

# **iPhone App Dev**

CM420-04-2012-C

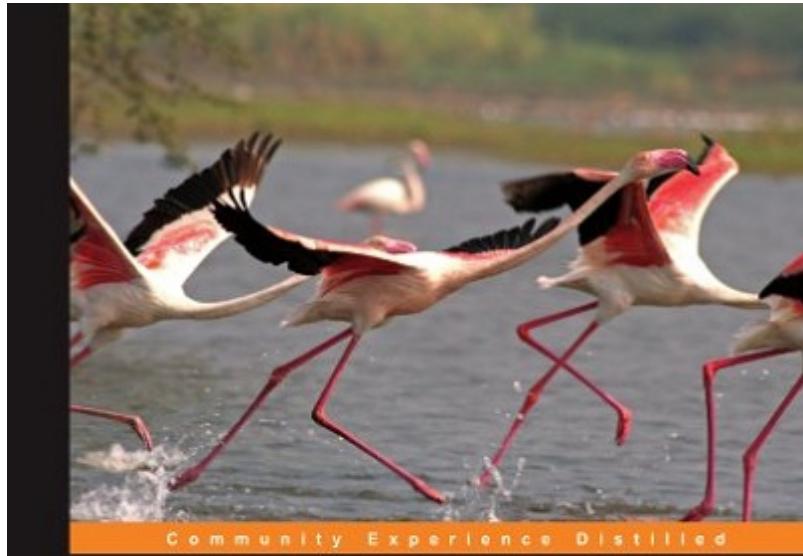
# Summary

- Introducing iOS app development
- Different types of iOS apps
- There is one purpose in every app
- Development environment

# **Thomas Mak**

makzan@42games.net

# Publications

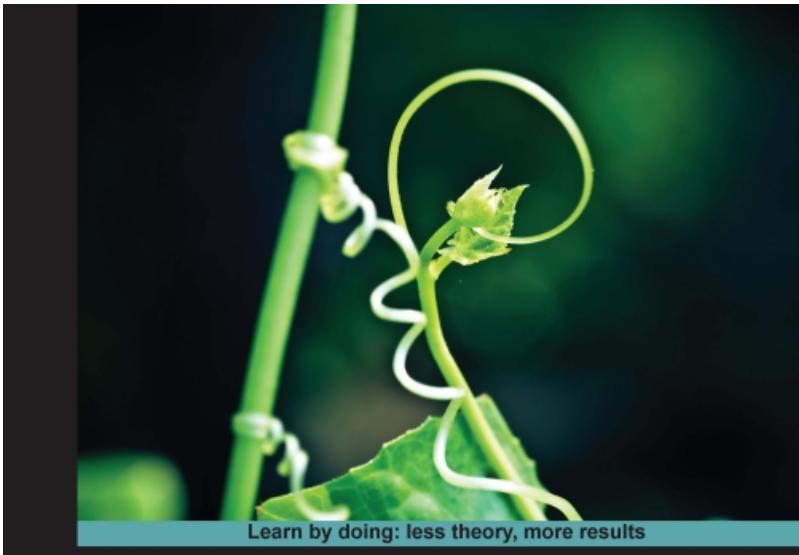


## Flash Multiplayer Virtual Worlds

Build immersive, full featured interactive worlds for games, online communities, and more

Makzan

[PACKT]  
PUBLISHING



## HTML5 Games Development by Example

Create six fun games using the latest HTML5, Canvas, CSS, and JavaScript techniques

*Beginner's Guide*

Makzan

[PACKT]  
PUBLISHING

# Selected iOS games



# iOS Ecosystem

# Development Environment

Software Configuration

Mac OS X 10.7

XCode 4.3

Mac OS X 10.6 及 XCode 3 may be used in old  
mac environment.

# Benefits of iOS development

- Devices are limited
- Only 2 screen sizes
- Most users update their iOS systems
- Simple app distribution channel
- Review process acts as a quality guard

# Weakness of iOS development

- Quite difficult to development
- Reviewing process slows down updates
- Some apps will never appear on App Store

# iOS Screen Size

iPhone / iPod Touch  
320 x 480 points

Actual Resolution  
320 x 480 pixels or  
640 x 960 pixels

# iOS Screen Size

iPad

768 x 1024 points

Actual Resolution

768 x 1024 pixels or

1536 x 2048 pixels

# **App Classification**

# Communication



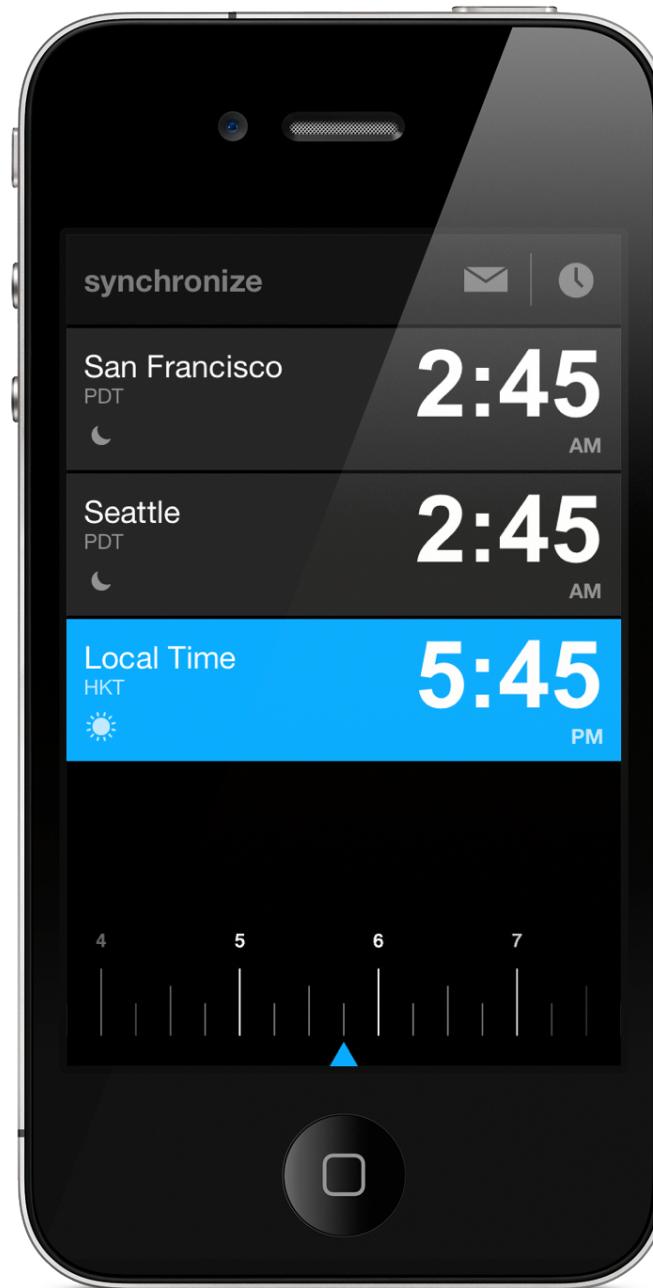
# Social Network



# Utilities



# Utilities



# Utilities



# Utilities



# Utilities



# Utilities



# Utilities



# Informative





# Location



# Location



# Digital Media



The image shows two smartphones side-by-side. The phone on the left displays a digital magazine archive with issues from November 2011, October 2011, and September 2011. The phone on the right displays a detailed diagram of a pufferfish's anatomy titled "How it blows".

**How it blows**

As water enters the stomach, kinked pleats in the inner-lining allow it to flex and stretch under enormous pressure. As the stomach cavity fills, it balloons above and around the spine, continually pulling the inner-lining fibres so tight that they harden to form an almost perfect impenetrable sphere.

**Stomach**  
Water flows from the mouth to the stomach by compressing the oral cavity. Its stomach bloats to 100 times its initial volume.

**Organs**  
Despite its arching spine and absence of ribs, the internal organs are squeezed between the backbone and the stomach.

**Mouth**  
To expand, the pufferfish enlarges its mouth; water enters and is prevented from leaving by an oral valve.

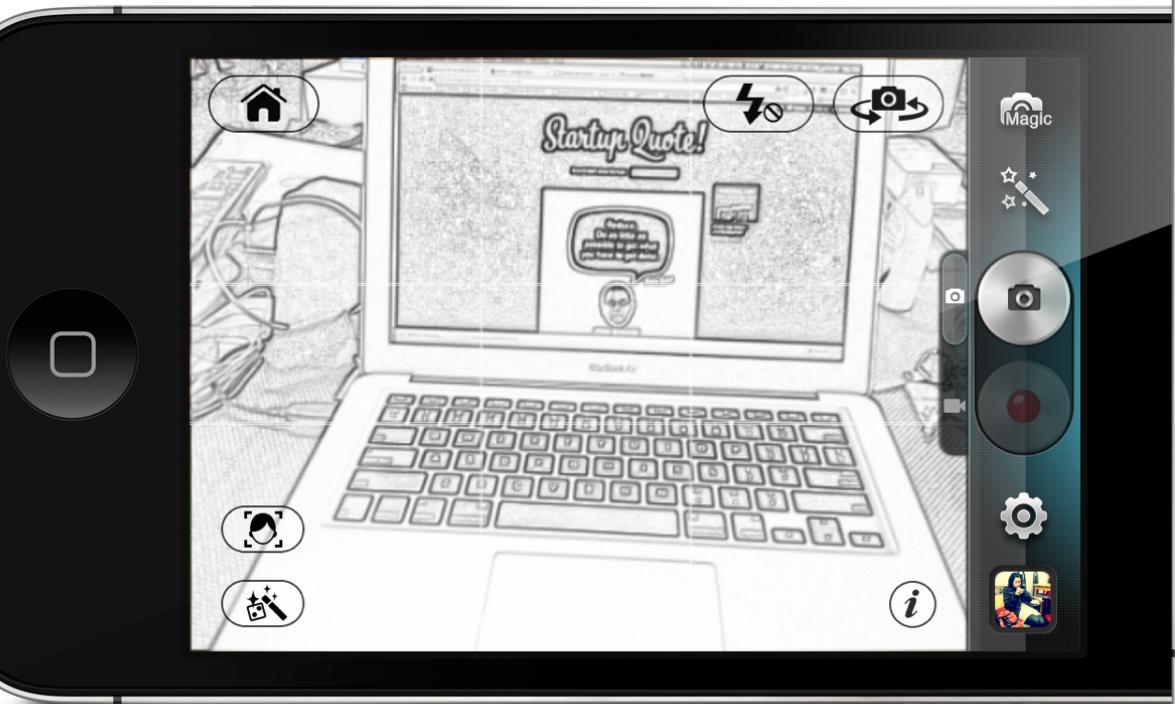
**Teeth**  
Pufferfish have four large teeth fused into an upper and lower plate.

**Skin**  
It is pleats that allow this fibrous inner-layer to expand and are responsible when stretched for its rigid form.

**Outer skin**  
This elastic layer provides a smooth hydrodynamic profile as cover to the inner pleated layer.

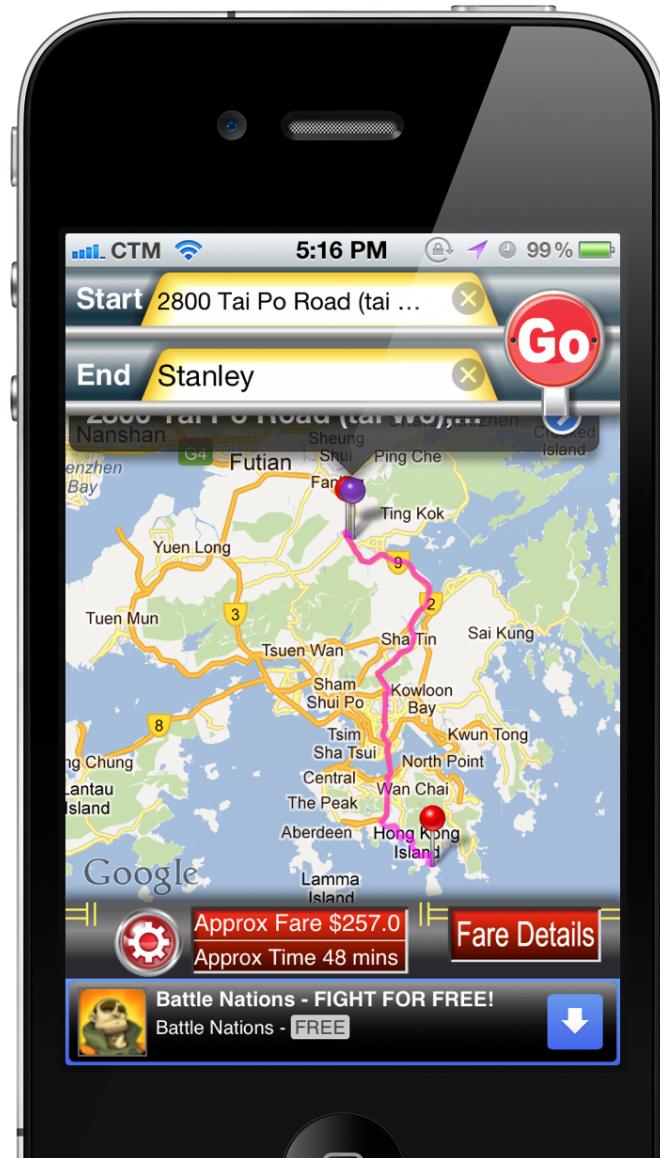
**Spikes**  
Some species sport modified scales that lay flush to the skin. A tripod-shaped base causes them to snap up when the fish is puffed.

# Photography

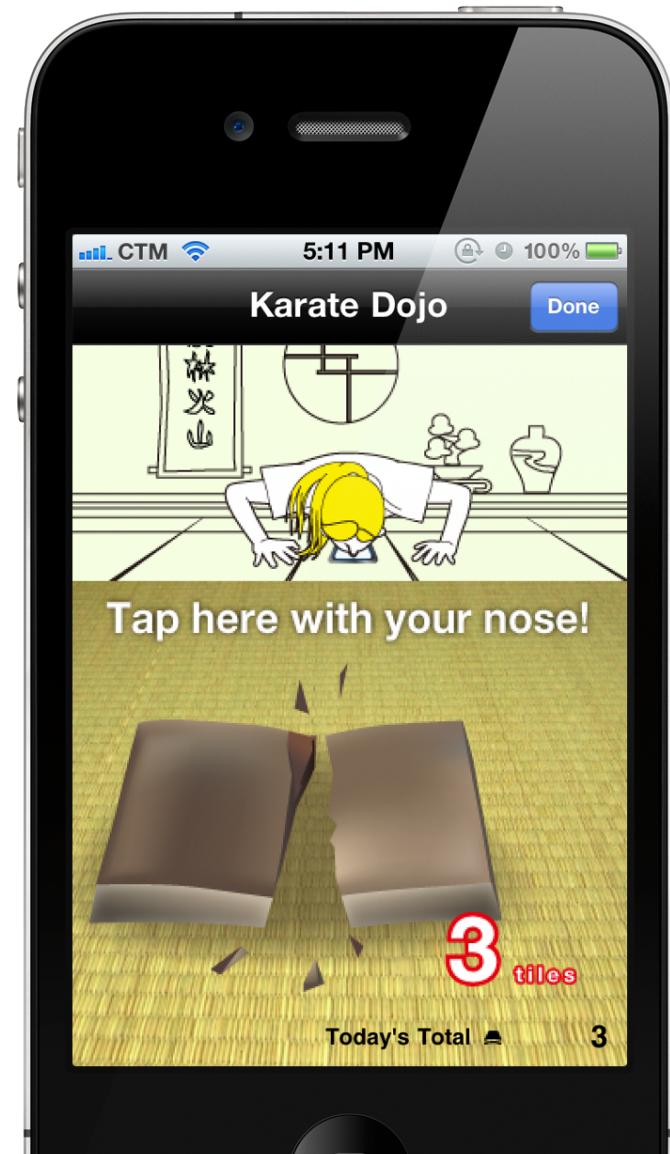


# **Every App Solves a Problem**

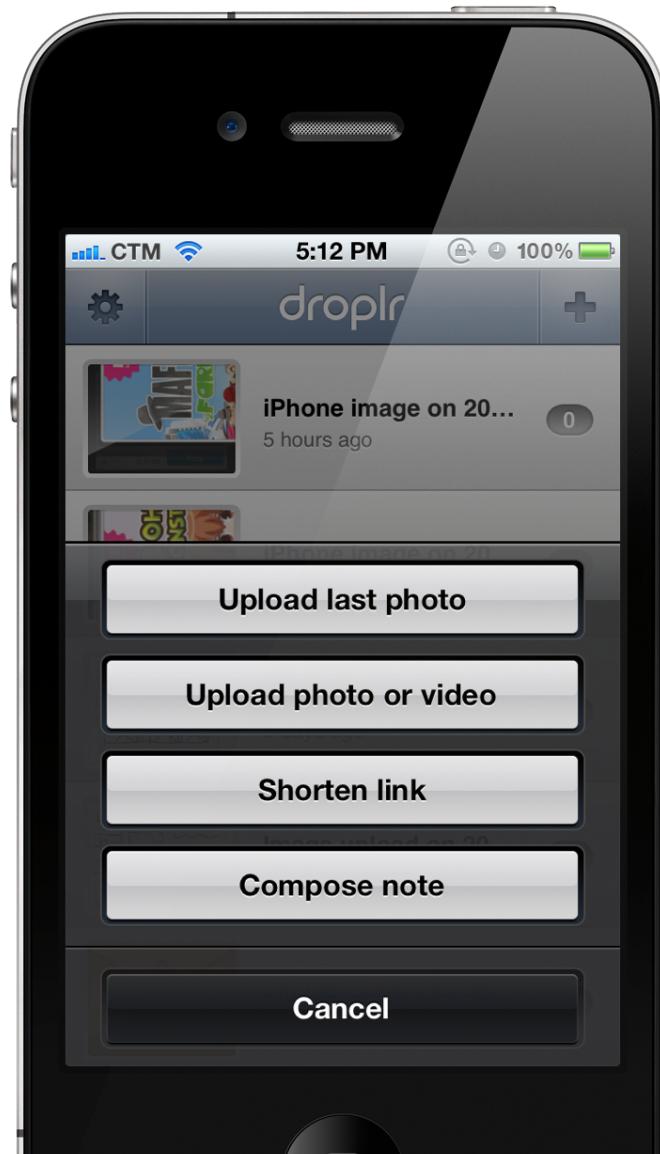
# Every app solves a problem



# Every app solves a problem



# Every app solves a problem



# **App Store**

# App Store Rankings

## Ranking

- Top Paid
- Top Free
- Top Glossing

## App Store Essentials



**GET STUFF DONE**  
APPS FOR PRODUCTIVE PEOPLE



## New &amp; Noteworthy

[See All >](#)

Solar Walk - 3D  
Solar System...  
Education



Burnout™ CRASH!  
Games



Booking.com  
Tonight  
Travel



Toca Kitchen  
Monsters  
Education



Shadow Move  
Games



MASS EFFECT™  
INFILTRATOR  
EA Games



Things  
Productivity



Crow  
Games



Flava™ - Save All  
Moments!  
Lifestyle



MARVEL  
AVENGERS  
ORIGINS:  
ASSEMBLE!  
Books



Big Win Hockey  
Games



Timegg  
Utilities

Welcome Seng Hin!

## iPhone

## APP STORE QUICK LINKS

[All Categories](#)

Apple Apps

Previous Apps of the Week

Previous Games of the Week...

App Store Essentials

Game Center

Great Free Apps

@School

iWork

App Store on Facebook

App Store on Twitter

Purchased NEW

## TOP CHARTS

Paid Apps

[See All >](#)

1. WhatsApp Messenger  
Social Networking

2. Angry Birds Space  
Games

3. 日本杂志大全  
Books

4. Where's My Water?



# GET STUFF DONE

APPS FOR PRODUCTIVE PEOPLE



## Get Stuff Done

Sort By: **Featured** ▾



**Evernote**  
Productivity  
Updated 15 March 2012  
[+ DOWNLOAD](#)



**Clear**  
Productivity  
Updated 16 February 2012  
[DOWNLOAD](#)



**Things**  
Productivity  
Updated 28 March 2012  
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**Due** — super fast reminders, reu...  
Productivity  
Updated 11 April 2012  
[+ \\$4.99 BUY APP](#)



**Wunderlist**  
Productivity  
Updated 25 July 2011  
[DOWNLOAD](#)



**OmniFocus for iPhone**  
Productivity  
Updated 26 March 2012  
[\\$19.99 BUY APP](#)



**Calvetica Calendar**  
Productivity  
Updated 14 March 2012  
[+ \\$2.99 BUY APP](#)



**Orchestra To-do**  
Productivity  
Updated 05 March 2012  
[FREE APP](#)



**PlainText - Dropbox text editing**  
Productivity  
Updated 23 March 2012  
[+ DOWNLOAD](#)

# Become an iOS Developer

<http://developers.apple.com>

## iOS

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### iOS Developer Program

Individual

\$99 / Year

For an individual developer who will be creating free and commercial iOS apps for distribution on the App Store.

### iOS Developer Program

Company

\$99 / Year

For a company with a development team who will be creating free and commercial iOS apps for distribution on the App Store.

### iOS Developer Enterprise Program

\$299 / Year

For a company who will be creating proprietary, in-house iOS apps.

**Note:** A Dun & Bradstreet Number is required.

### iOS Developer University Program

Free

For higher education institutions looking to introduce iOS development into their curriculum.

# **Getting Your Hand Dirty**

# XCode

The screenshot shows the Xcode interface with the following details:

- Title Bar:** My First Great App.xcodeproj — ViewController.m
- Scheme:** My First Great App > iPhone 5.1 Simulator
- Editor:** Editor View Organizer
- Project Navigator:** Shows the project structure:
  - My First Great App (target, iOS SDK 5.1)
  - My First Great App
    - AppDelegate.h
    - AppDelegate.m
    - ViewController.h
    - ViewController.m (selected)
    - ViewController.xib
    - Supporting Files
  - Frameworks
  - Products
- Code Editor:** Displays the content of ViewController.m. The code includes imports, interface declarations, and implementation methods like viewDidLoad and viewDidUnload.
- Assistant Editor:** Displays the corresponding ViewController.h header file.

```
// ViewController.m
// My First Great App
//
// Created by Seng Hin Mak on 18/4/12.
// Copyright (c) 2012 42games ltd. All rights reserved.
//

#import "ViewController.h"

@interface ViewController : UIViewController

@end

@implementation ViewController

- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view, typically from a nib
}

- (void)viewDidUnload
{
    [super viewDidUnload];
    // Release any retained subviews of the main view.
}

- (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
{
    return (interfaceOrientation !=
        UIInterfaceOrientationPortraitUpsideDown);
}

@end

// ViewController.h
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//

#import <UIKit/UIKit.h>

@interface ViewController : UIViewController
```

Xcode

My First Great App.xcodeproj — ViewController.m

Run Stop Scheme Breakpoints Editor

My First Great App > iPhone 5.1 Simulator

My First Great App > My First Great App > ViewController.m > No Selection

Counterparts > ViewController.h > No Selection

My First Great App

1 target, iOS SDK 5.1

My First Great App

- AppDelegate.h
- AppDelegate.m
- ViewController.h
- ViewController.m
- ViewController.xib
- Supporting Files
- Frameworks
- Products

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{
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@end
```

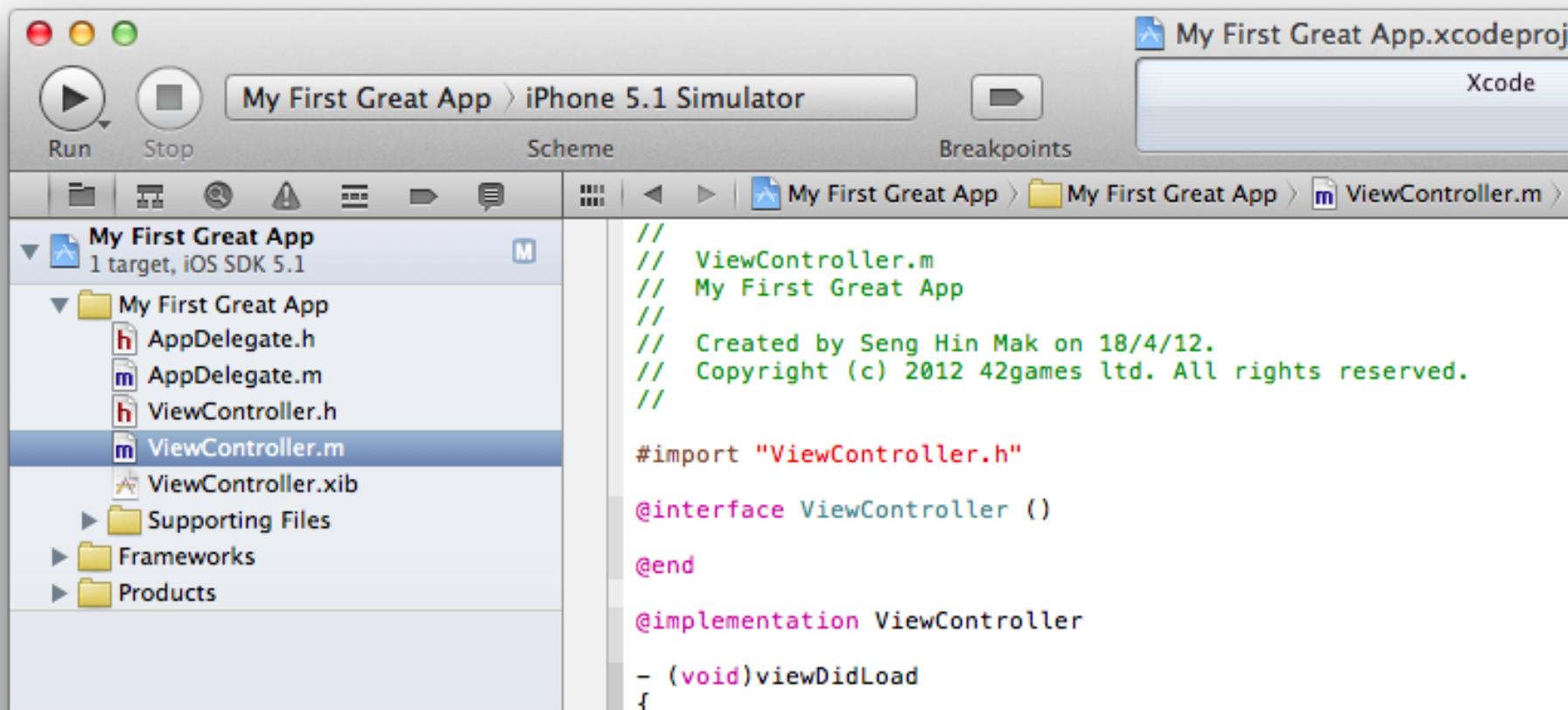
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//

#import <UIKit/UIKit.h>

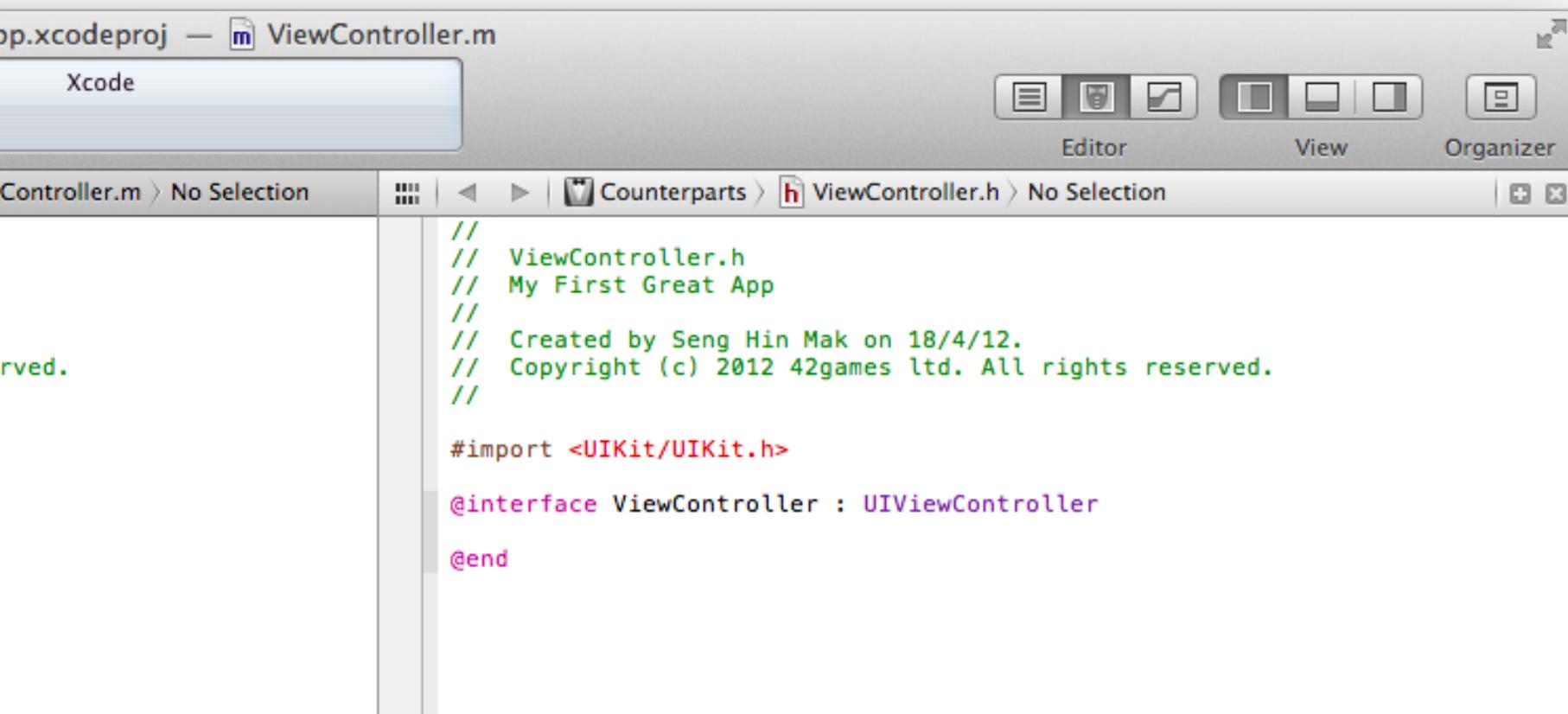
@interface ViewController : UIViewController

@end
```

# Toolbar



# Toolbar



The screenshot shows the Xcode interface with the following details:

- Project Bar:** Shows "Top.xcodeproj" and "ViewController.m".
- Toolbar:** Located at the top right, it includes icons for Editor, View, and Organizer, along with other standard Xcode tools.
- File Navigator:** Shows "Controller.m > No Selection".
- Search Bar:** Shows "Counterparts > ViewController.h > No Selection".
- Editor Area:** Displays the content of ViewController.h:

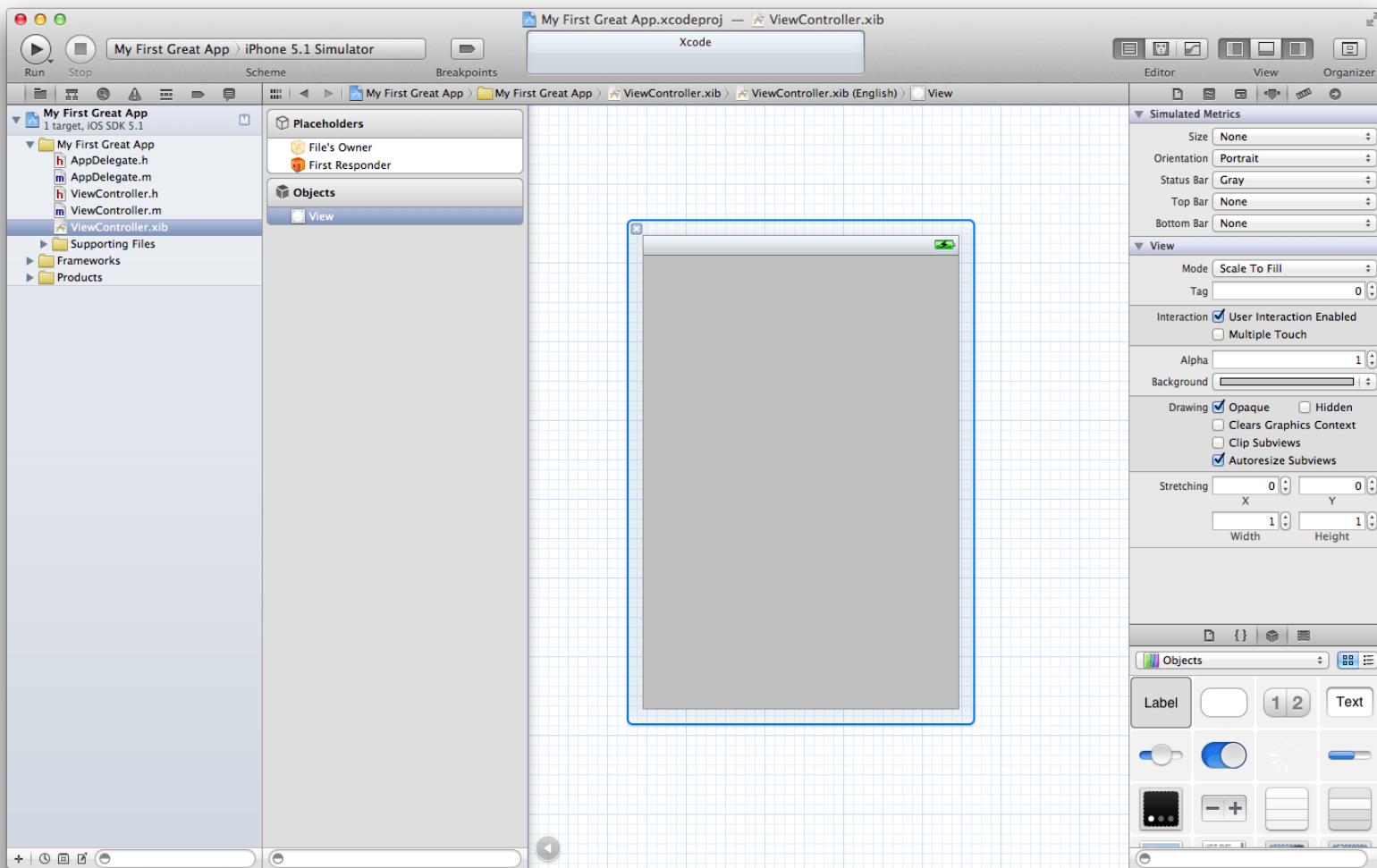
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// Copyright (c) 2012 42games ltd. All rights reserved.
//

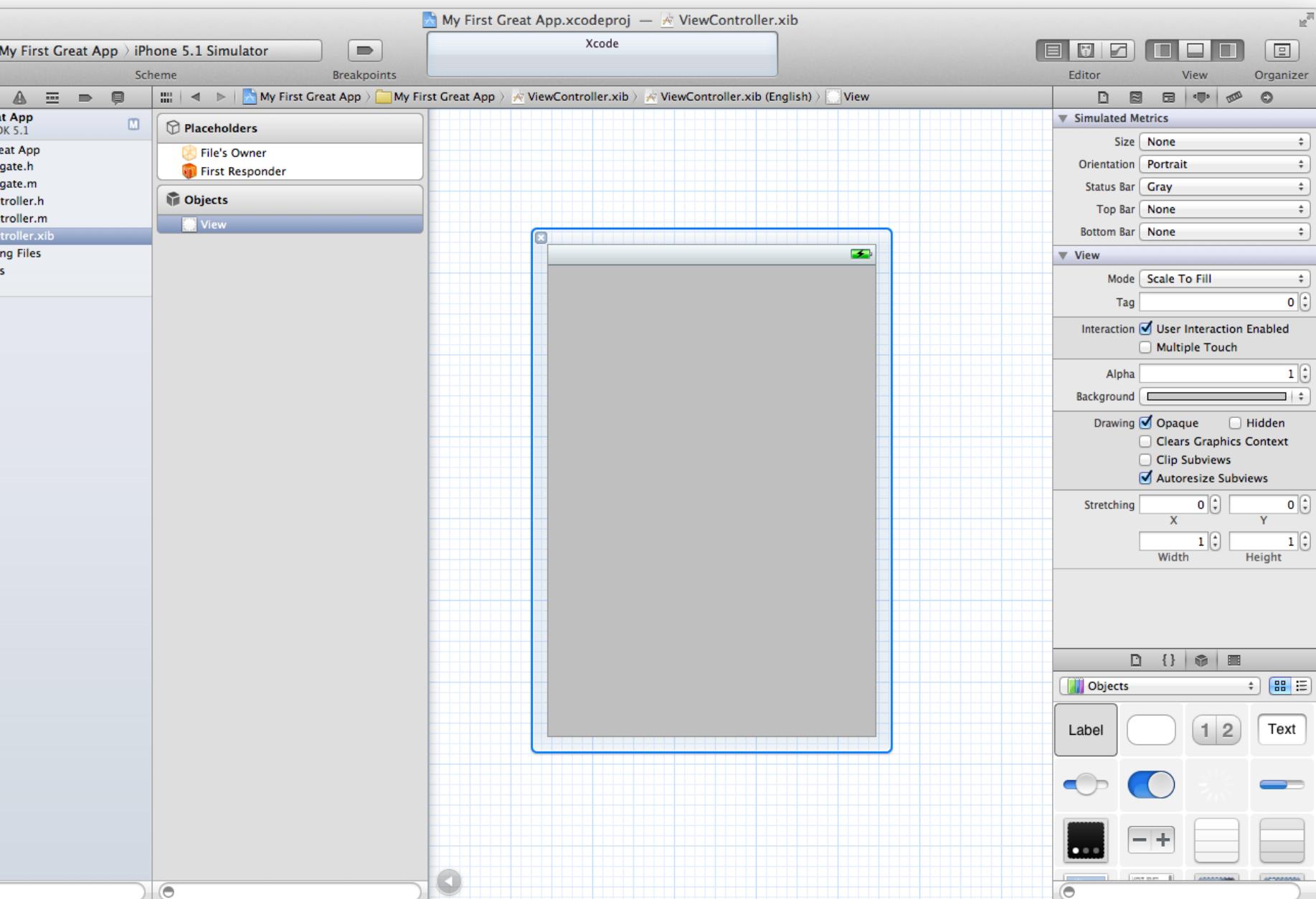
#import <UIKit/UIKit.h>

@interface ViewController : UIViewController

@end
```

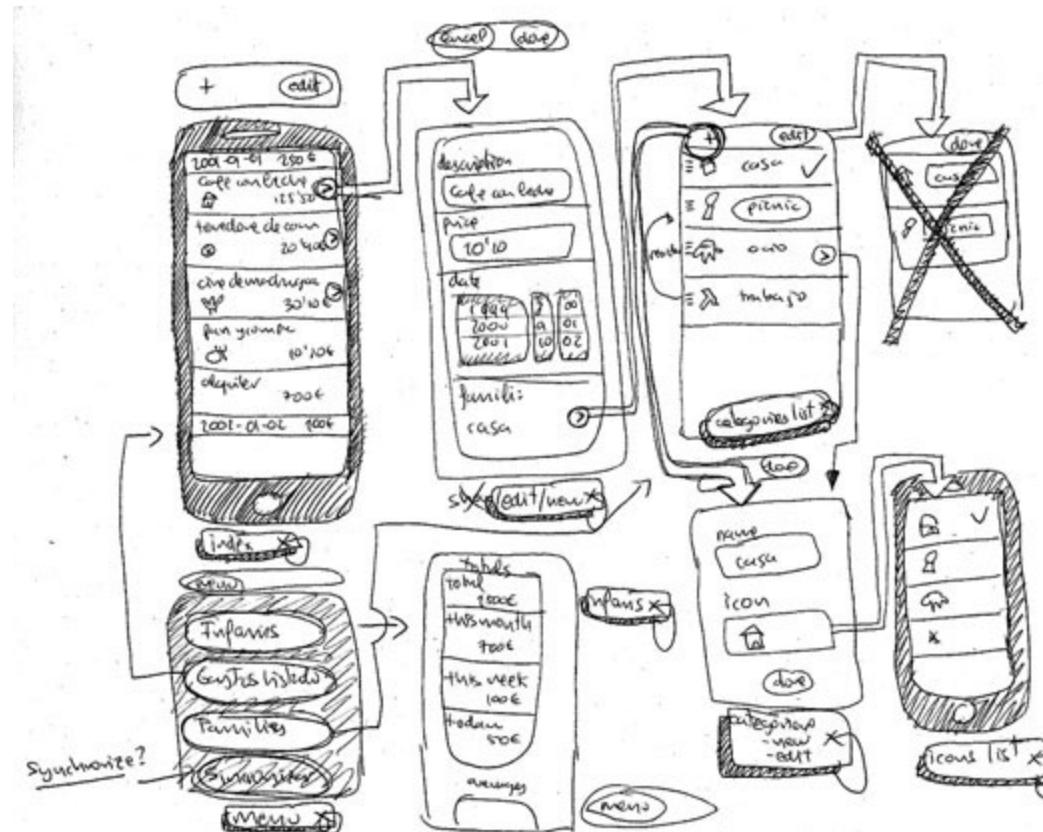
# Interface Builder





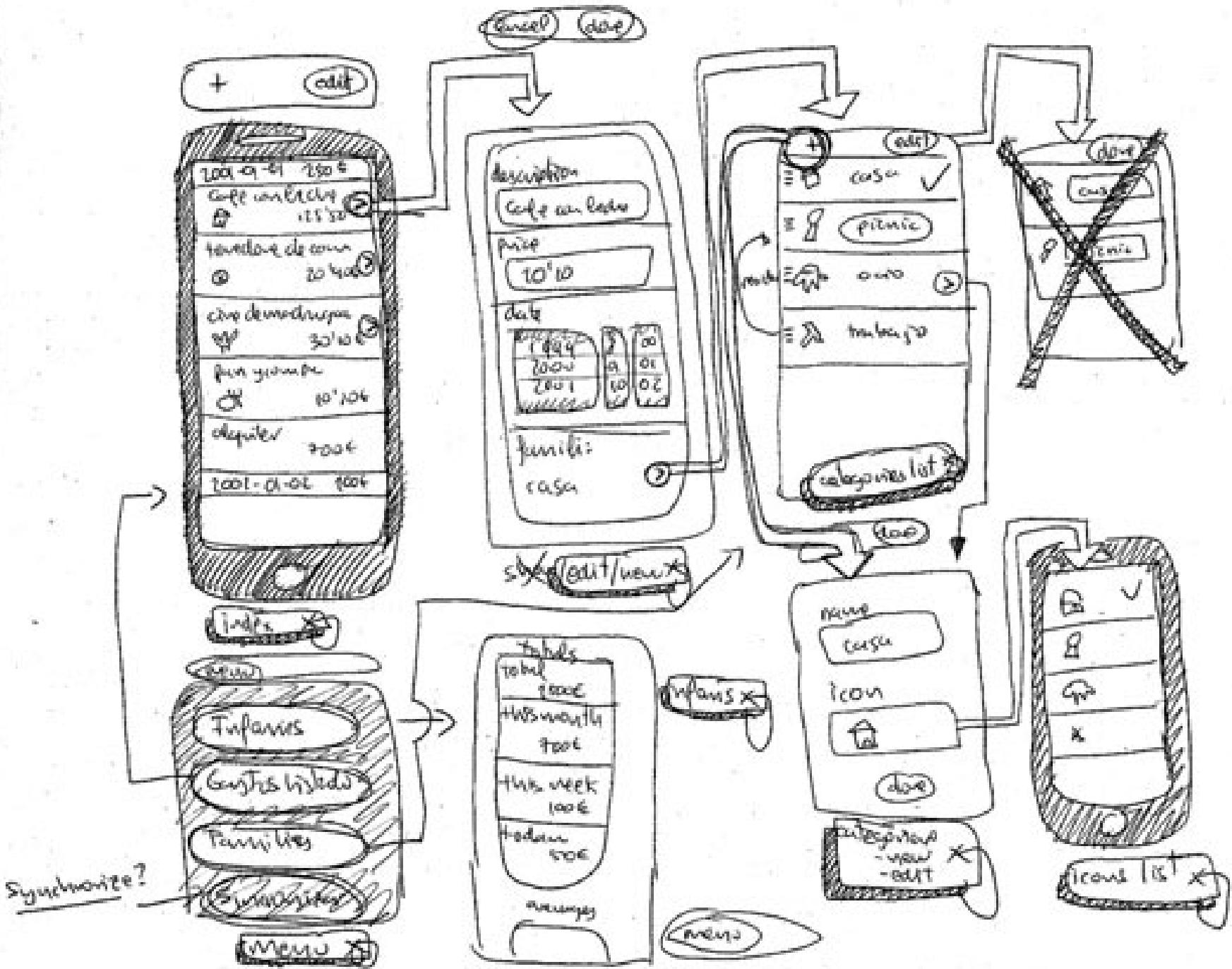
# XCode Demo

# iOS app wireframe



<http://sixrevisions.com/user-interface/website-wireframing/>

<http://moobileframes.tumblr.com/>



# Practice

Browse the App Store. Find some apps that impress you. Discuss why they are good.

Do you have any problem that want to solve in a mobile phone? What app do you want to develop? Try draw some wireframes.