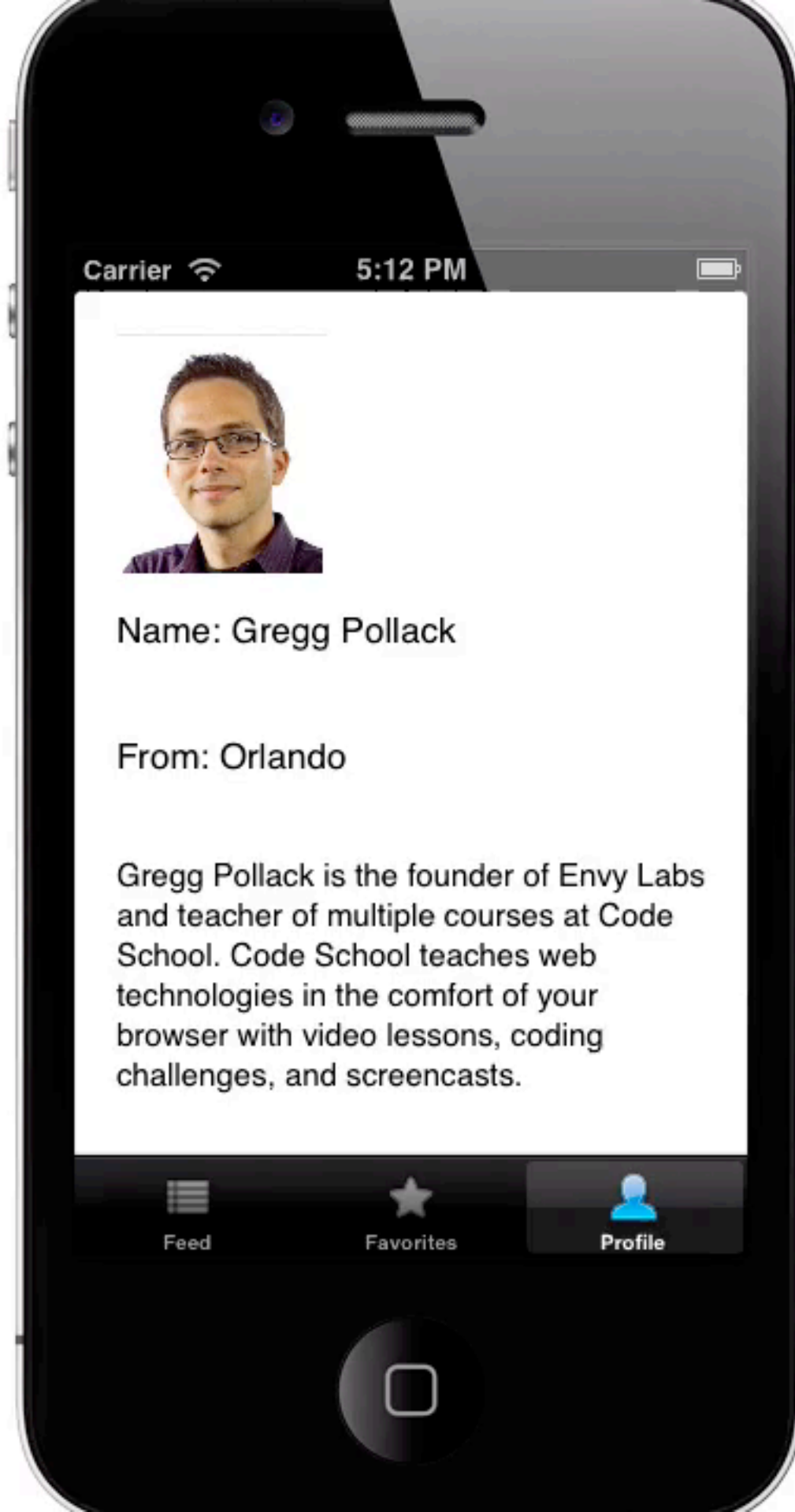
Resize if superview height changes



To Resize also in Landscape View

```
self.scrollView.autoresizingMask =  
    (UIViewAutoresizingFlexibleHeight | UIViewAutoresizingFlexibleWidth);
```

Now with UIScrollView!



SCROLLY GOODNESS!

