

How to Make an iOS App

A Brief Guide to Getting on the App Store

Emily Van Haren @ CodeChix Madison, March 2015

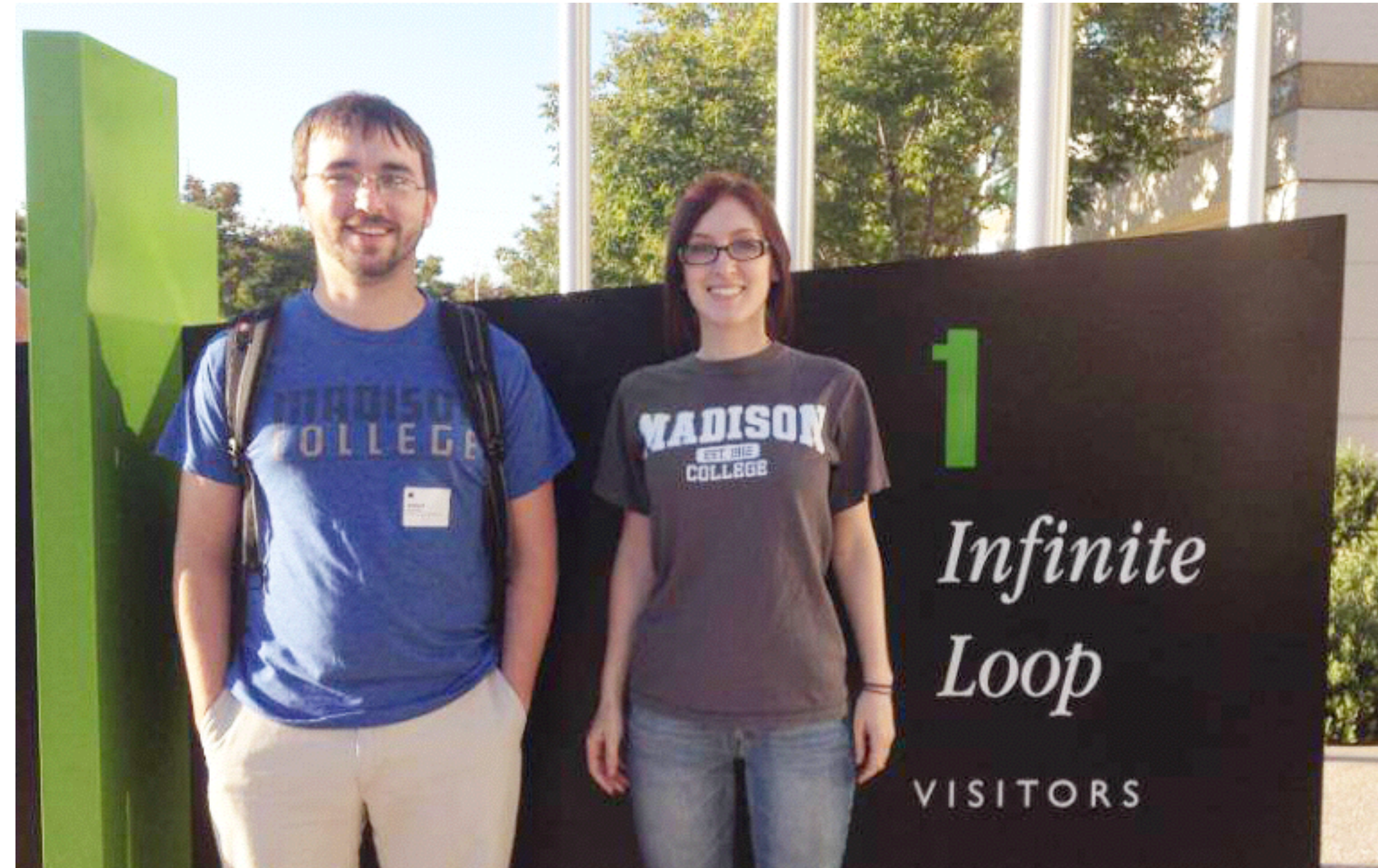
Hello,



IT - Mobile App Development

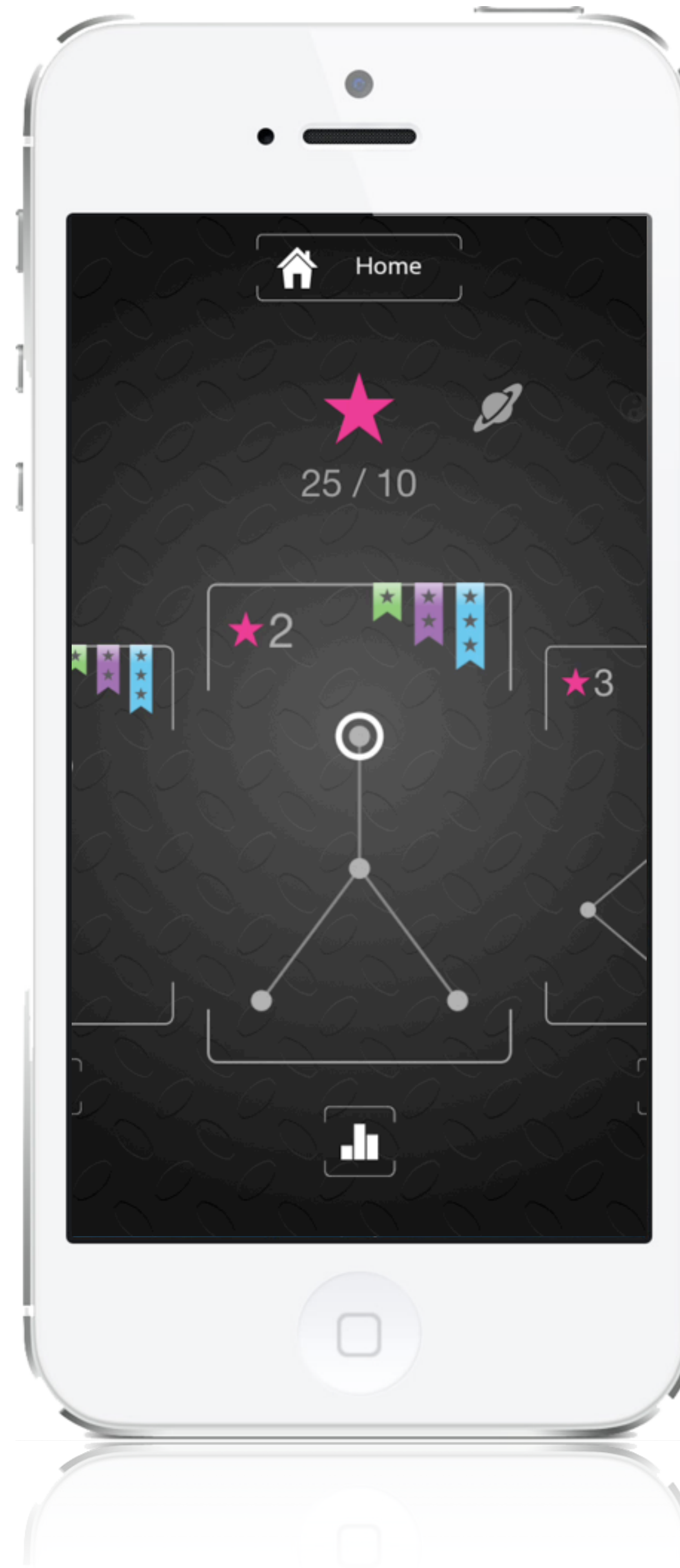
Madison College, Fall 2012 - Spring 2015

Hello,



Cocoa Camp 2013

Hello,



Connexio



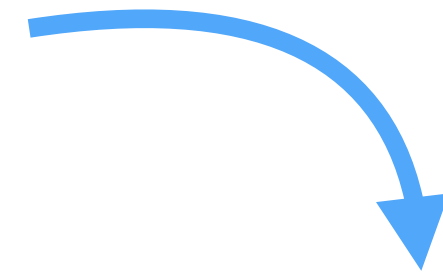
“The first 90 percent of the code accounts for the first 90 percent of the development time.

The remaining 10 percent of the code accounts for the other 90 percent of the development time.”

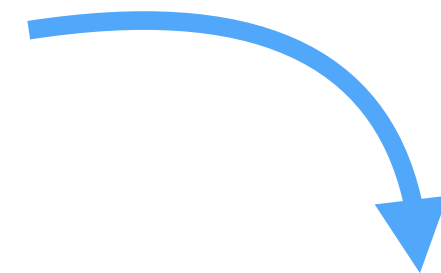
- Tom Cargill, Bell Labs

My Development Process

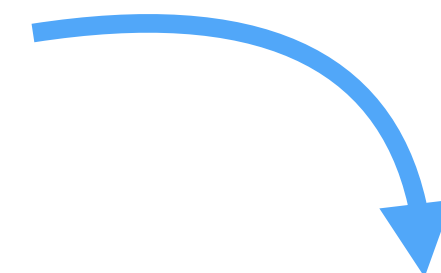
Idea



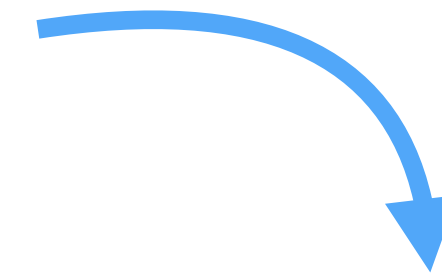
Plan



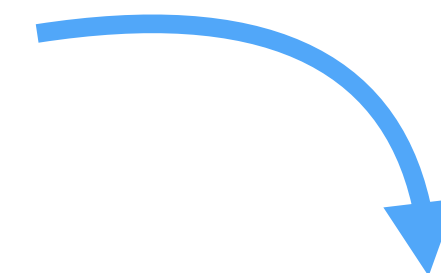
Design



Code



Test



Submit

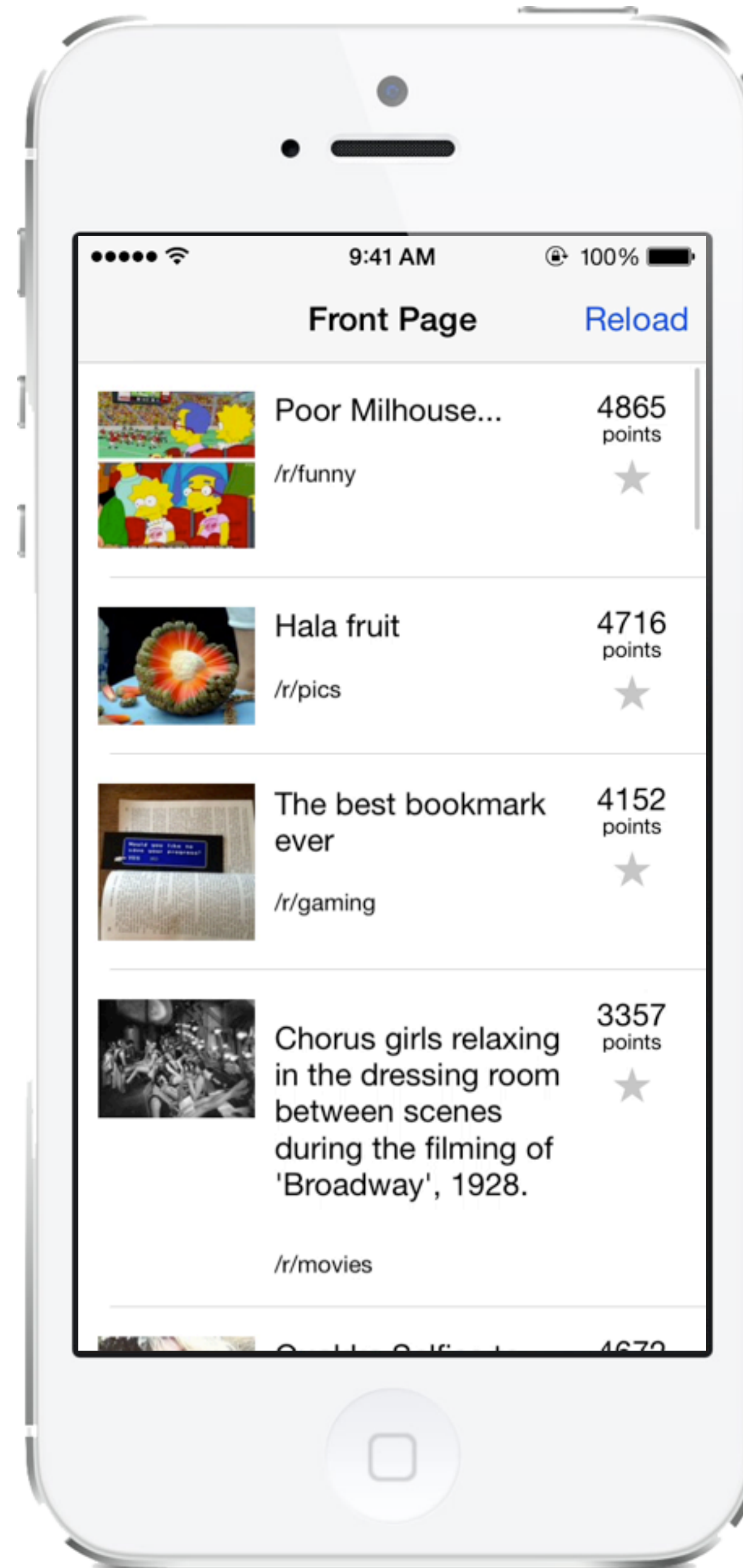
The Internet's Front Page

The screenshot shows the Reddit front page with the following elements:

- Navigation:** "MY SUBREDDITS", "FRONT - ALL - RANDOM", "DOCUMENTARIES - GAMING - PHILOSOPHY - PERSONALFINANCE - TELEVISION - GADGETS - FOOD - EARTHPOORN - TODAYILEARNED - TIFU - MUSIC - JOKES - FUTUROLOGY MORE »".
- Reddit Logo:** "reddit" with the alien mascot.
- Sorting Options:** "hot", "new", "rising", "controversial", "top", "gilded", "wiki", "promoted".
- Search and Login:** A search bar and a login section with fields for "username" and "password", a "remember me" checkbox, a "reset password" link, and a "login" button.
- Post 1 (Sponsored):** "DuckDuckGo is now built-in to Safari & Firefox. It's easier than ever to switch and stop getting tracked!" (duckduckgo.com) promoted by duckduckgo-official. 1054 upvotes, 374 comments. Includes a "sponsored link" label and a "what's this?" link.
- Trending Subreddits:** "/r/projecteternity /r/bigbangcomics /r/glitch_art /r/beetlejuicing /r/CoolAcoustics 25 comments".
- Post 2:** "Poor Milhouse..." (imgur.com) submitted 5 hours ago by Cmgizzi to /r/funny. 4793 upvotes, 334 comments.
- Post 3:** "The best bookmark ever" (m.imgur.com) submitted 4 hours ago by FireBeaver to /r/gaming. 4110 upvotes, 217 comments.
- Post 4:** "Hala fruit" (i.imgur.com) submitted 5 hours ago by Isai76 to /r/pics. 4477 upvotes, 338 comments.
- Post 5:** "Quokka Selfies to brighten up your day!" (imgur.com) submitted 6 hours ago by AmieRamsey14 to /r/aww. 4652 upvotes, 658 comments.
- Post 6:** "Chorus girls relaxing in the dressing room between scenes during the filming of 'Broadway', 1928." (i.imgur.com) submitted 4 hours ago by DaHitcha to /r/movies. 3140 upvotes, 158 comments.
- Post 7:** "My ice cube is half transparent, half opaque." (imgur.com) submitted 5 hours ago by kkcshuber to /r/mildlyinteresting. 3179 upvotes, 149 comments.
- Post 8:** "Recycled Laptop screen as a second PC monitor." (imgur.com) submitted 6 hours ago by Tehmooo to /r/DIY. 3703 upvotes, 328 comments.
- Advertisement:** A cartoon wizard holding a glowing orb, with text "r/bitcoin", "MAGIC internet money", and "Join us". Below it is a link "discuss this ad on reddit".
- Gold Goal:** "daily reddit gold goal" progress bar at 40% with a "help support reddit" button.

Tonight's App

A Reddit Feed



Idea



Idea

What are you passionate about?

Idea

What are you passionate about?

What would you use?

Idea

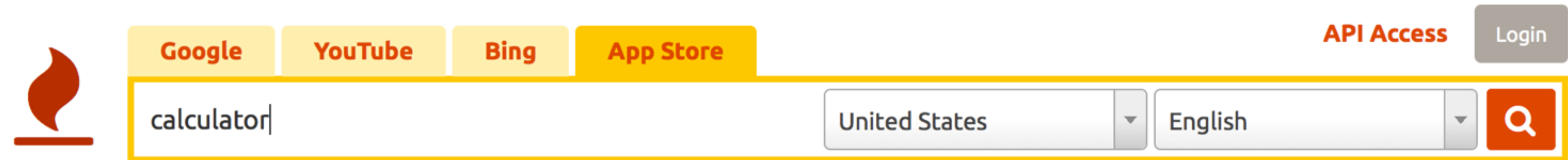
What are you passionate about?

What would you use?

Do some market research!

Idea

Market Research



The image shows a screenshot of a keyword tool interface. On the left, there is a red flame icon. Above the search bar, there are four tabs: "Google", "YouTube", "Bing", and "App Store", with "App Store" being the active tab. To the right of the tabs, there are links for "API Access" and "Login". The search bar contains the text "calculator". To the right of the search bar, there are two dropdown menus: "United States" and "English". A red search button with a magnifying glass icon is on the far right of the search bar.

Search for keyword "calculator" found **1061** results

 Copy all

<http://keywordtool.io/app-store>

Idea

Market Research

calculator hd - free	+
calculator pro for ipad free	+
calculator·	+
scientific calculator	+
graphing calculator viewer	+
graphing calculator	+
digits, the calculator for humans	+
financial calculator	+
free calculator	+
handy calculator	+
loan calculator	+
mortgage calculator	+
calculator hero	+

calculator hero	+
calculator for ipad - calc pro hd free	+
calculator xl	+
calculator hd pro free	+
calculator hd+ free	+
calculator x free: metric, currency and unit converter for ipad	+
calculator lock free - private photos and videos manager	+
calculator free for ipad	+
myscript calculator - handwriting calculator	+
calculator hd for ipad	+
calculator hd	+

calculator - all in one	+
calculator all-in-one lite	+
2 cycle mix & sim - oil calculator and simulator	+
2-in-1: calculator and tip calculator pro	+
2-in-one: calculator and tip calculator	+
abi calculator and reference	+
academy professor - damage calculator and hero tracker for council, dark elves, dwarves, the tribe, tf2, and shaolin	+
age calculator - age+	+
algebra calculator - advanced 2 line calculator	+
audio calculator app	+

Idea

A Reddit Feed

- ✓ I would use it
- ✓ I'm passionate about it
- ✓ I did some market research

Idea

Existing Apps

Showing results for "reddit"

iPhone Apps



Alien Blue - reddit official client

News



In-App Purchases



Pics HD for Reddit

Entertainment



In-App Purchases



iAliens for Reddit

News



In-App Purchases



reddit AMA - Ask Me Anything

News



Redditor - the perfect client fo...

News



In-App Purchases

Idea

Existing App Reviews

Confusing, at Best ★★☆☆☆

“it’s awesome to look at, but sadly, absolutely worthless [at] actually navigating”

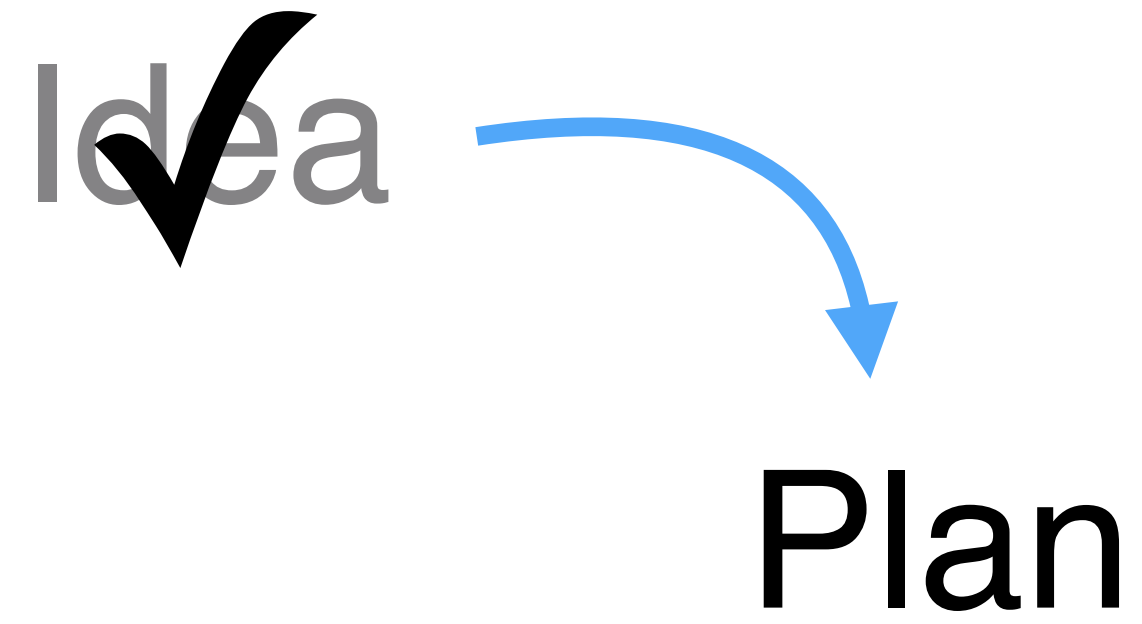
Normally great, but lately glitchy... ★★☆☆☆

“the app has been randomly crashing ... it’s getting more and more frequent”

Great! But needs picture swipe ★★☆☆☆

“I don’t have time to exit the story/picture then find another one. I would rather just swipe from one to the other.”

My Development Process



Plan

Features

**What should the user
be able to do?**

Plan

Features

- ✓ Browse posts from the Reddit front page
- ✓ See the posted picture, video, website, etc.

Plan

Someday...

Log in

Add comments

Create a post

See comments

Vote on comments

Vote on posts

Plan

Technologies

Back-End Web Server

Plan

Technologies

Back-End Web Server

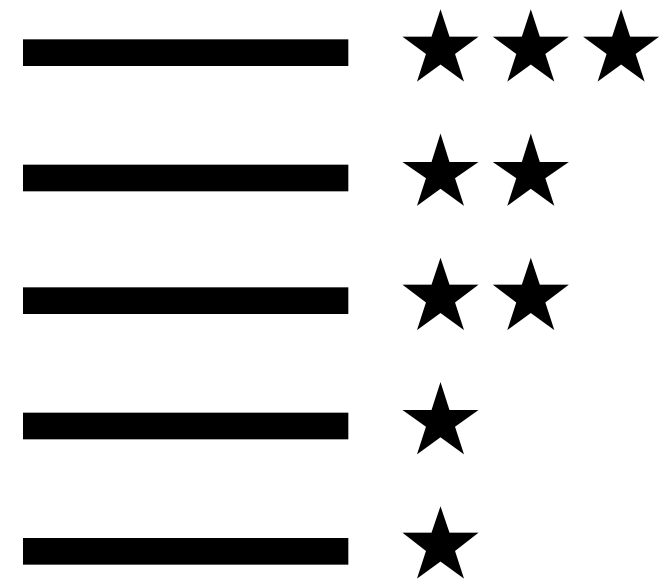


Databases

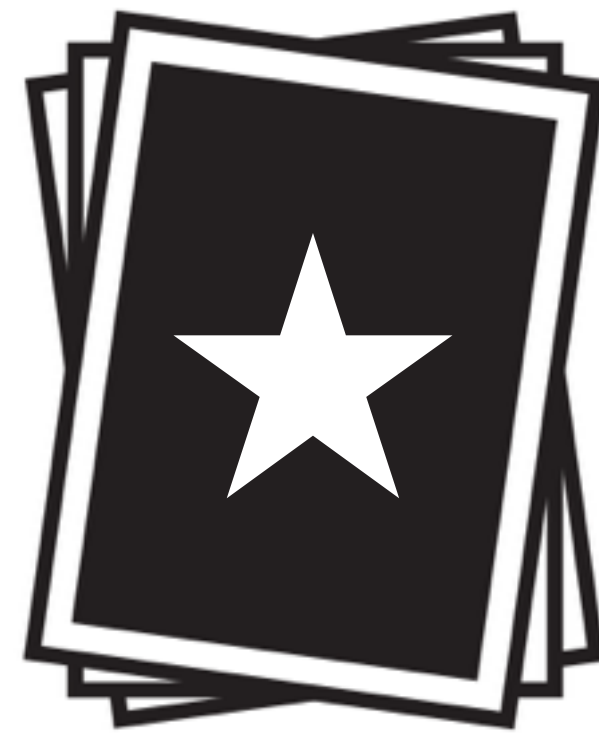
Plan

Technologies

Back-End Web Server



Databases

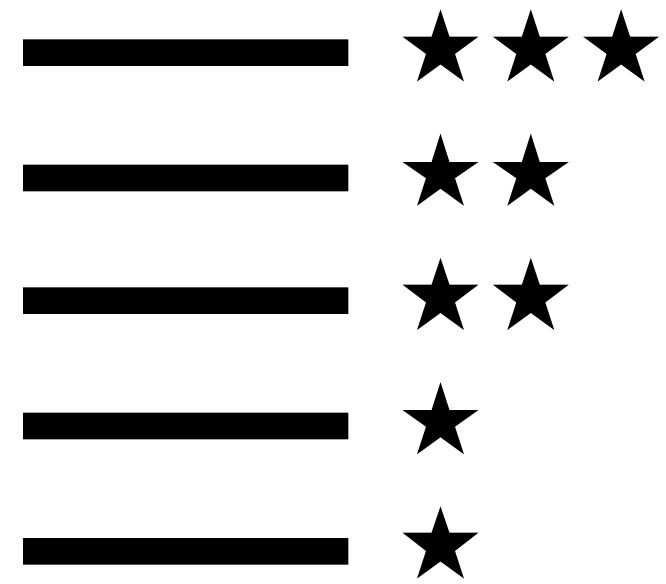


File storage

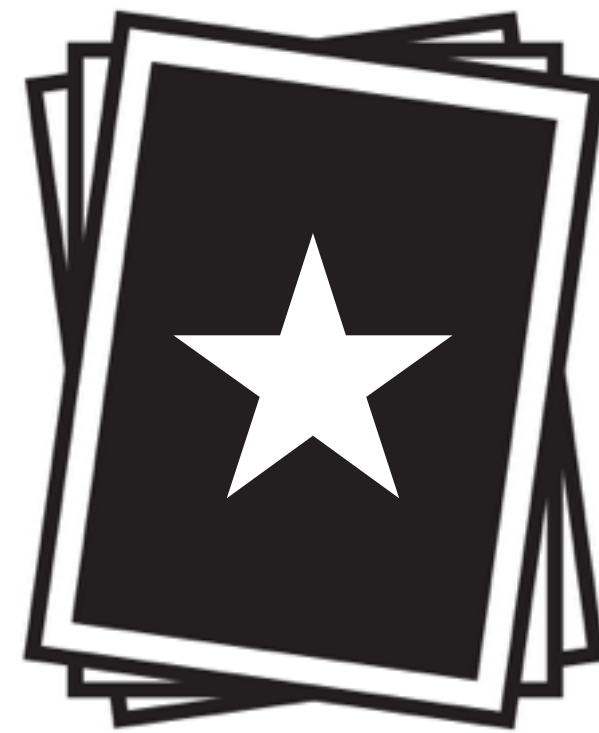
Plan

Technologies

Back-End Web Server



Databases



File storage

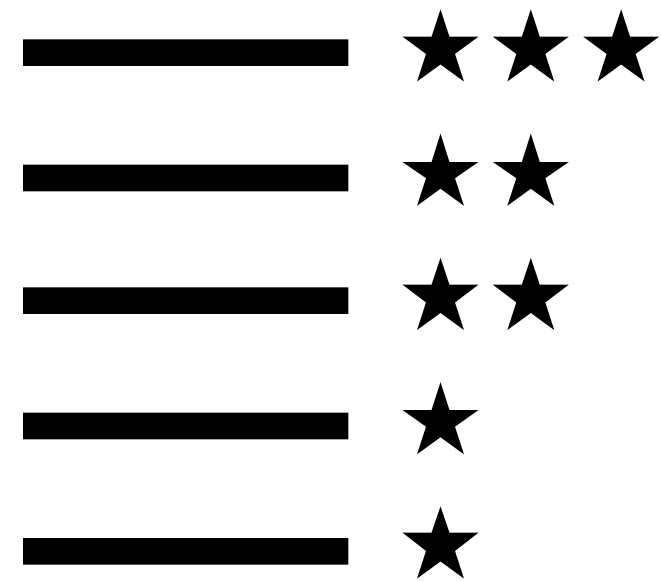


Authentication

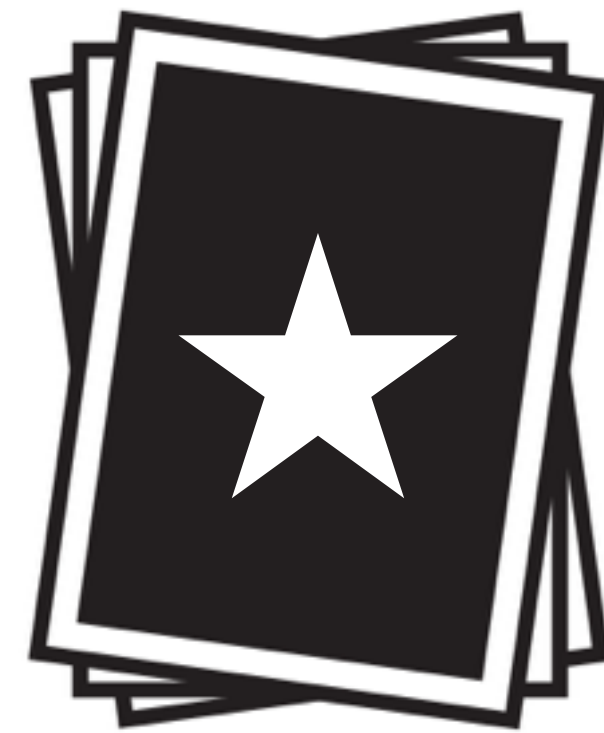
Plan

Technologies

Back-End Web Server



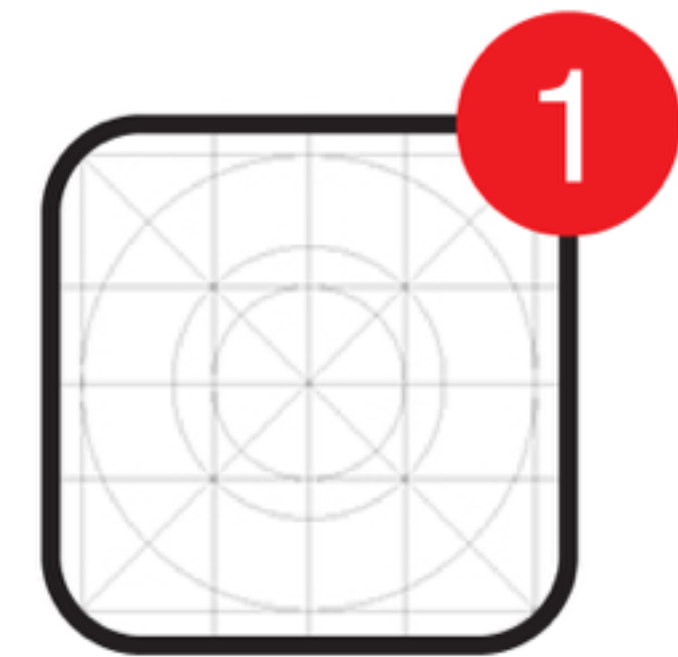
Databases



File storage



Authentication



Push notifications

Plan

Technologies

Back-End Solutions

Plan

Technologies

Back-End Solutions

Roll your own

Plan

Technologies

Back-End Solutions

Roll your own

Back-end as a service
(BaaS)

Plan

Technologies

Tonight's App:

~~Back-End Web Server~~

Plan

Technologies

iOS Frameworks

Core Audio

Core Graphics

Core Bluetooth

Core Location

Core Data

SpriteKit

Plan

Technologies

Tonight's App:

~~Core Audio~~

✓ Core Graphics

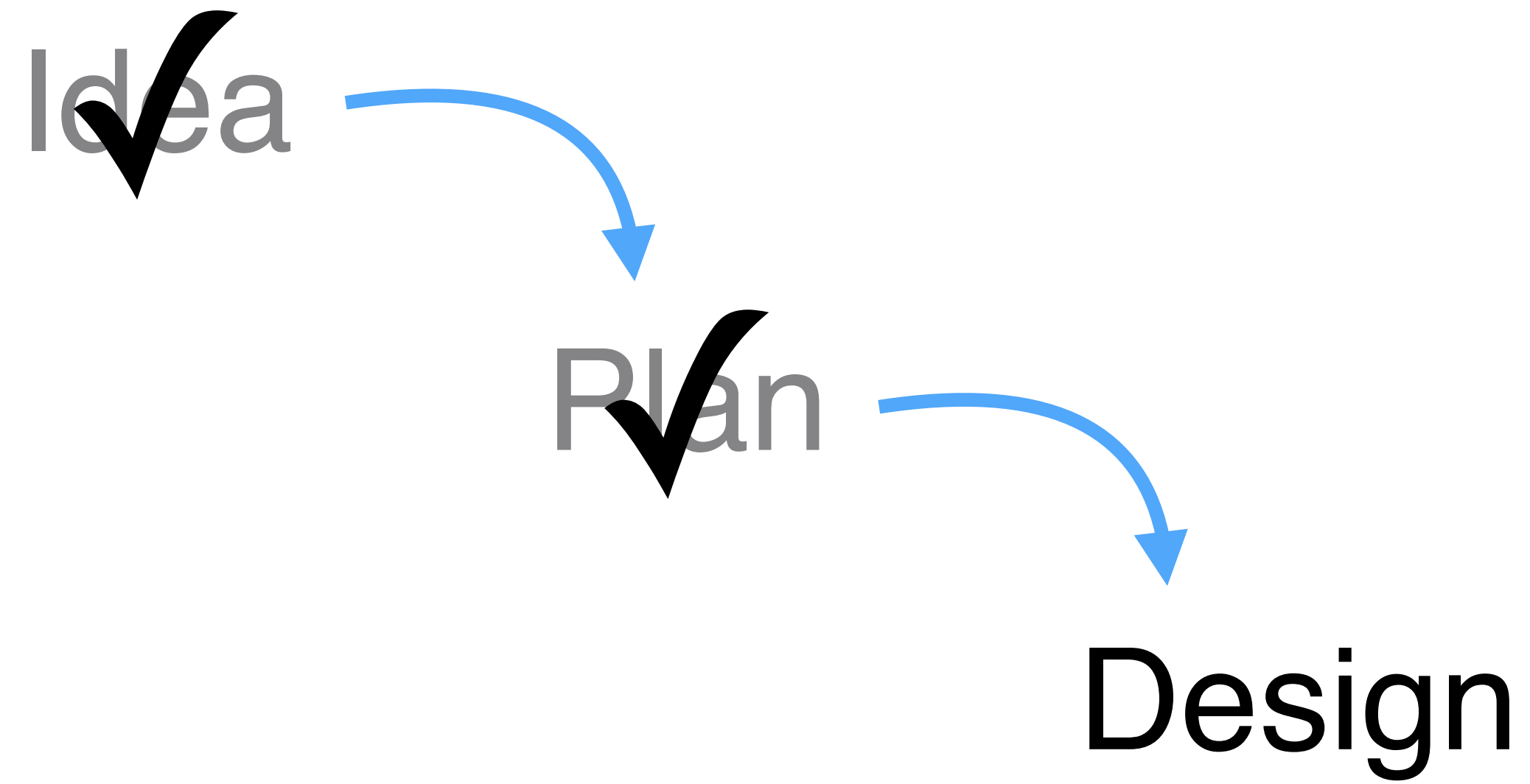
~~Core Bluetooth~~

~~Core Location~~

~~Core Data~~

~~SpriteKit~~

My Development Process



Design

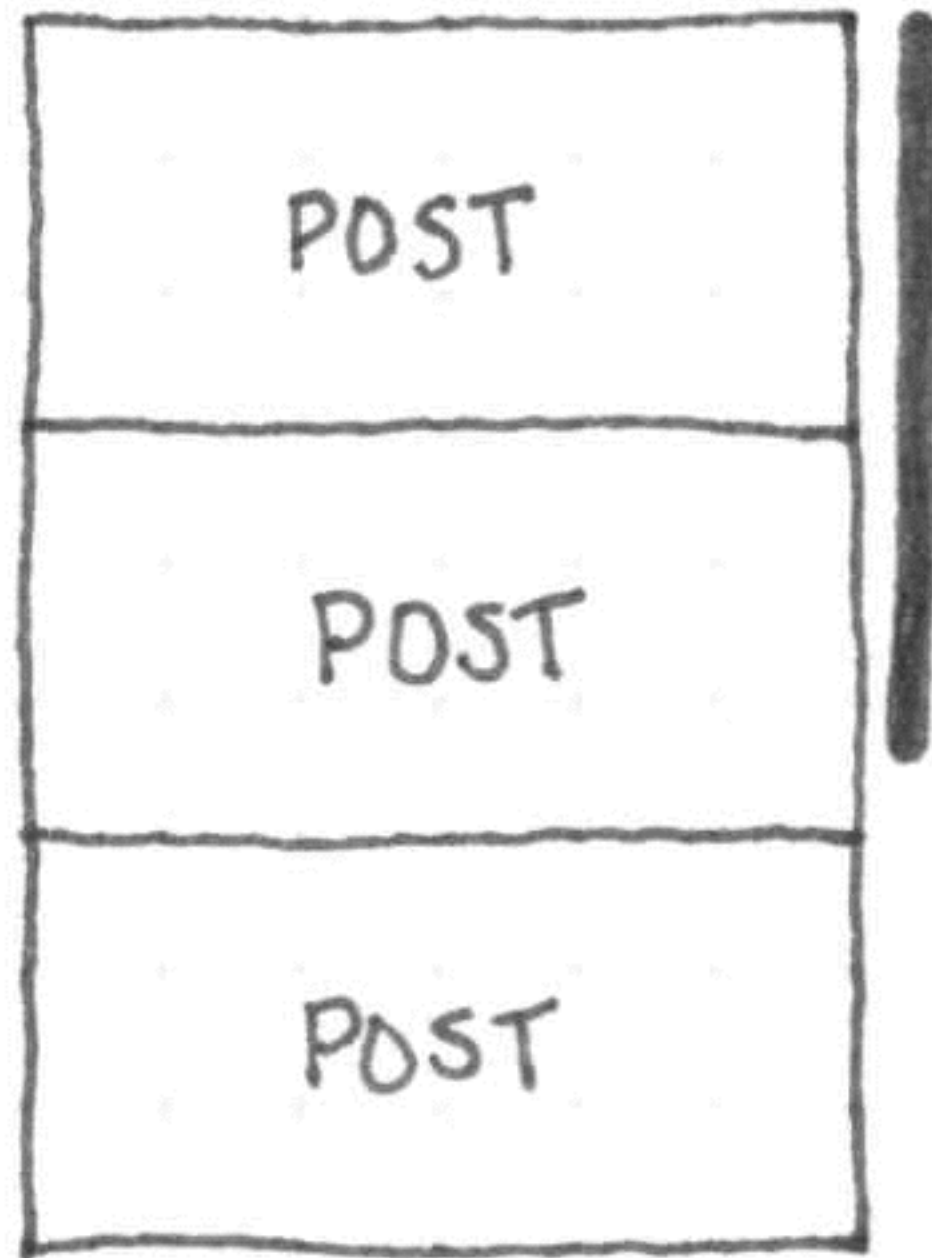
What should the user see?

Design

Features (Again)

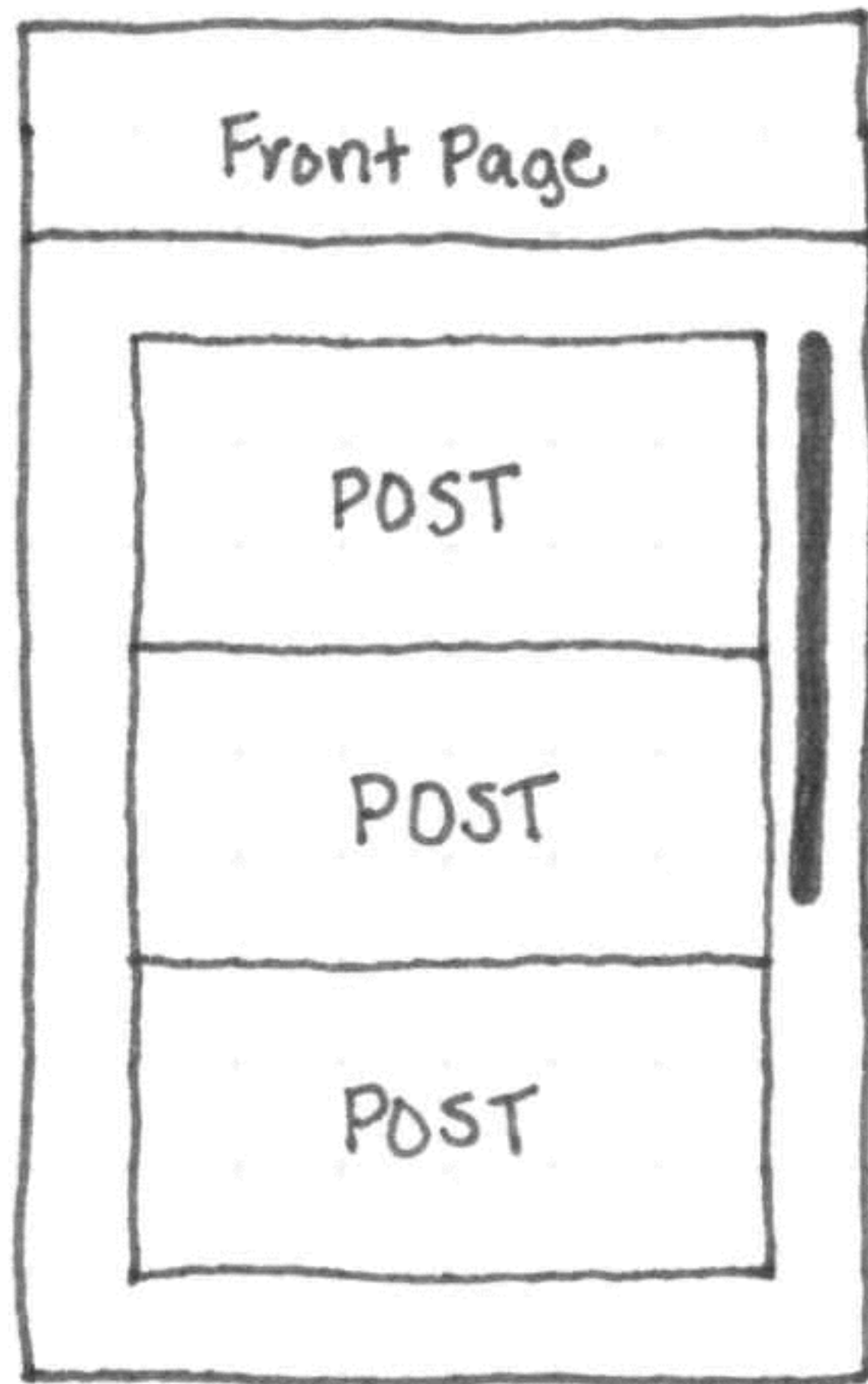
- ✓ Browse posts from the Reddit front page
- ✓ See the posted picture, video, website, etc.

Design

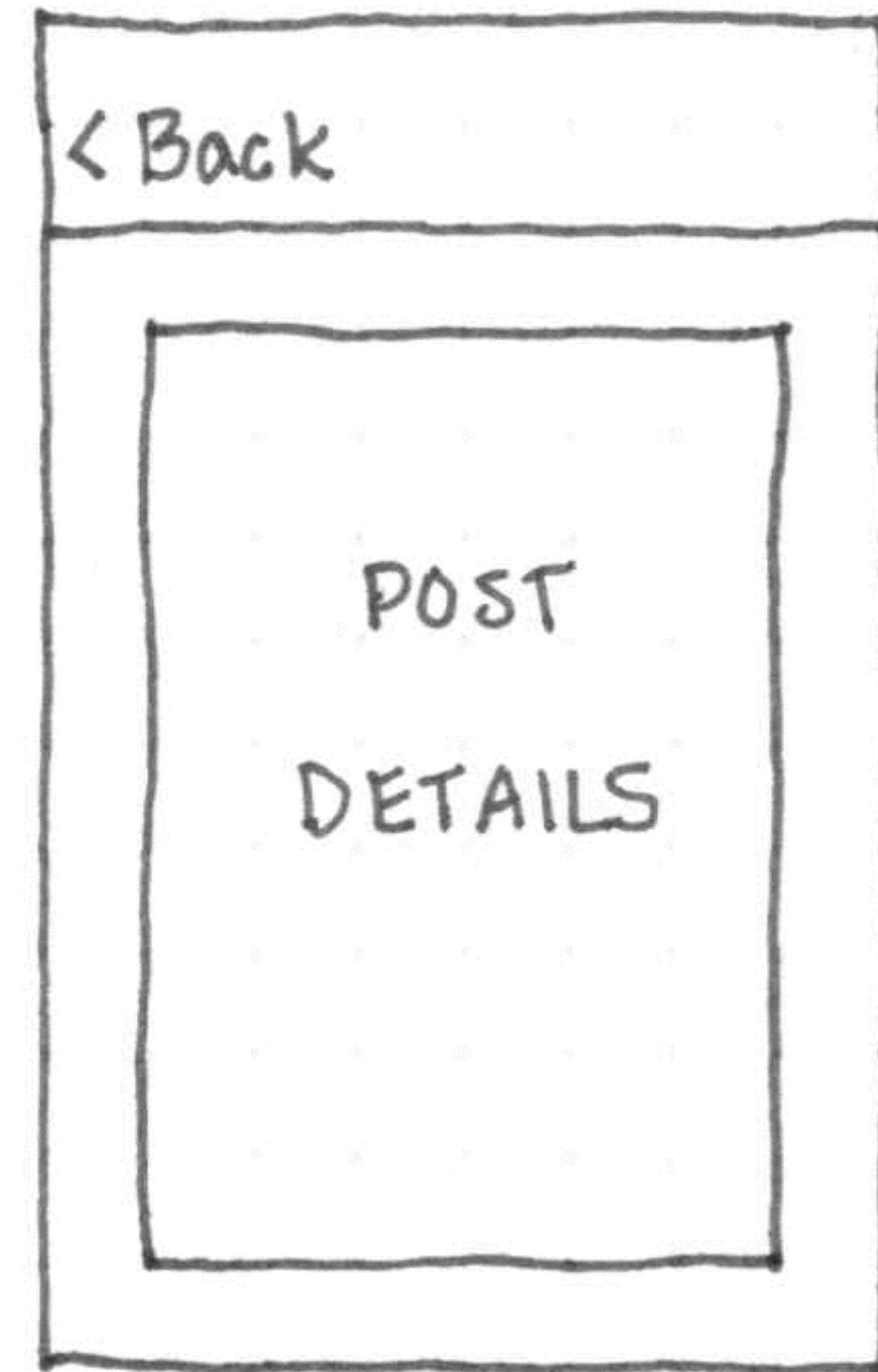


Browse posts

Design



Browse posts



See a post

Design



Design

Sketch It On Paper



Graph Paper

+



Colored Pens

Design

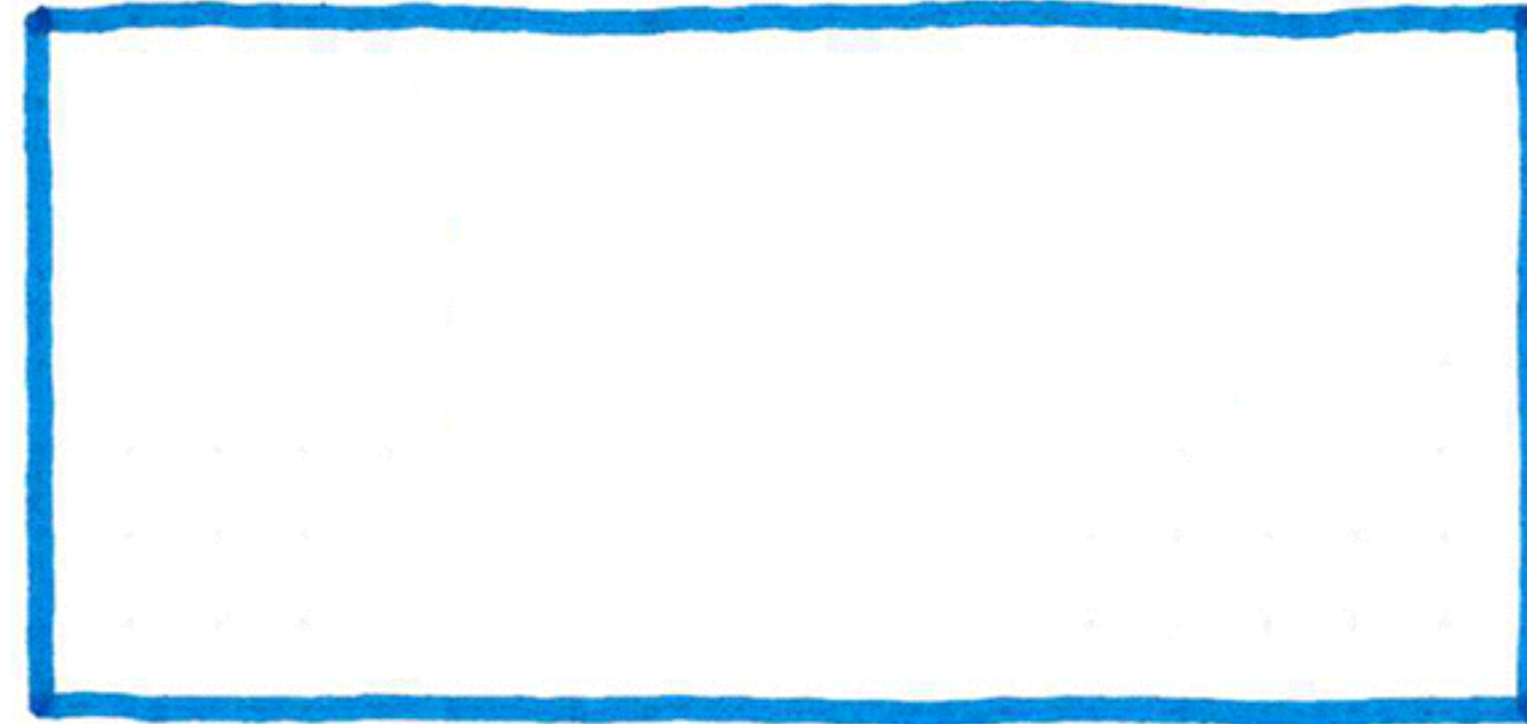
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

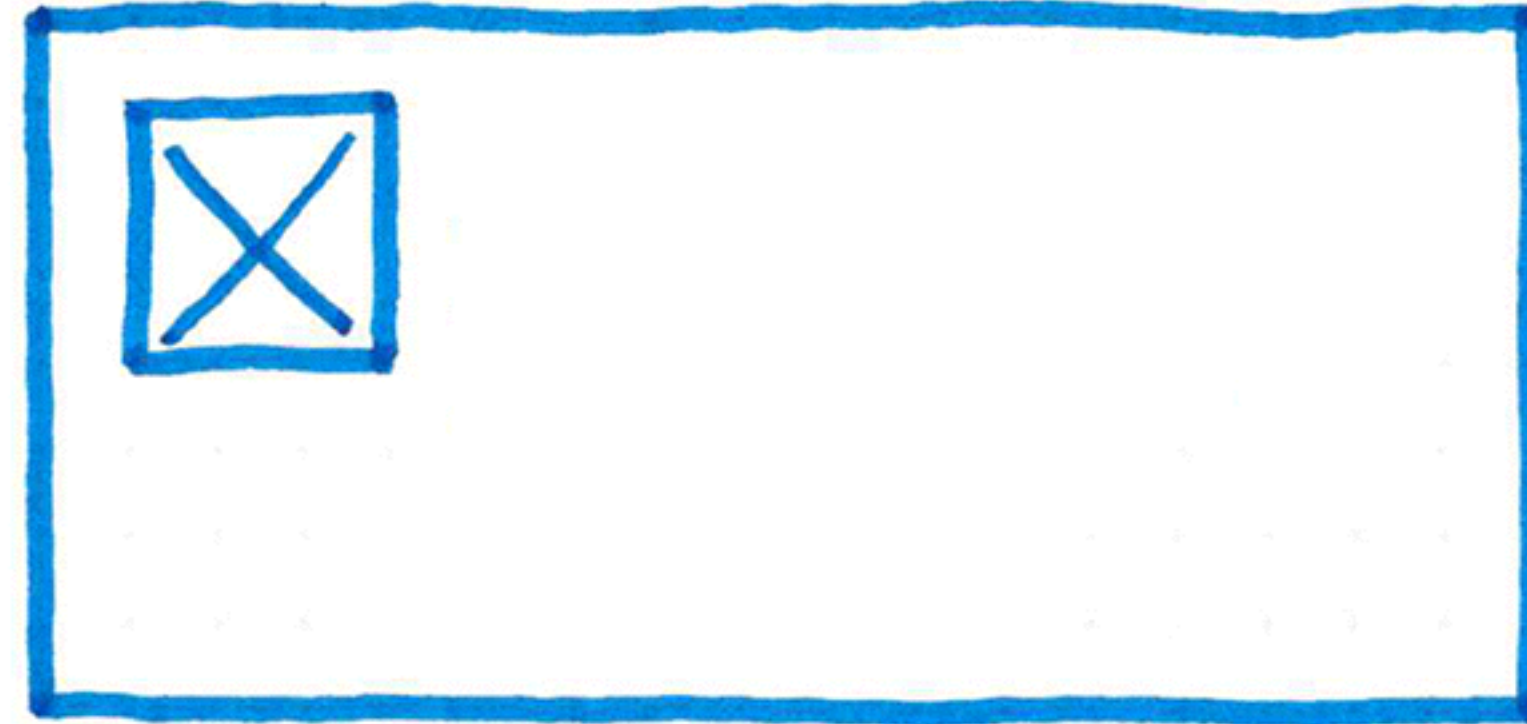
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

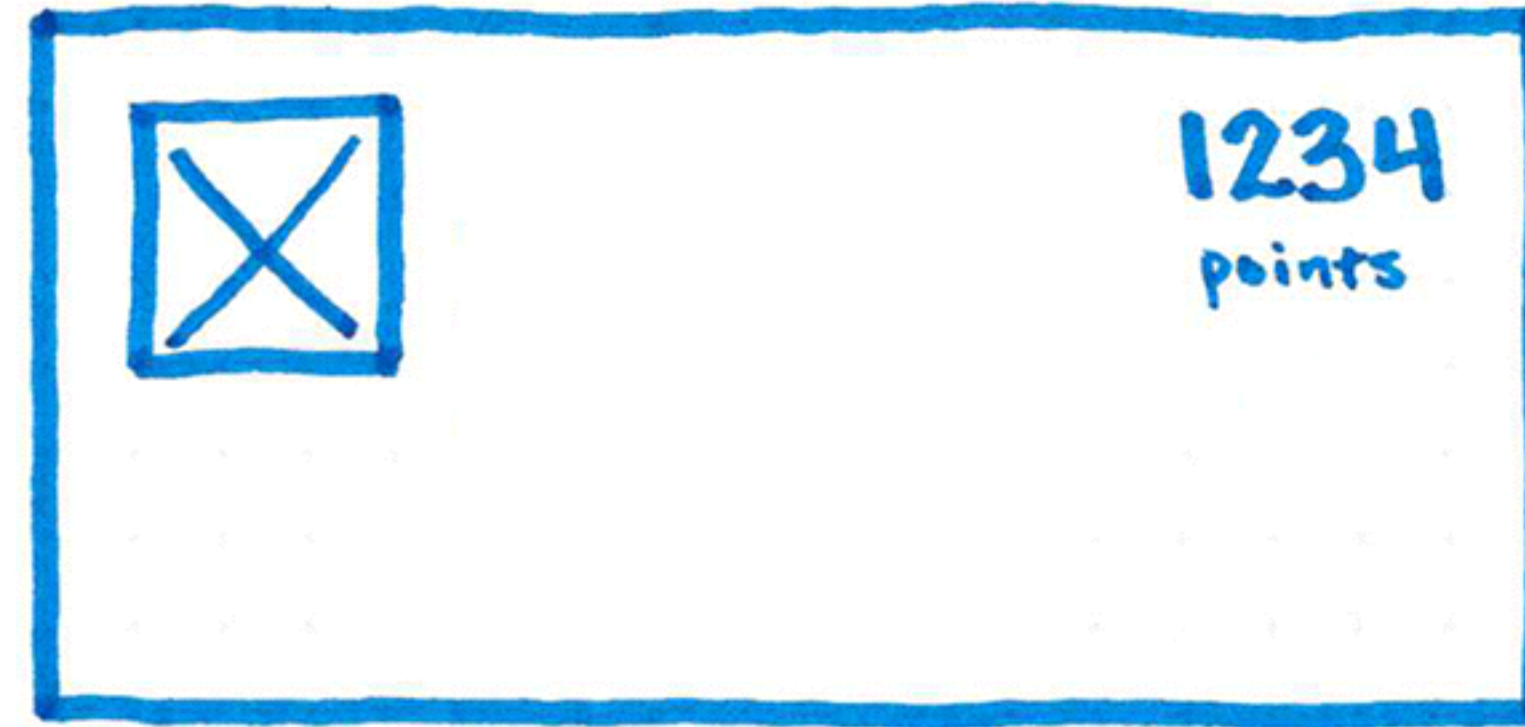
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

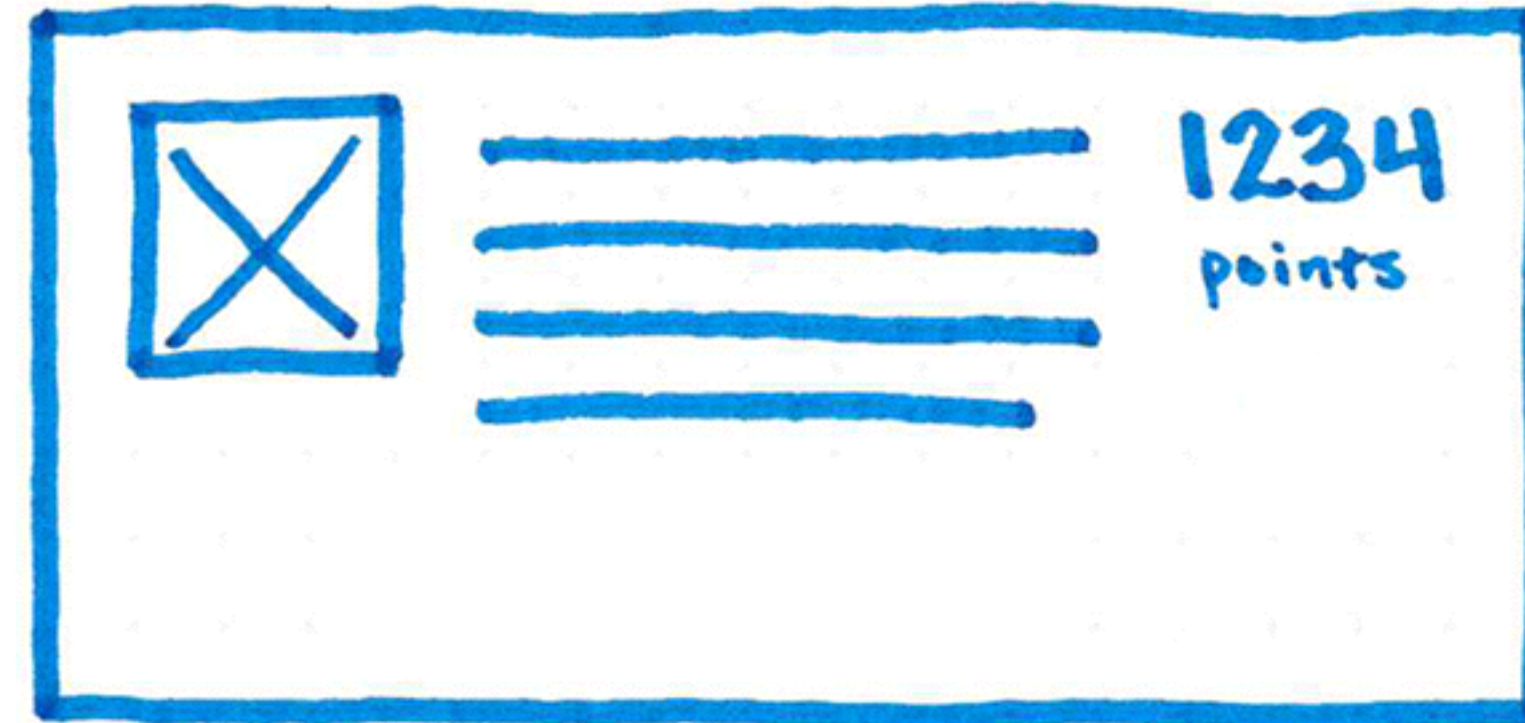
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

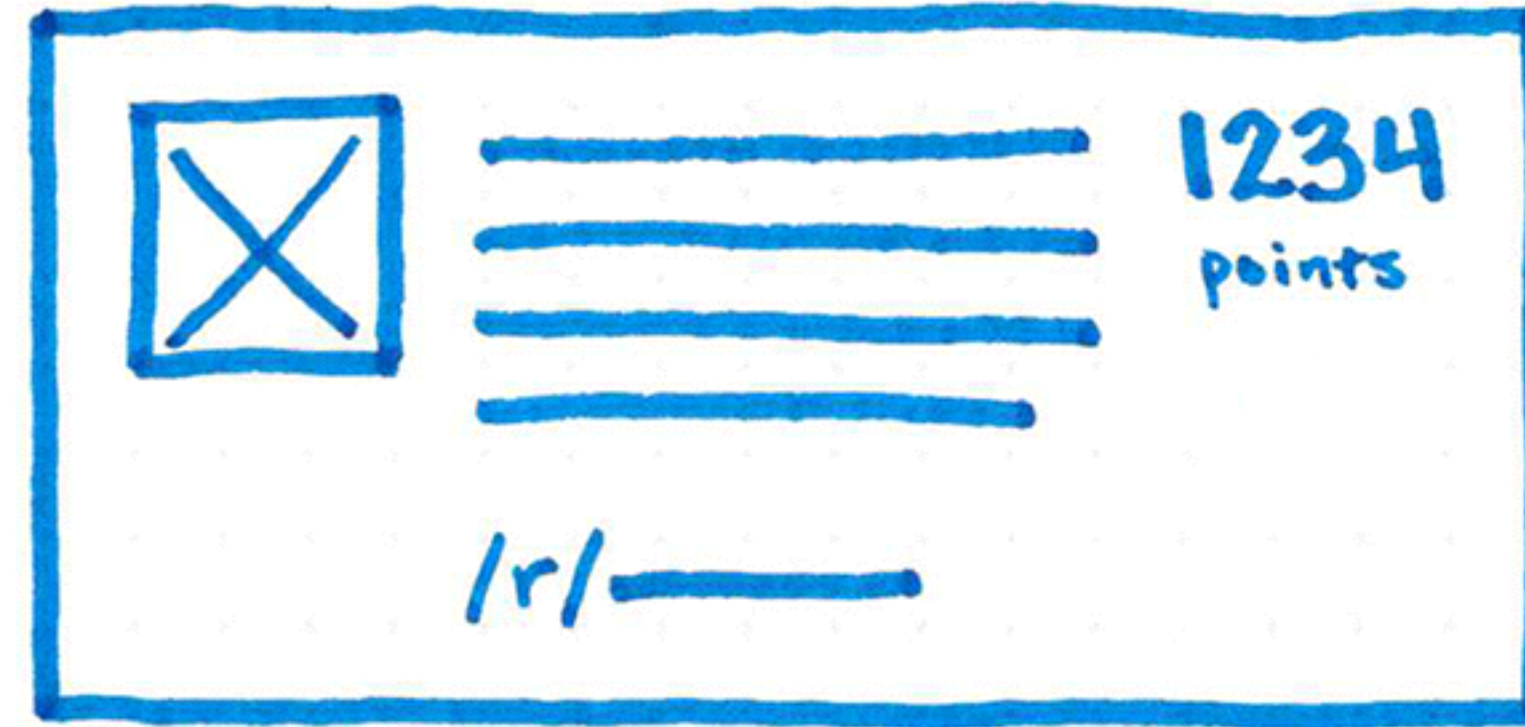
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

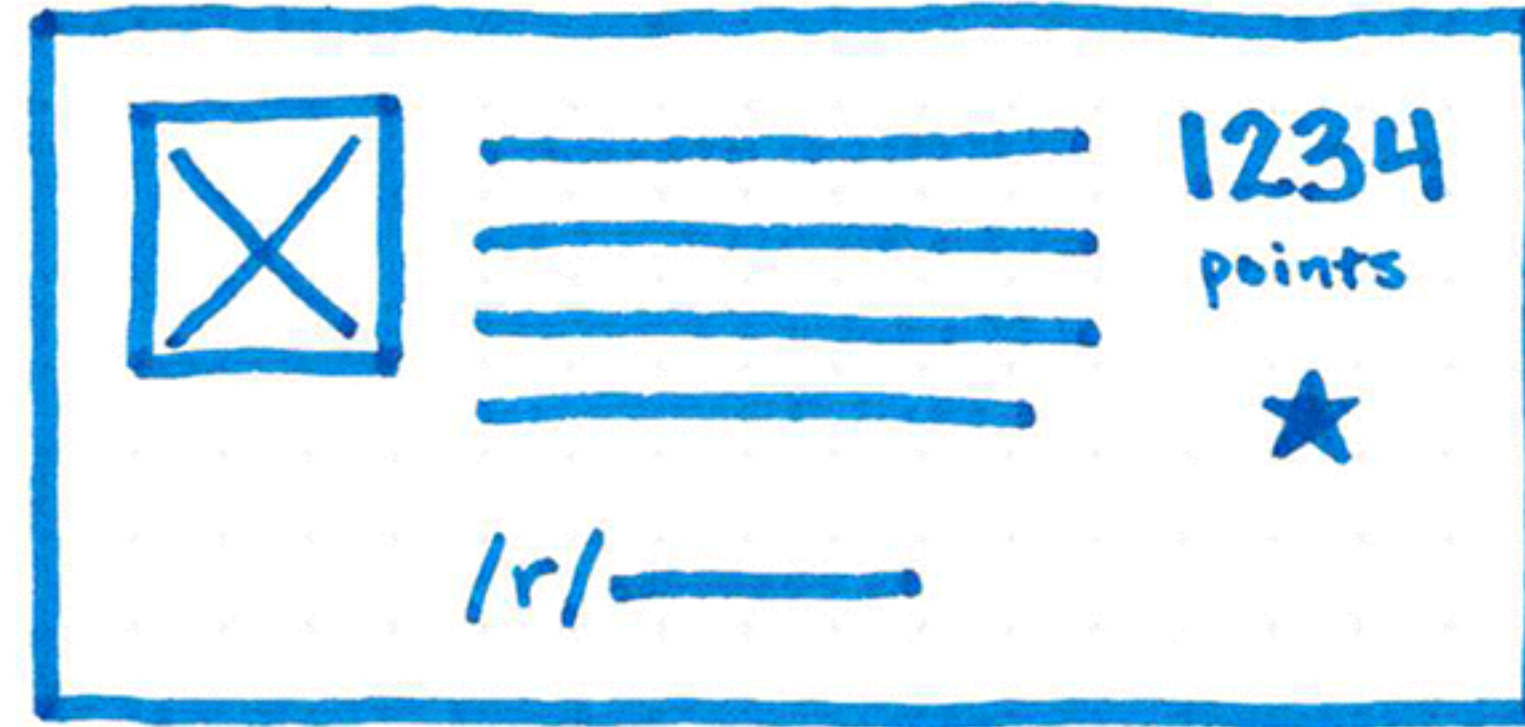
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

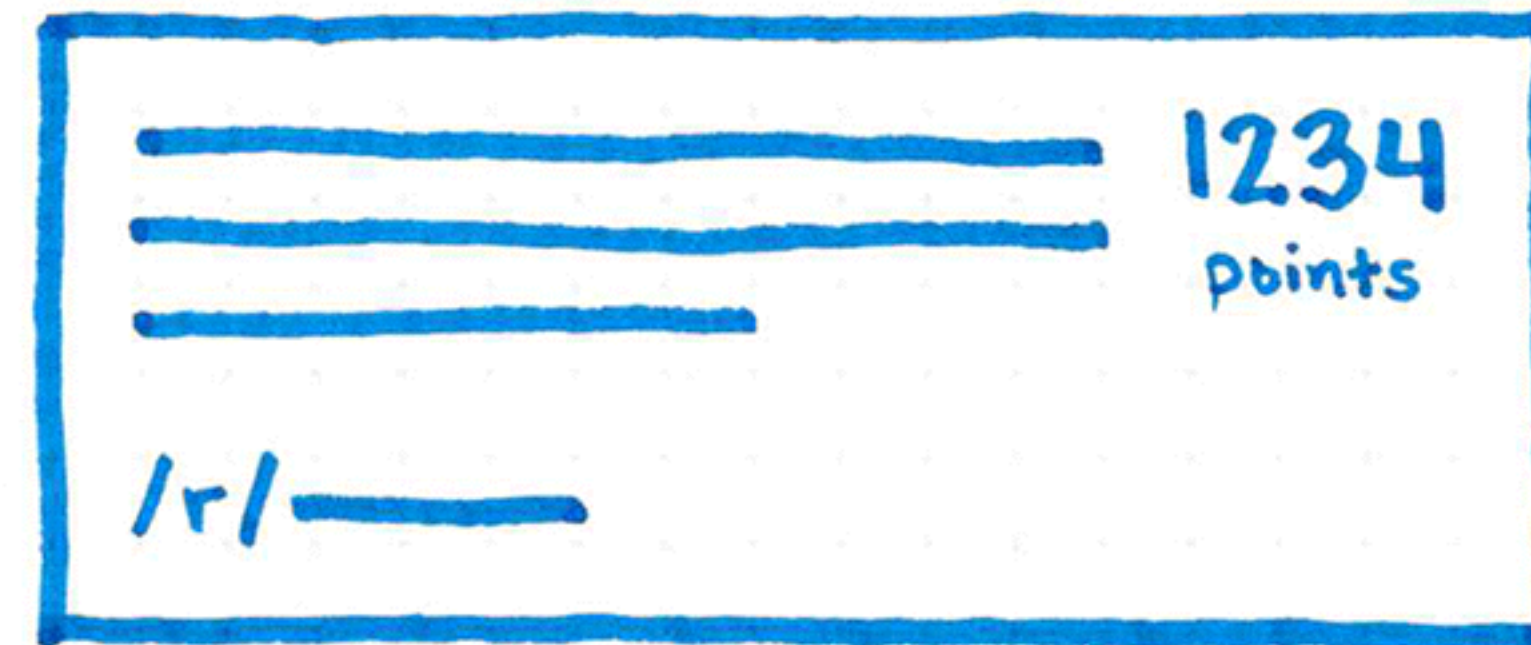
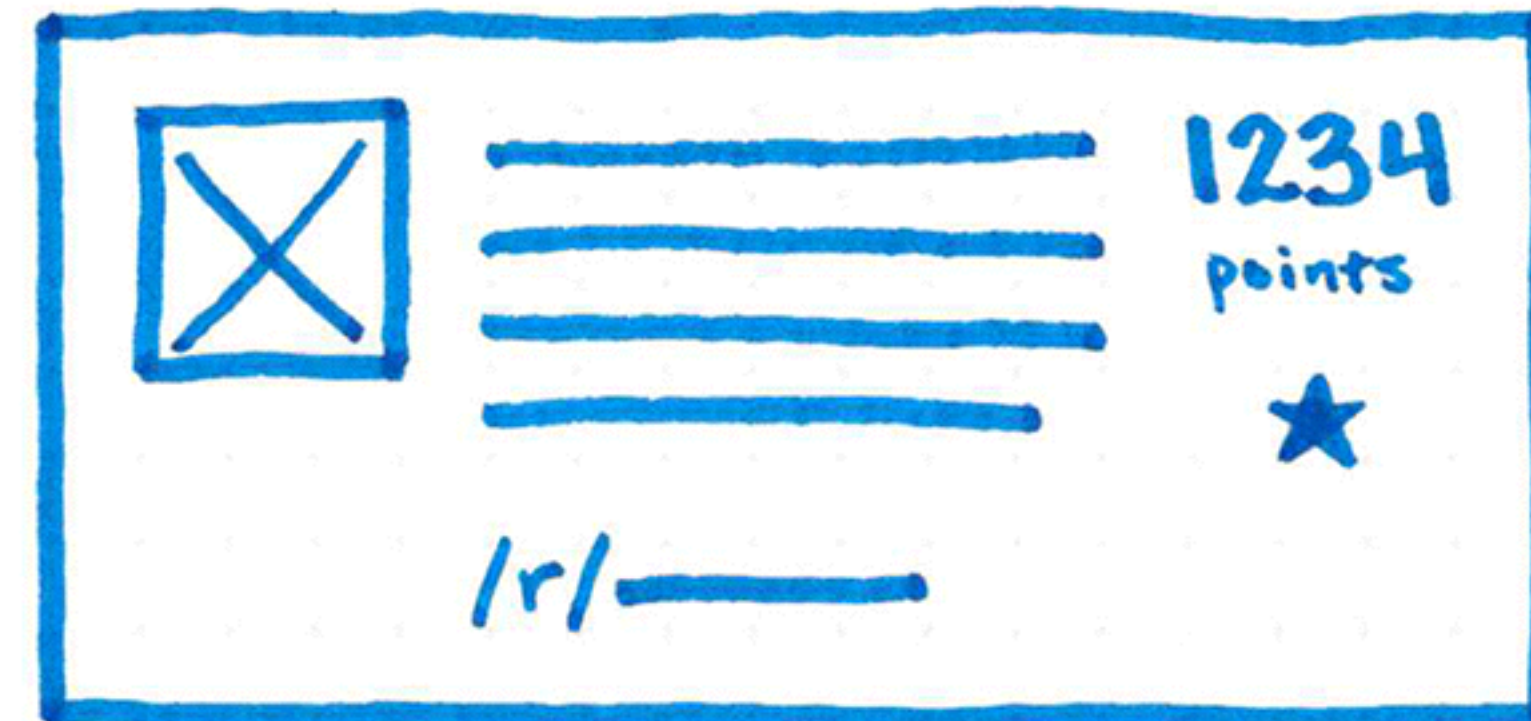
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

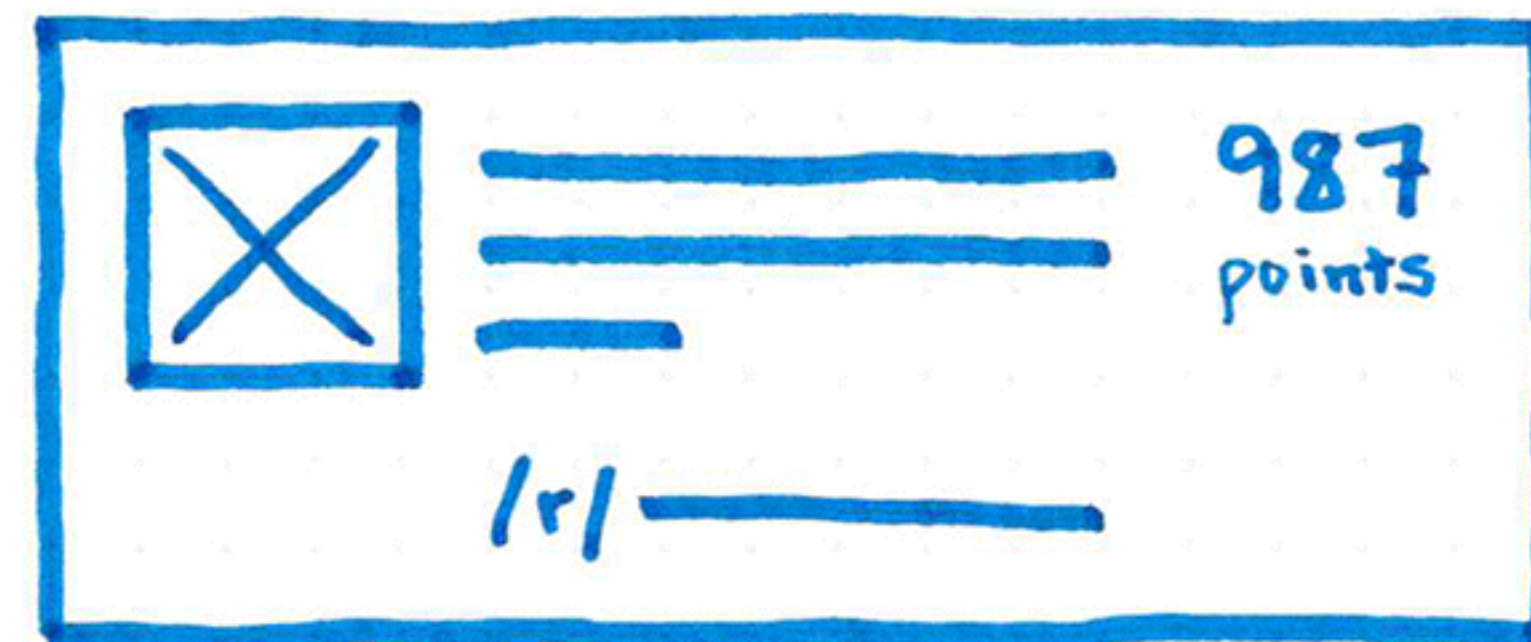
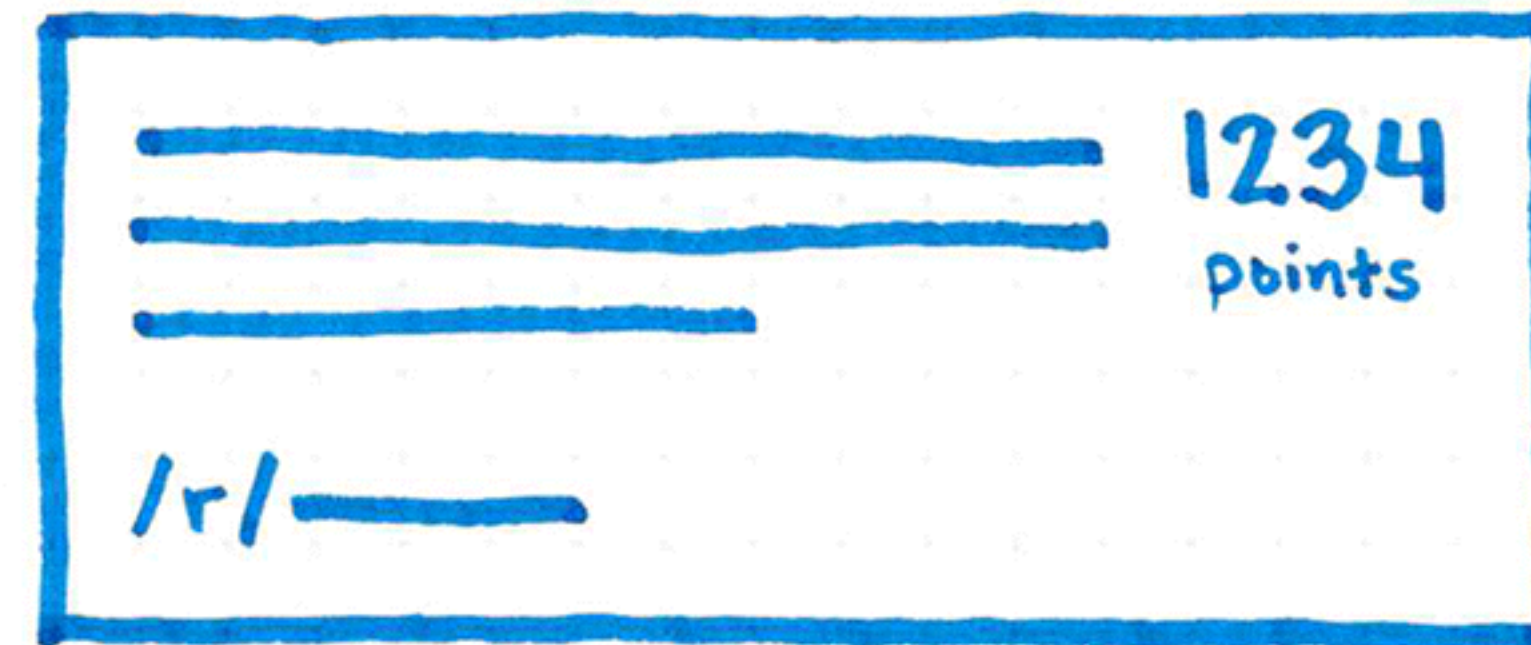
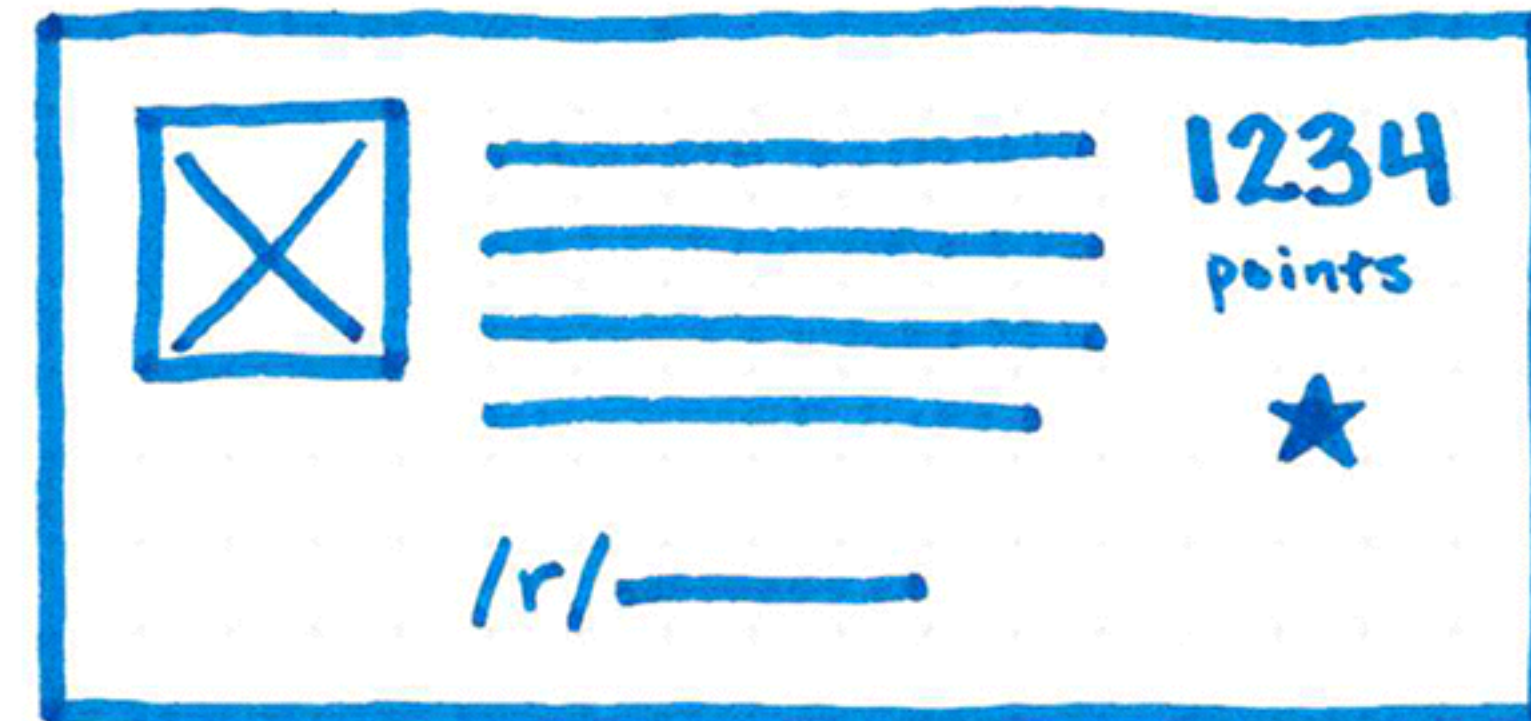
Sketch It On Paper

Title

Thumbnail

Score

Subreddit



Design

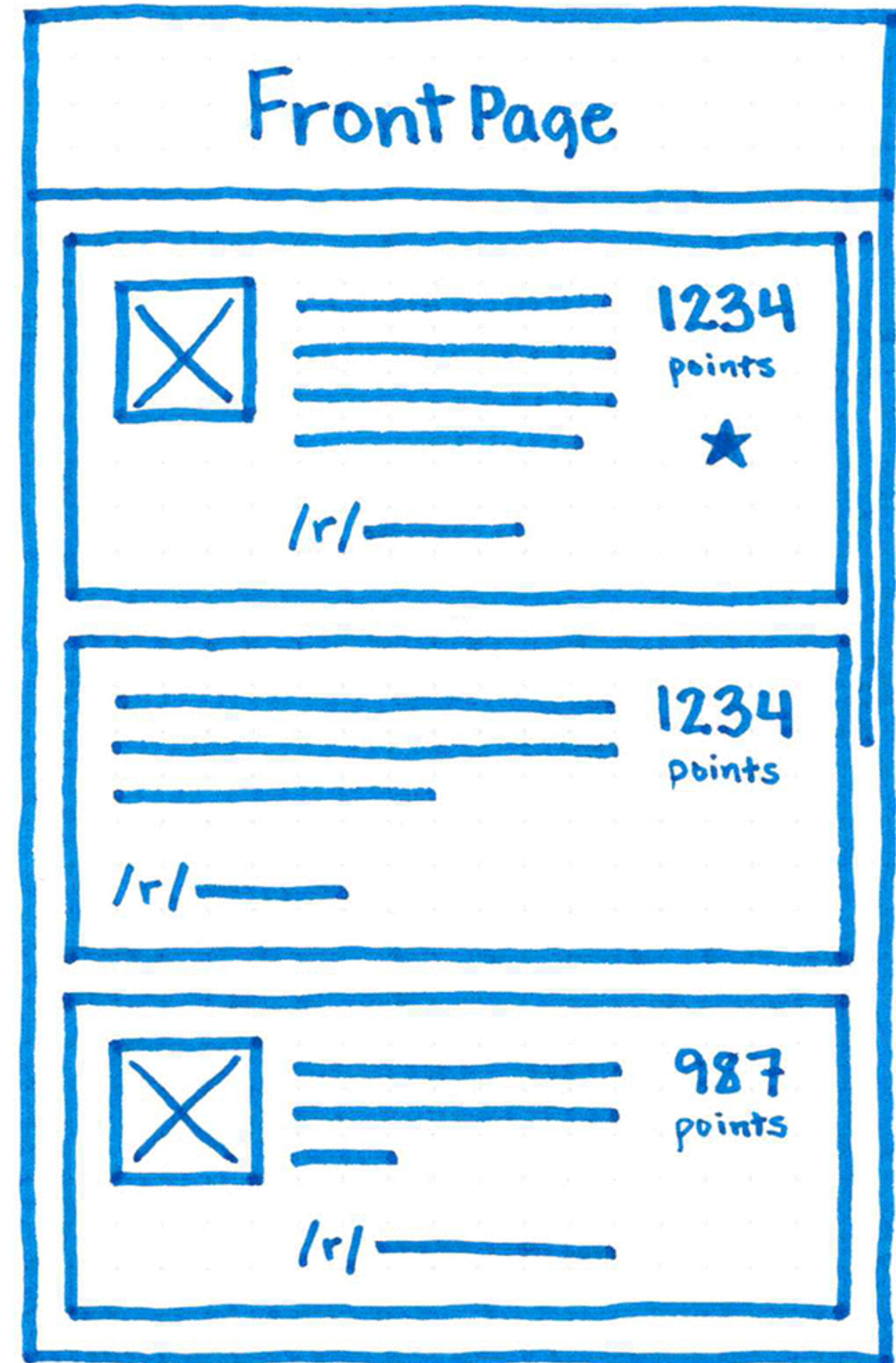
Sketch It On Paper

Title

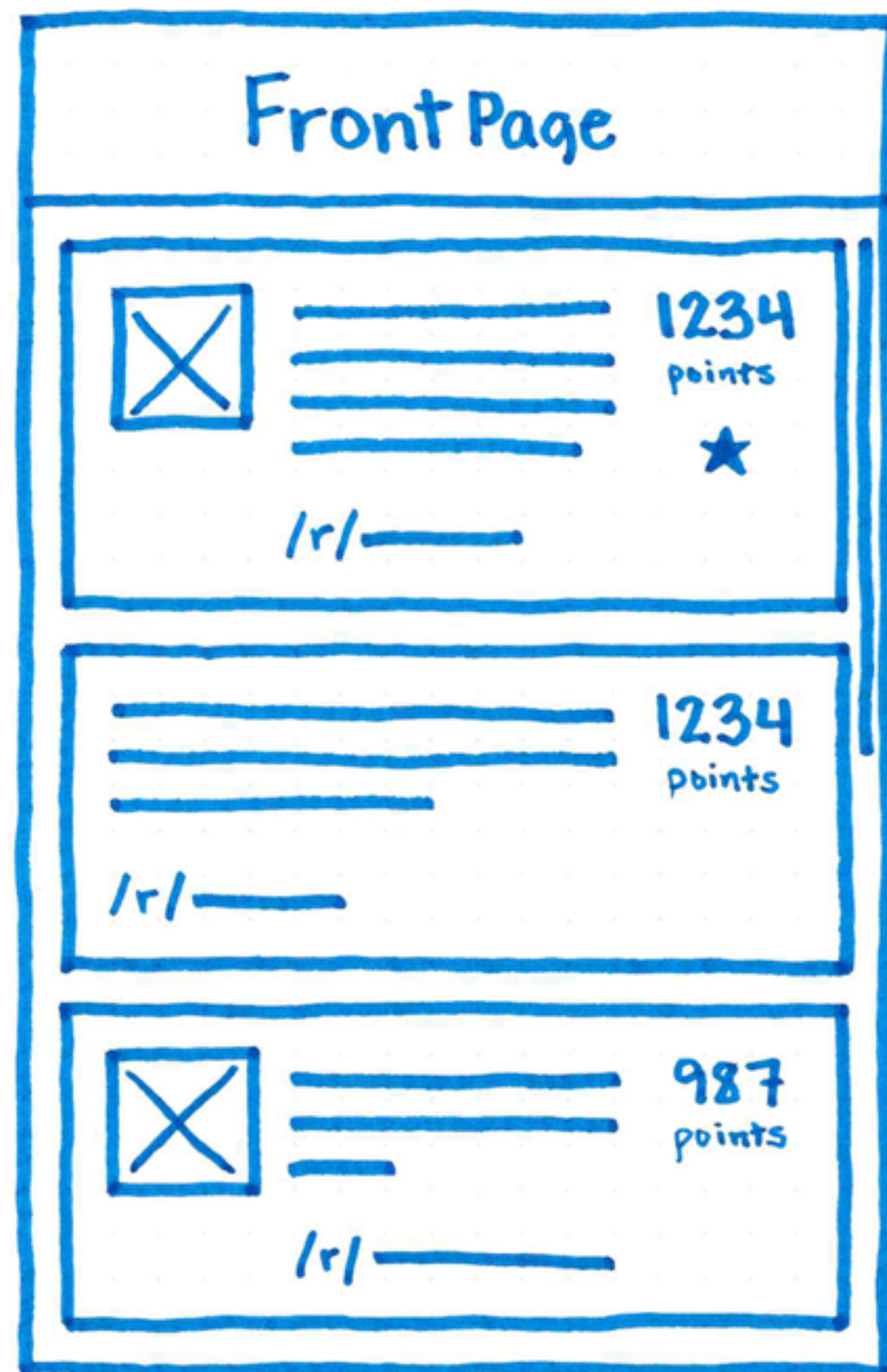
Thumbnail

Score

Subreddit



Design

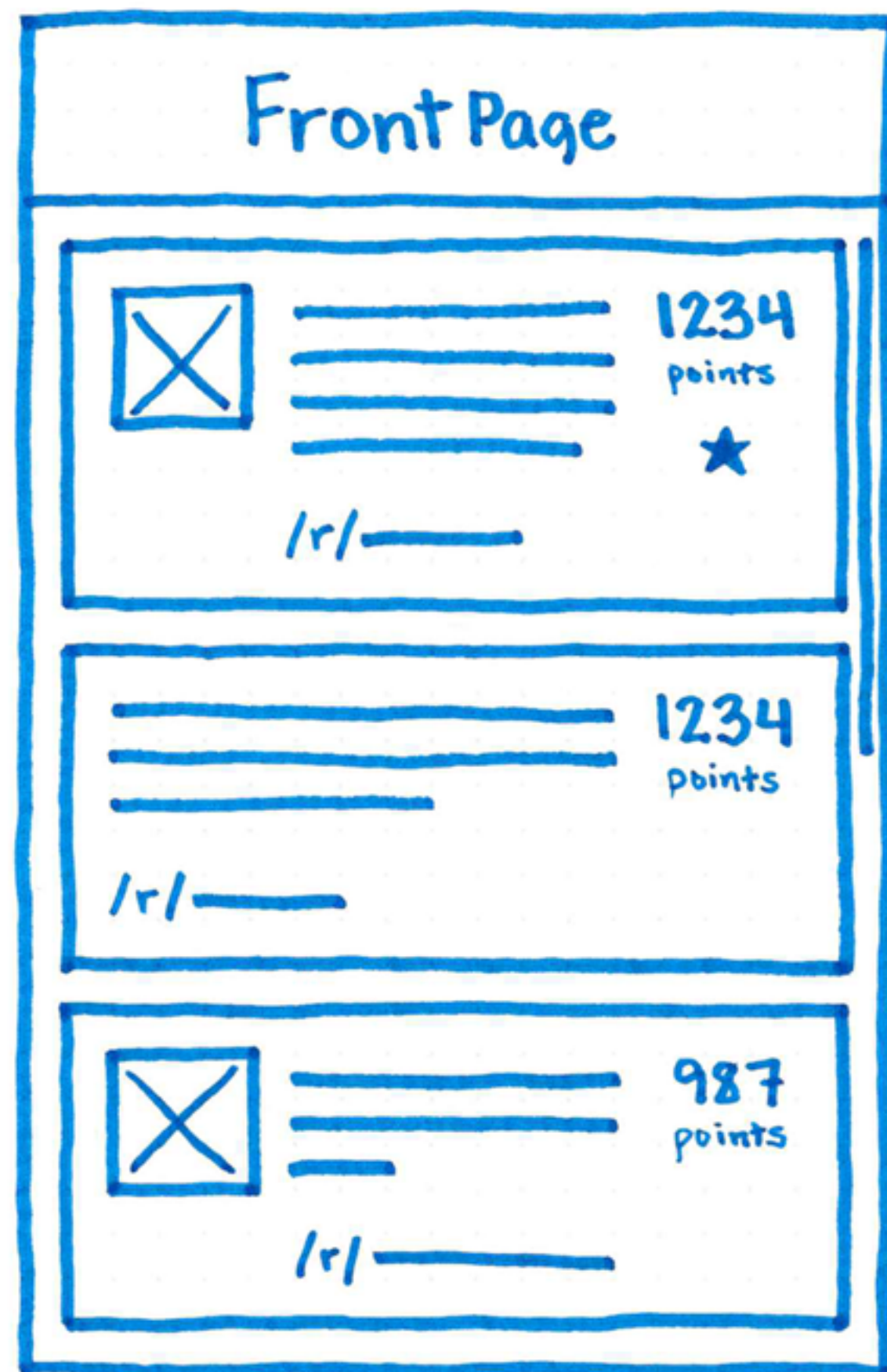


Browse posts

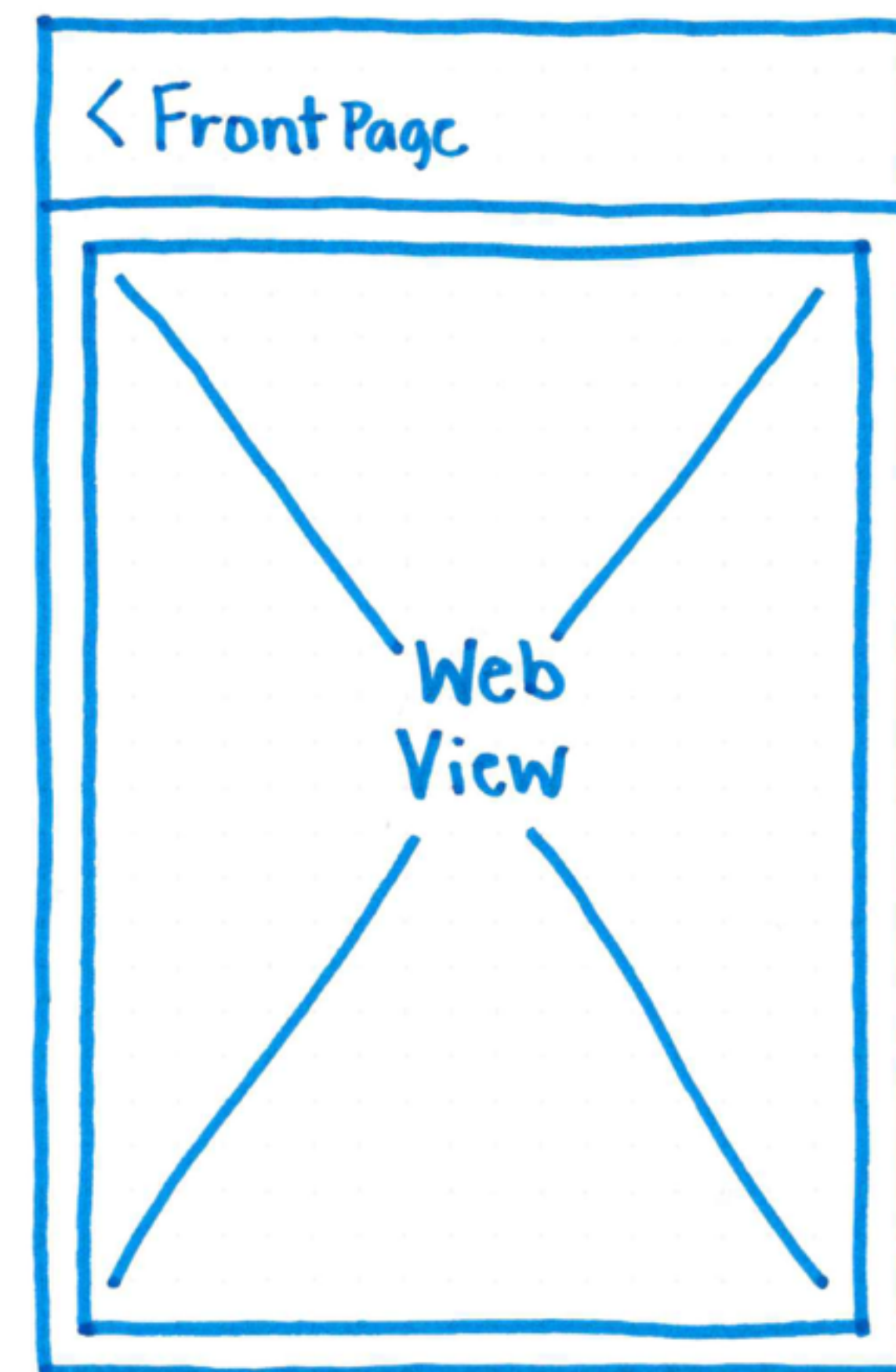


See a post

Design

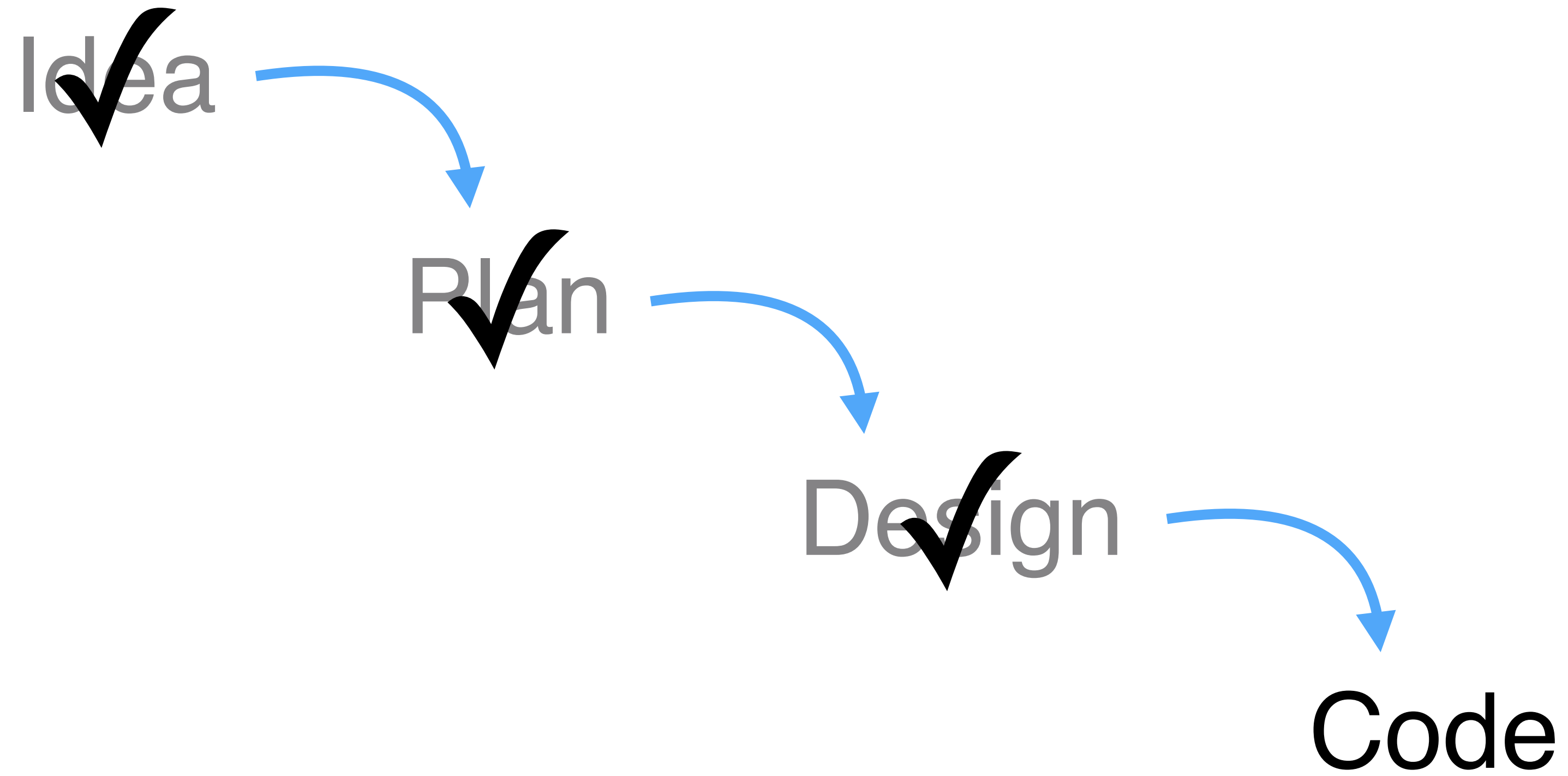


Browse posts



See a post

My Development Process



Code

Languages

Objective-C

Released 1983

Swift

Released 2014

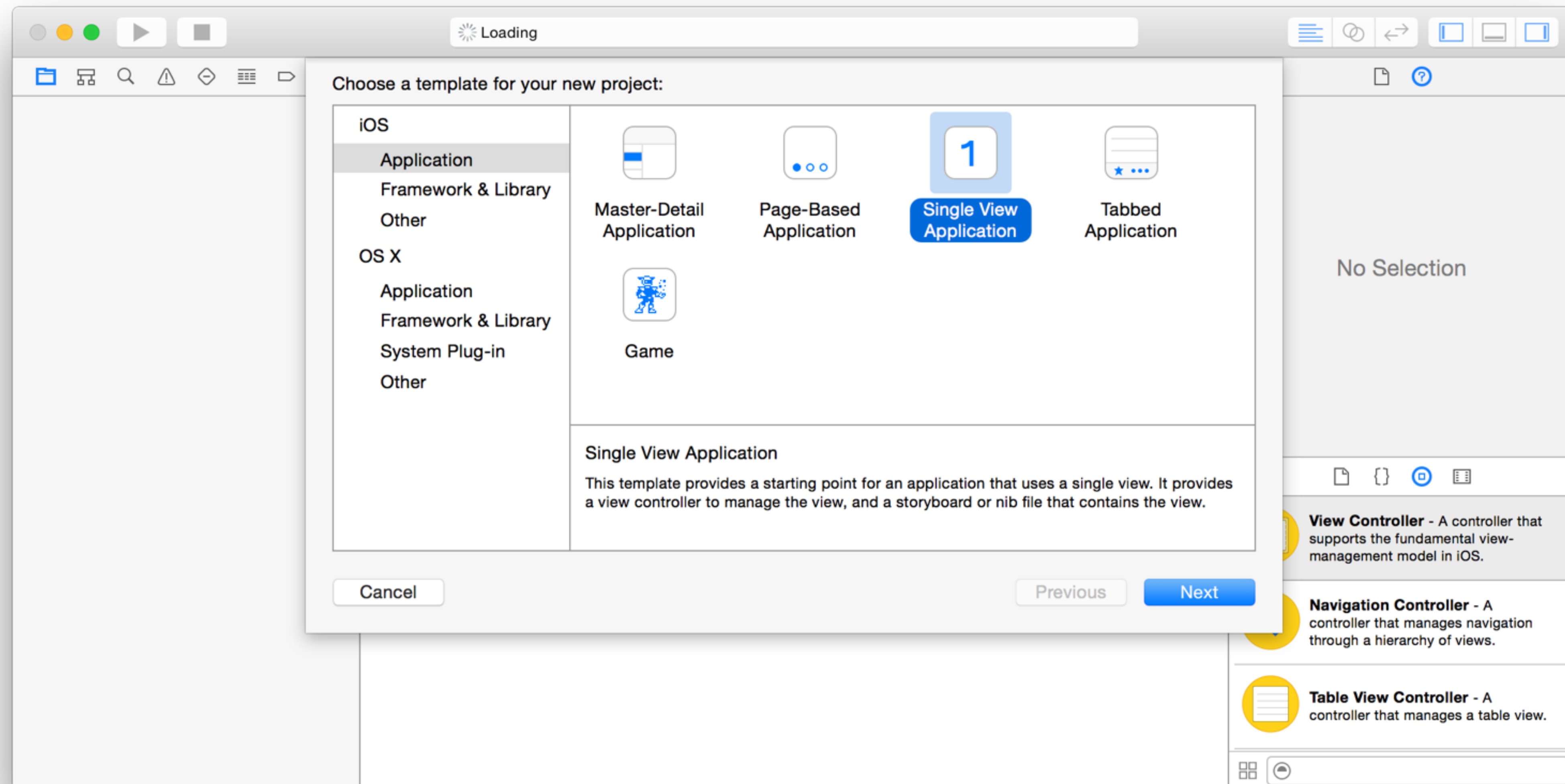
Code Environment



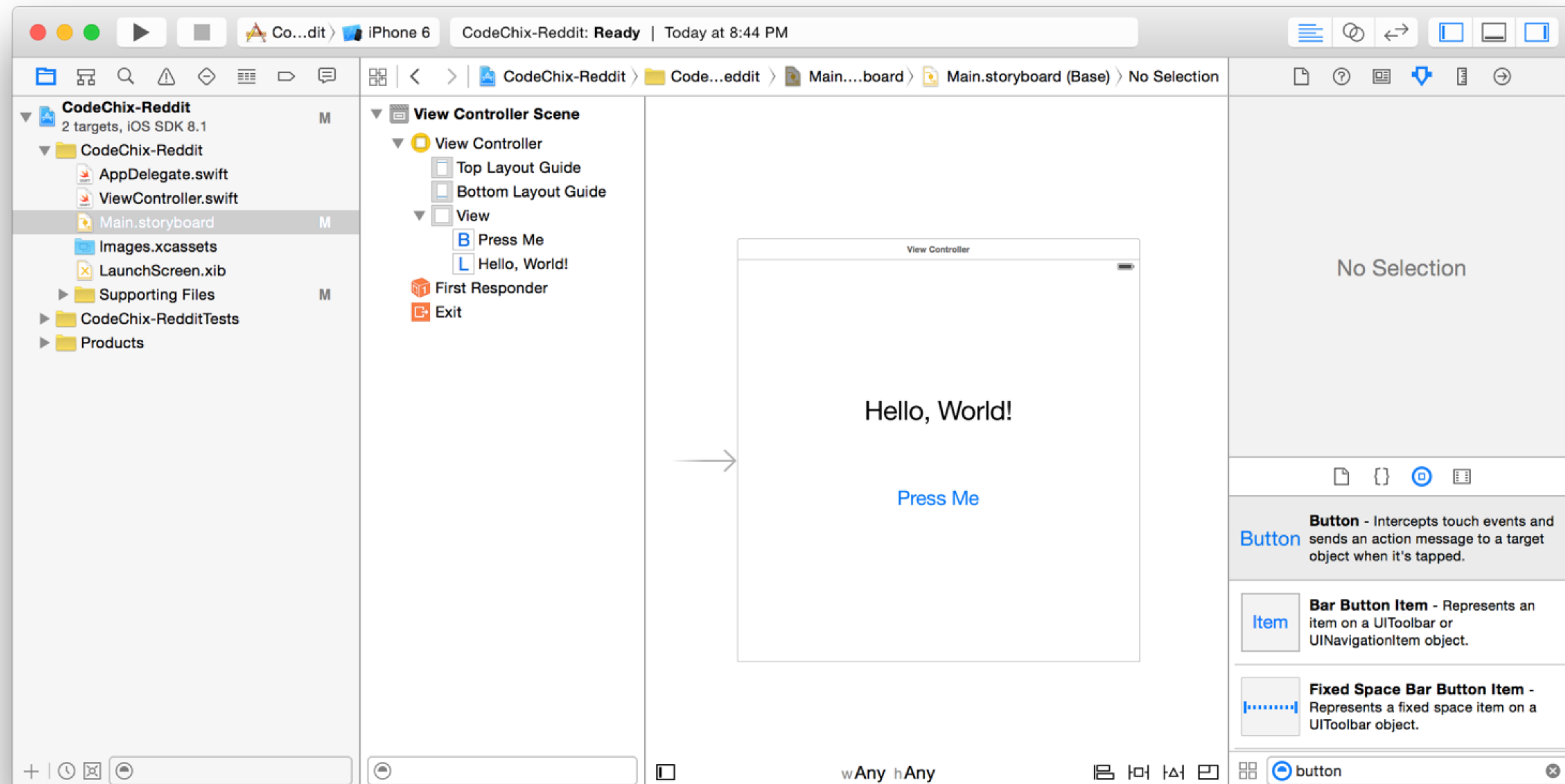
Xcode

Code

New Project

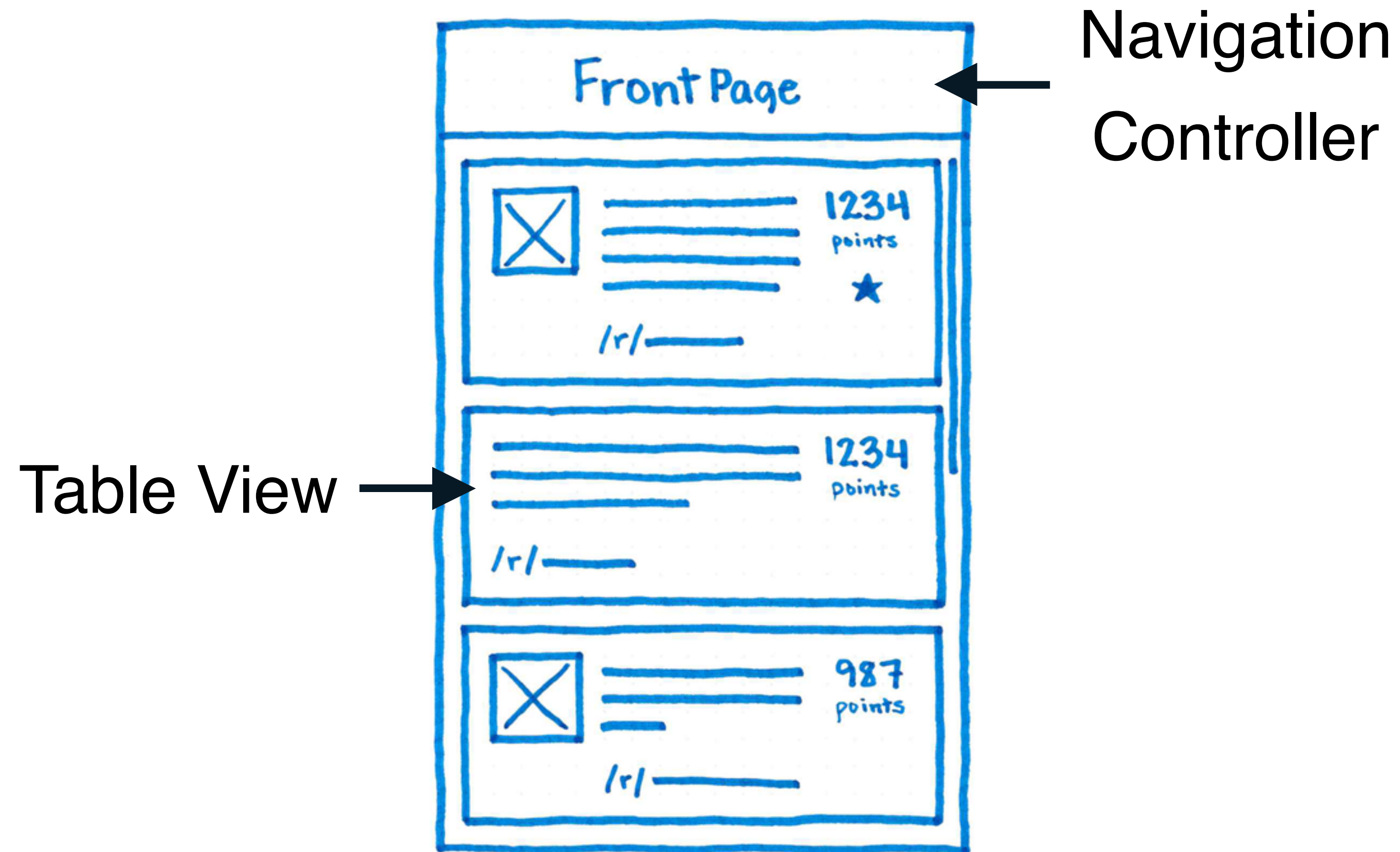


Code Storyboards



Code

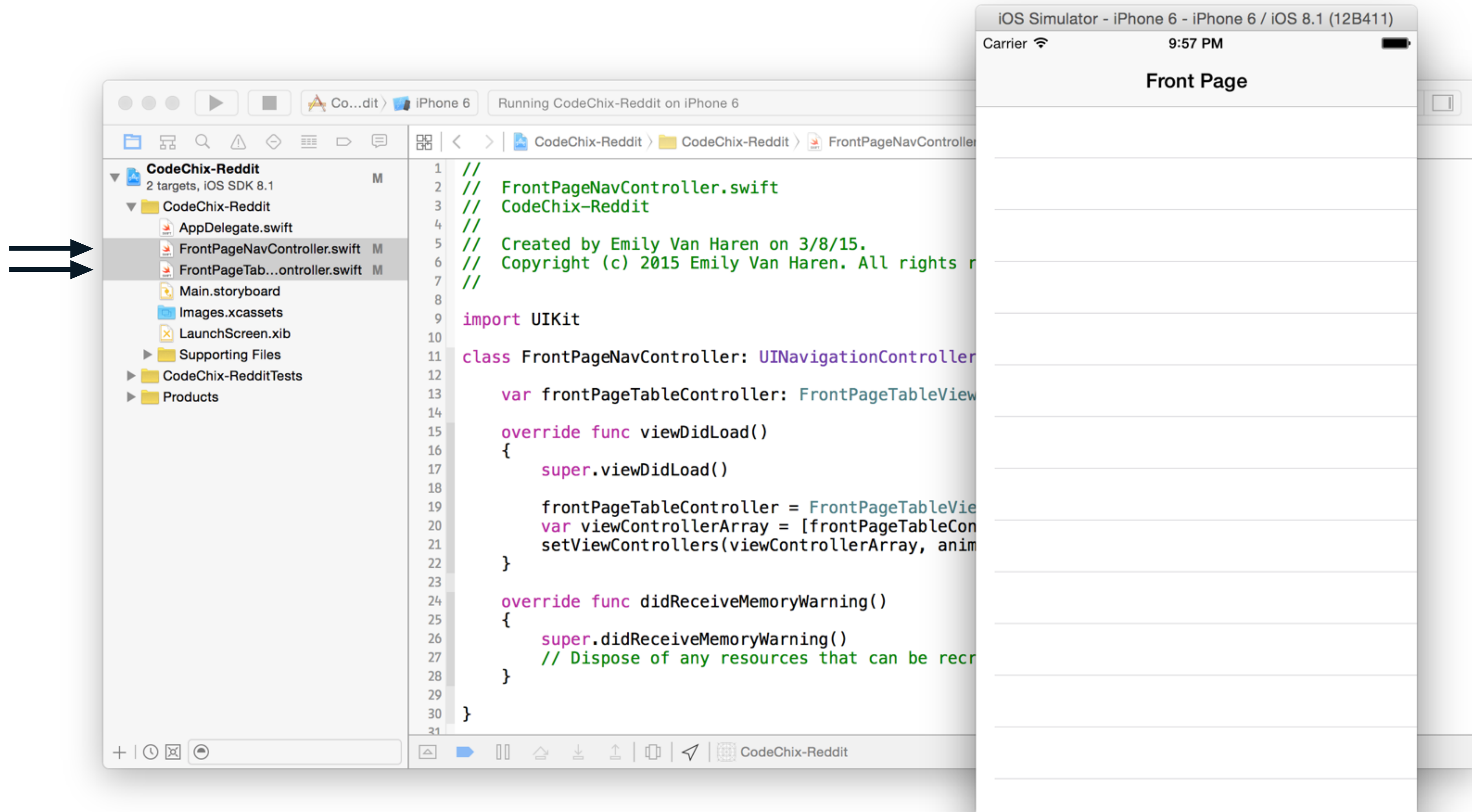
First Screen First



Browse posts

Code

First Screen First



The image displays the Xcode development environment and an iOS Simulator. On the left, the Xcode interface shows a project named "CodeChix-Reddit" with a file explorer on the left and a code editor on the right. The file explorer highlights "FrontPageNavController.swift". The code editor shows the following Swift code:

```
1 //  
2 // FrontPageNavController.swift  
3 // CodeChix-Reddit  
4 //  
5 // Created by Emily Van Haren on 3/8/15.  
6 // Copyright (c) 2015 Emily Van Haren. All rights reserved.  
7 //  
8  
9 import UIKit  
10  
11 class FrontPageNavController: UINavigationController  
12  
13     var frontPageTableController: FrontPageTableView  
14  
15     override func viewDidLoad()  
16     {  
17         super.viewDidLoad()  
18  
19         frontPageTableController = FrontPageTableVie  
20         var viewControllerArray = [frontPageTableCon  
21         setViewControllers(viewControllerArray, anim  
22     }  
23  
24     override func didReceiveMemoryWarning()  
25     {  
26         super.didReceiveMemoryWarning()  
27         // Dispose of any resources that can be recr  
28     }  
29  
30 }  
31
```

On the right, the iOS Simulator shows an iPhone 6 screen with the title "Front Page" and a list of horizontal lines representing content.


```

{
  "kind": "t3",
  "data": {
    "domain": "i.imgur.com",
    "banned_by": null,
    "media_embed": {
      "subreddit": "funny",
      "selftext": "",
      "likes": null,
      "user_reports": [
      ],
      "secure_media": null,
      "link_flair_text": null,
      "id": "2xxtzv",
      "gilded": 0,
      "archived": false,
      "clicked": false,
      "report_reasons": null,
      "author": "rossgraphitas",
      "score": 4246,
      "over_18": false,
      "thumbnail": "http://b.thumbs.redditmedia.com/_sHsYX6TNh3N1cYIbVFKsT2KeFa6KbqUWzvYP1AgLSY.jpg",
      "edited": false,
      "link_flair_css_class": null,
      "author_flair_css_class": null,
      "downs": 0,
      "secure_media_embed": {
      },
      "saved": false,
      "stickied": false,
      "is_self": false,
      "permalink": "\/r\/funny\/comments\/2xxtzv\/who_has_ever_needed_one_of_these_after_a_meeting\/",
      "name": "t3_2xxtzv",
      "created": 1425526739,
      "url": "http://i.imgur.com/9yF0Vyo.jpg",
      "title": "Who has ever needed one of these after a meeting?",
      "distinguished": null,
      "media": null,
      "mod_reports": [
      ],
      "visited": false,
      "num_reports": null,
      "ups": 4246
    }
  }
},

```

<http://reddit.com/.json>

Code

NSURLSession

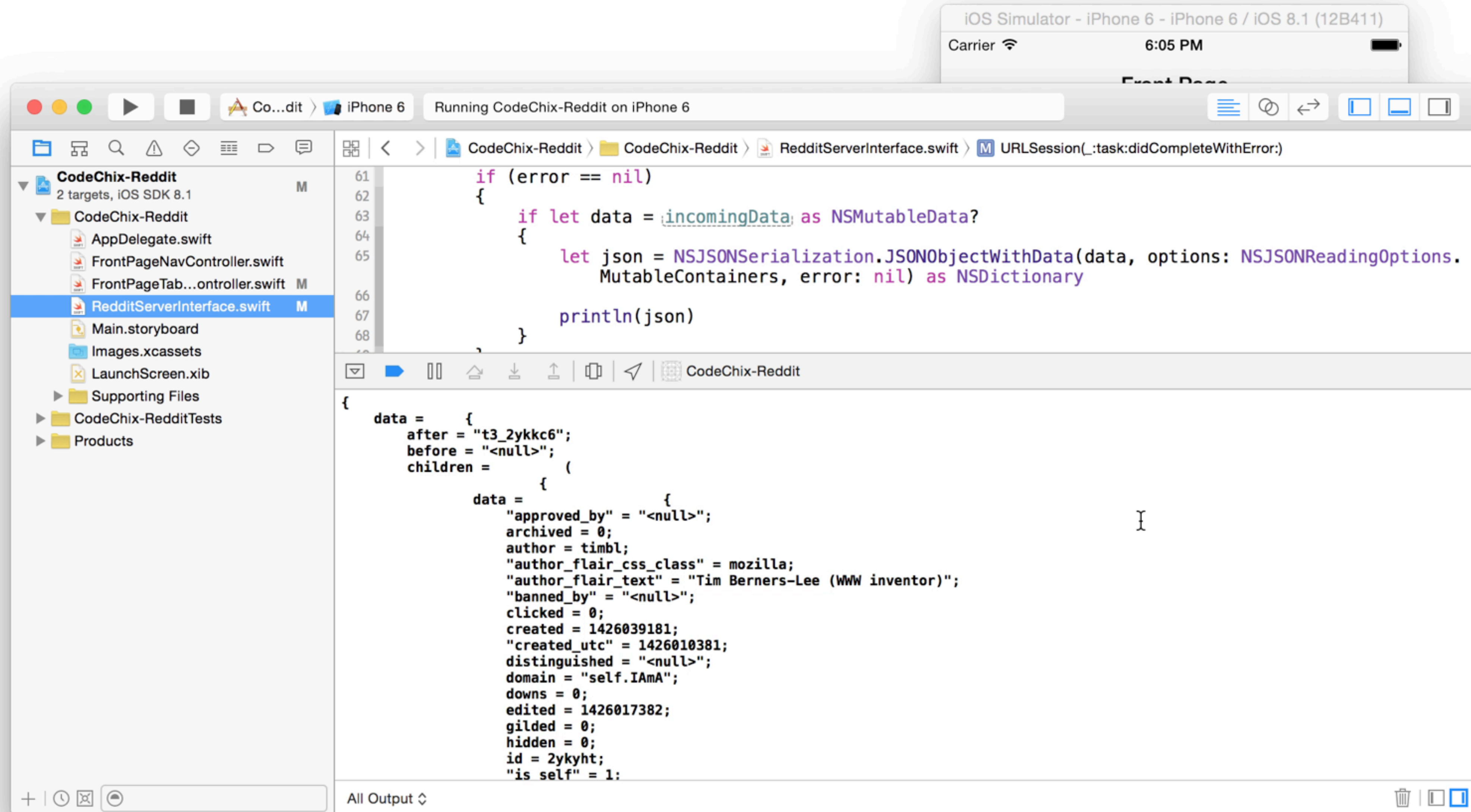
```
// The same URL we visited in the browser
//
let url = NSURL(string: "http://www.reddit.com/.json")

// Make it a GET request
//
var request = NSMutableURLRequest(URL: url!)
request.HTTPMethod = "GET"

// Send the request
//
dataTask = session.dataTaskWithRequest(request)
dataTask.resume()
```


Code

JSON Response



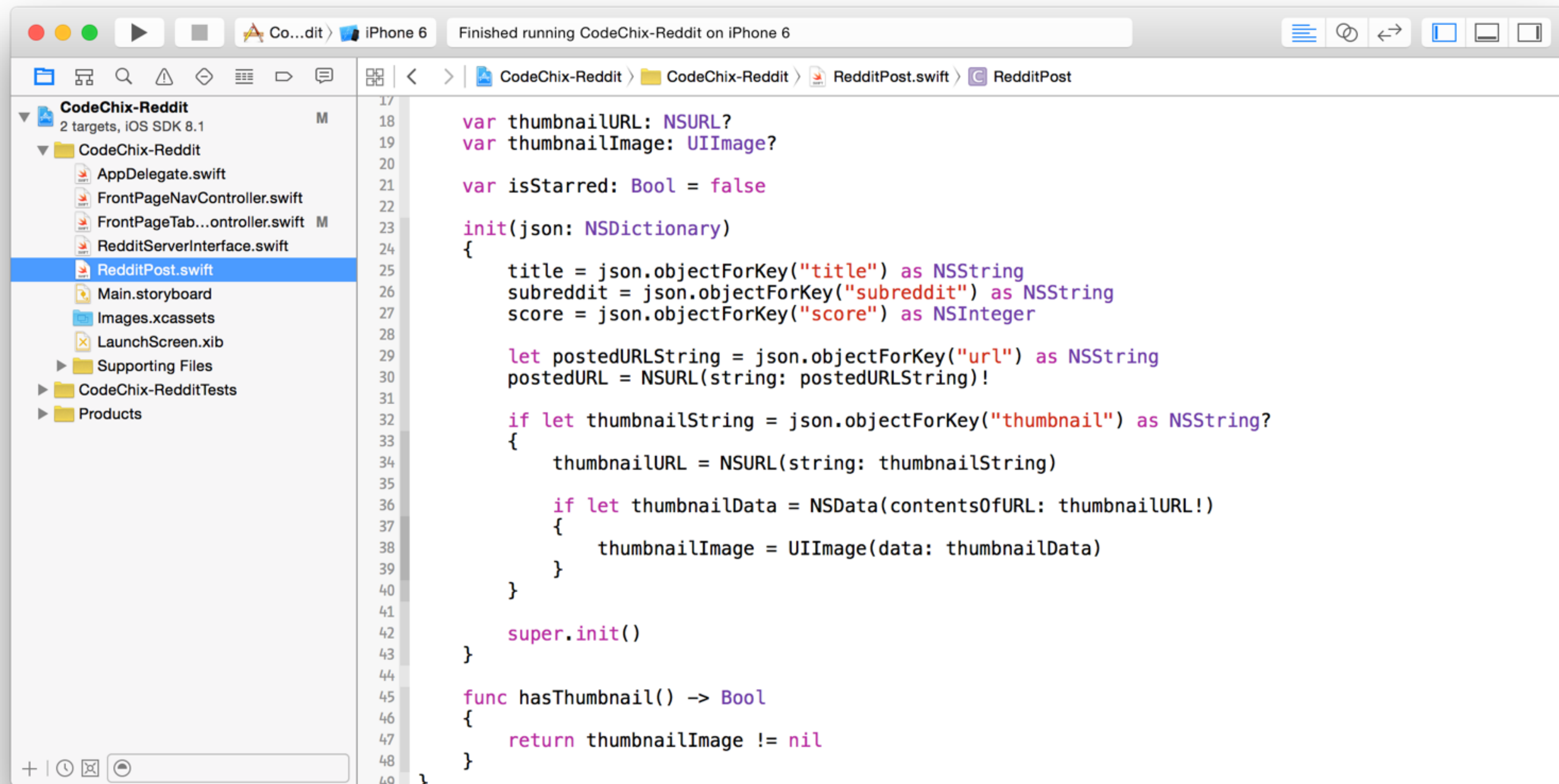
The screenshot shows the Xcode IDE with a Swift file named `RedditServerInterface.swift` open. The code is running on an iPhone 6 simulator. The code snippet shows a successful JSON response being printed to the console.

```
61     if (error == nil)
62     {
63         if let data = incomingData as NSMutableData?
64         {
65             let json = NSJSONSerialization.JSONObjectWithData(data, options: NSJSONReadingOptions.
66                 MutableContainers, error: nil) as NSDictionary
67
68             println(json)
69         }
70     }
```

```
{
  data = {
    after = "t3_2ykkc6";
    before = "<null>";
    children = (
      {
        data = {
          "approved_by" = "<null>";
          archived = 0;
          author = timbl;
          "author_flair_css_class" = mozilla;
          "author_flair_text" = "Tim Berners-Lee (WWW inventor)";
          "banned_by" = "<null>";
          clicked = 0;
          created = 1426039181;
          "created_utc" = 1426010381;
          distinguished = "<null>";
          domain = "self.IAmA";
          downs = 0;
          edited = 1426017382;
          gilded = 0;
          hidden = 0;
          id = 2ykyht;
          "is self" = 1;
```

Code

Reddit Post

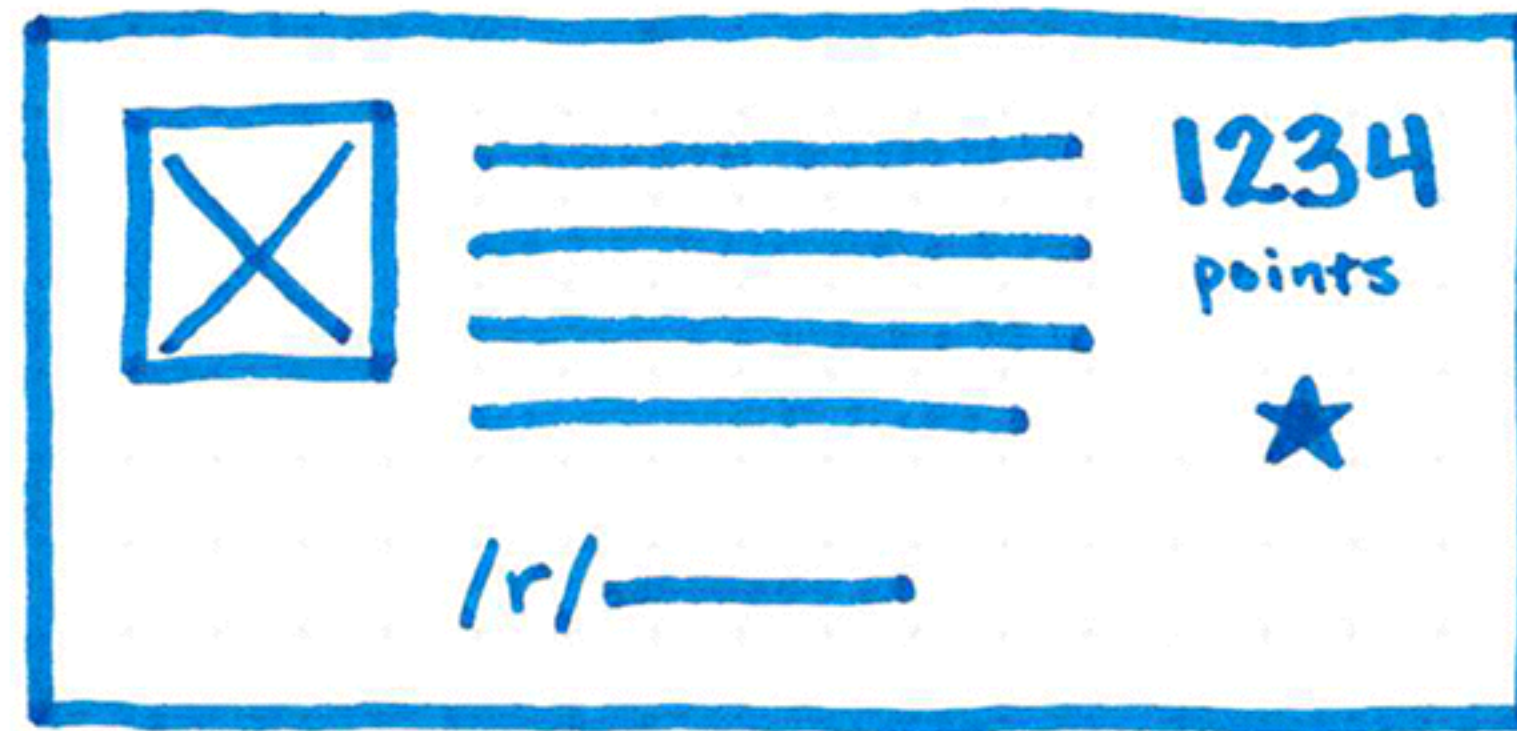


The image shows a screenshot of the Xcode IDE. The top status bar indicates the app is finished running on an iPhone 6. The left sidebar shows the project structure for 'CodeChix-Reddit', with 'RedditPost.swift' selected. The main editor area displays the following Swift code:

```
17
18     var thumbnailURL: NSURL?
19     var thumbnailImage: UIImage?
20
21     var isStarred: Bool = false
22
23     init(json: NSDictionary)
24     {
25         title = json objectForKey("title") as NSString
26         subreddit = json objectForKey("subreddit") as NSString
27         score = json objectForKey("score") as NSInteger
28
29         let postedURLString = json objectForKey("url") as NSString
30         postedURL = NSURL(string: postedURLString)!
31
32         if let thumbnailString = json objectForKey("thumbnail") as NSString?
33         {
34             thumbnailURL = NSURL(string: thumbnailString)
35
36             if let thumbnailData = NSData(contentsOfURL: thumbnailURL!)
37             {
38                 thumbnailImage = UIImage(data: thumbnailData)
39             }
40         }
41
42         super.init()
43     }
44
45     func hasThumbnail() -> Bool
46     {
47         return thumbnailImage != nil
48     }
49 }
```


Code

Post Cell



Code

Post Cell Subviews

Subviews →

```
// PostTableViewCell.swift
//
class PostTableViewCell: UITableViewCell
{
    var titleLabel: UILabel!
    var subredditLabel: UILabel!
    var pointsLabelLabel: UILabel!
    var pointsValueLabel: UILabel!

    var thumbnailImageView: UIImageView?

    var starButton: UIButton!
    var starView: StarView!
}
```

Code

Initialize the Subviews

```
// FrontPageTableViewController.swift
//
override func tableView(tableView: UITableView,
    cellForRowAtIndexPath indexPath: NSIndexPath) -> UITableViewCell
{
    let cell = tableView.dequeueReusableCellWithIdentifier("PostCell") as PostTableViewCell

    cell.initSubviews()

    cell.showSubviews()

    return cell
}
```

Code

Initialize the Subviews

```
// FrontPageTableViewController.swift
//
override func tableView(tableView: UITableView,
    cellForRowAtIndexPath indexPath: NSIndexPath) -> UITableViewCell
{
    let cell = tableView.dequeueReusableCellWithIdentifier("PostCell") as PostTableViewCell
    cell.initSubviews()
    cell.showSubviews()

    return cell
}
```

```
// PostTableViewCell.swift
//
func initSubviews()
{
    titleLabel = UILabel()
    subredditLabel = UILabel()
    pointsLabelLabel = UILabel()
    pointsValueLabel = UILabel()
    thumbnailImageView = UIImageView()
    starView = StarView()
    starButton = UIButton()
}
```


Code

Initialize the Subviews

```
// FrontPageTableViewController.swift
//
override func tableView(tableView: UITableView,
    cellForRowAtIndexPath indexPath: NSIndexPath) -> UITableViewCell
{
    let cell = tableView.dequeueReusableCellWithIdentifier("PostCell") as PostTableViewCell

    cell.initSubviews()

    cell.showSubviews()

    return cell
}
```

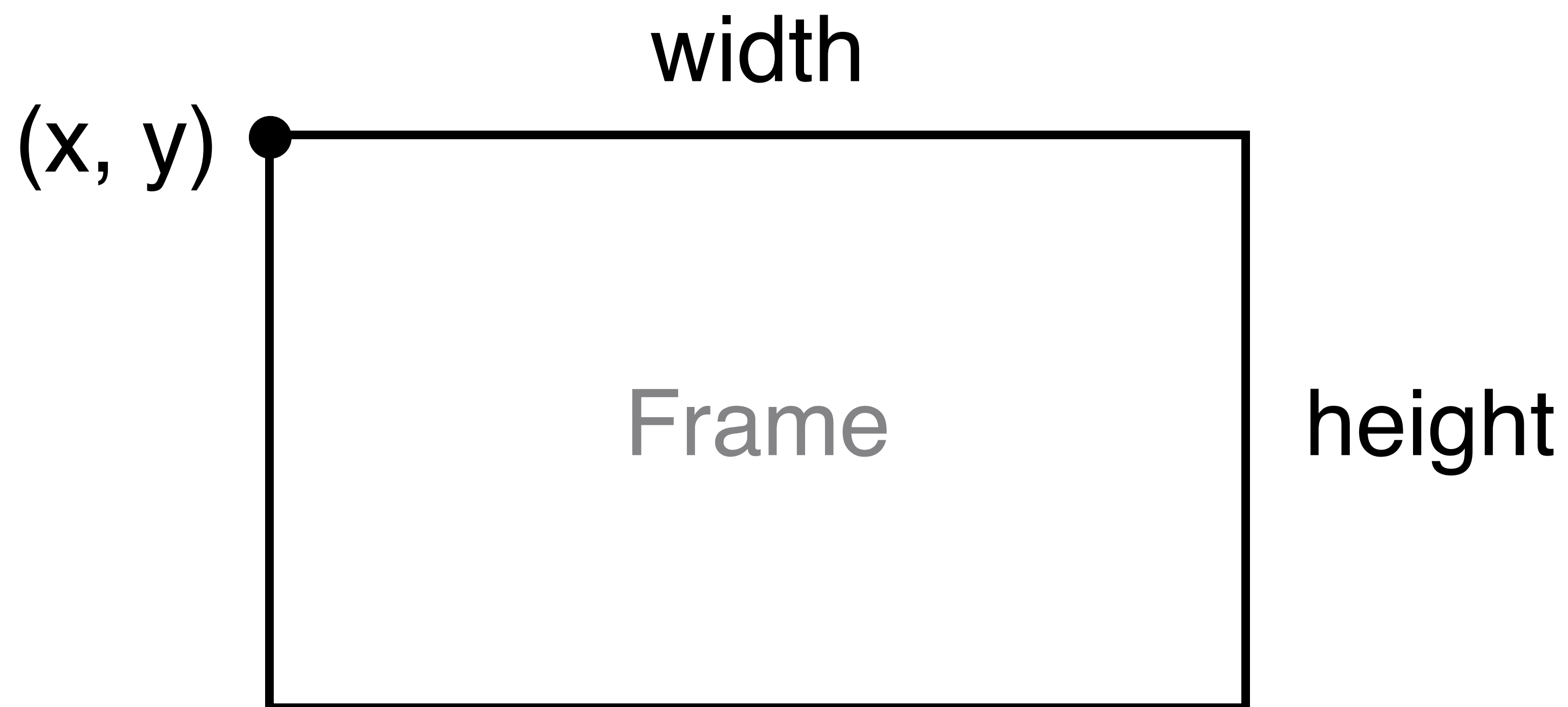
```
// PostTableViewCell.swift
//
func initSubviews()
{
    titleLabel = UILabel()
    subredditLabel = UILabel()
    pointsLabelLabel = UILabel()
    pointsValueLabel = UILabel()
    thumbnailImageView = UIImageView()
    starView = StarView()
    starButton = UIButton()
}
```

```
// PostTableViewCell.swift
//
func showSubviews()
{
    addSubview(titleLabel)
    addSubview(subredditLabel)
    addSubview(pointsLabelLabel)
    addSubview(pointsValueLabel)
    starButton.addSubview(starView)
    addSubview(starButton)

    if (post!.hasThumbnail()) {
        addSubview(thumbnailImageView!)
    }
}
```


Code

Subview Frames



Code

Layout the Subviews

```
// PostTableViewCell.swift
//
override func layoutSubviews()
{
    super.layoutSubviews()

    // Set frames here
}
```

Code

Layout the Subviews

```
// PostTableViewCell.swift
//
override func layoutSubviews()
{
    super.layoutSubviews()

    // Set frames here

    pointsValueLabel.frame = // some frame here
}
```

Code

Layout the Subviews

```
// PostTableViewCell.swift
//
func frameForPointsValueLabel() -> CGRect
{
    let width = PointsWidth
    let height = PointsValueFontSize
    let x = (contentView.bounds.size.width - (width + PaddingHorizontal))
    let y = PaddingVertical

    return CGRectMake(x, y, width, height)
}
```

Code

Layout the Subviews

```
// PostTableViewCell.swift
//
override func layoutSubviews()
{
    super.layoutSubviews()

    // Set frames here

    pointsValueLabel.frame = frameForPointsValueLabel()
}

func frameForPointsValueLabel() -> CGRect
{
    let width = PointsWidth
    let height = PointsValueFontSize
    let x = (contentView.bounds.size.width - (width + PaddingHorizontal))
    let y = PaddingVertical

    return CGRectMake(x, y, width, height)
}
```


Code

Layout the Subviews

```
// PostTableViewCell.swift
//
override func layoutSubviews()
{
    super.layoutSubviews()

    // Set frames here

    pointsValueLabel.frame = frameForPointsValueLabel()
    pointsValueLabel.font = UIFont(name: FontName, size: PointsValueFontSize)
    pointsValueLabel.textAlignment = NSTextAlignment.Center
}
```

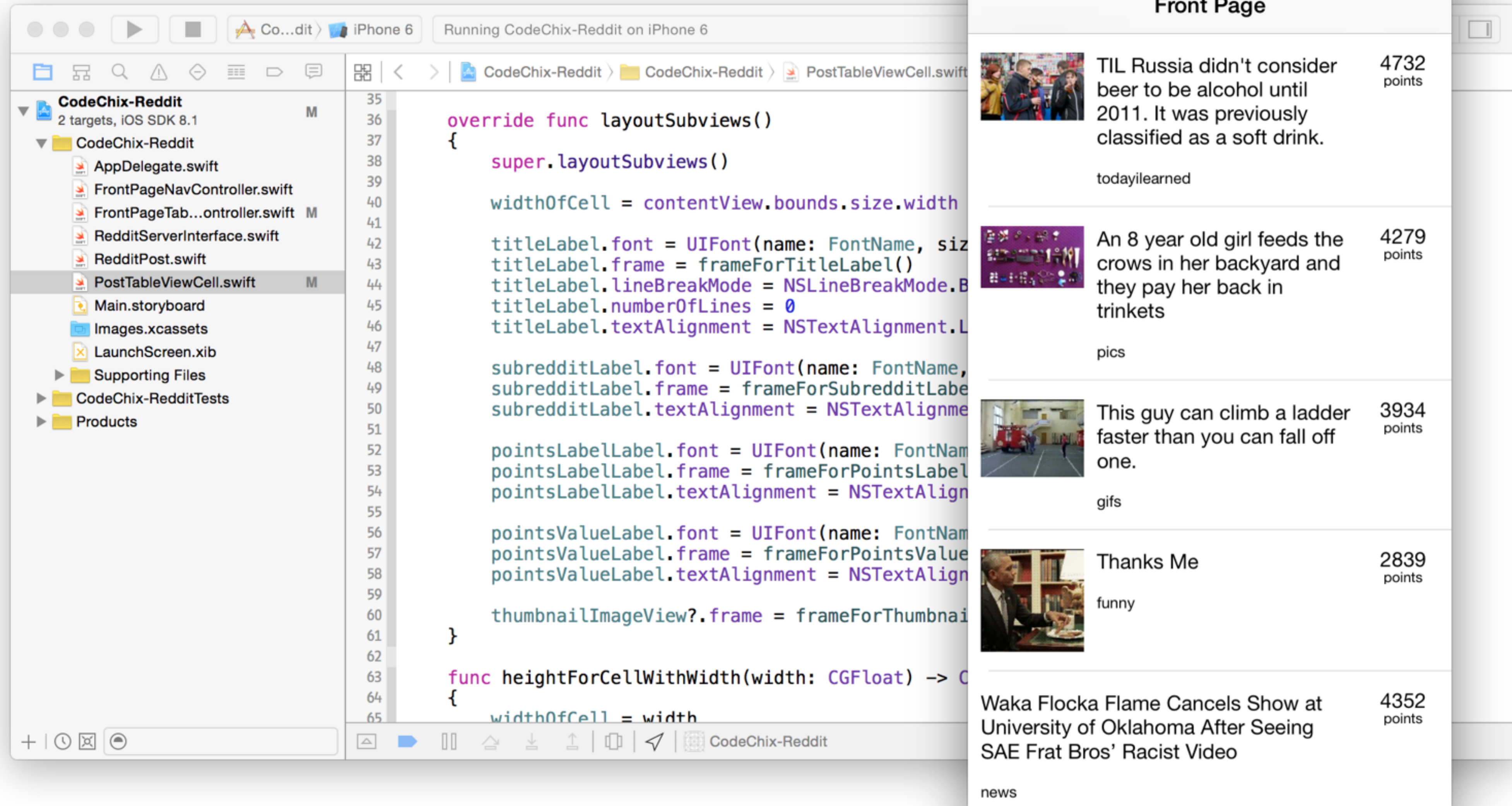
Code

Layout the Subviews

```
// PostTableViewCell.swift
//
func frameForPointsLabelLabel() -> CGRect { ... }
func frameForPointsValueLabel() -> CGRect { ... }
func frameForStarButton() -> CGRect { ... }
func frameForSubredditLabel() -> CGRect { ... }
func frameForThumbnailImage() -> CGRect { ... }
func frameForTitleLabel() -> CGRect { ... }
```


Code

Layout the Subviews



The image displays the Xcode development environment on the left and an iOS simulator on the right. The Xcode window shows the project 'CodeChix-Reddit' with the file 'PostTableViewCell.swift' selected. The code in the editor is as follows:

```
35  
36  
37 override func layoutSubviews()  
38 {  
39     super.layoutSubviews()  
40  
41     widthOfCell = contentView.bounds.size.width  
42  
43     titleLabel.font = UIFont(name: FontName, size: FontSize)  
44     titleLabel.frame = frameForTitleLabel()  
45     titleLabel.lineBreakMode = NSLineBreakMode.ByTruncatingTail  
46     titleLabel.numberOfLines = 0  
47     titleLabel.textAlignment = NSTextAlignment.Center  
48  
49     subredditLabel.font = UIFont(name: FontName, size: FontSize)  
50     subredditLabel.frame = frameForSubredditLabel()  
51     subredditLabel.textAlignment = NSTextAlignment.Center  
52  
53     pointsLabelLabel.font = UIFont(name: FontName, size: FontSize)  
54     pointsLabelLabel.frame = frameForPointsLabelLabel()  
55     pointsLabelLabel.textAlignment = NSTextAlignment.Center  
56  
57     pointsValueLabel.font = UIFont(name: FontName, size: FontSize)  
58     pointsValueLabel.frame = frameForPointsValueLabel()  
59     pointsValueLabel.textAlignment = NSTextAlignment.Center  
60  
61     thumbnailImageView?.frame = frameForThumbnailImage()  
62 }  
63  
64 func heightForCellWithWidth(width: CGFloat) -> CGFloat  
65 {  
    widthOfCell = width
```

The iOS simulator on the right shows the 'Front Page' of the app. It features a list of posts with the following details:

- Post 1:** TIL Russia didn't consider beer to be alcohol until 2011. It was previously classified as a soft drink. 4732 points. Subreddit: todayilearned.
- Post 2:** An 8 year old girl feeds the crows in her backyard and they pay her back in trinkets. 4279 points. Subreddit: pics.
- Post 3:** This guy can climb a ladder faster than you can fall off one. 3934 points. Subreddit: gifs.
- Post 4:** Thanks Me. 2839 points. Subreddit: funny.
- Post 5:** Waka Flocka Flame Cancels Show at University of Oklahoma After Seeing SAE Frat Bros' Racist Video. 4352 points. Subreddit: news.

Code

Core Graphics

Drawn onto a context

Bezier Paths

Images

Text

Resolution Independent

Code

File Size Comparison

1.1 MB



Connexio

1.4 MB



4500 x 3000 pixels

Code

Triangle by Core Graphics

```
let context = UIGraphicsGetCurrentContext()

// Start at the top of the triangle
//
CGContextMoveToPoint(context, (frame.size.width / 2.0), 0.0)

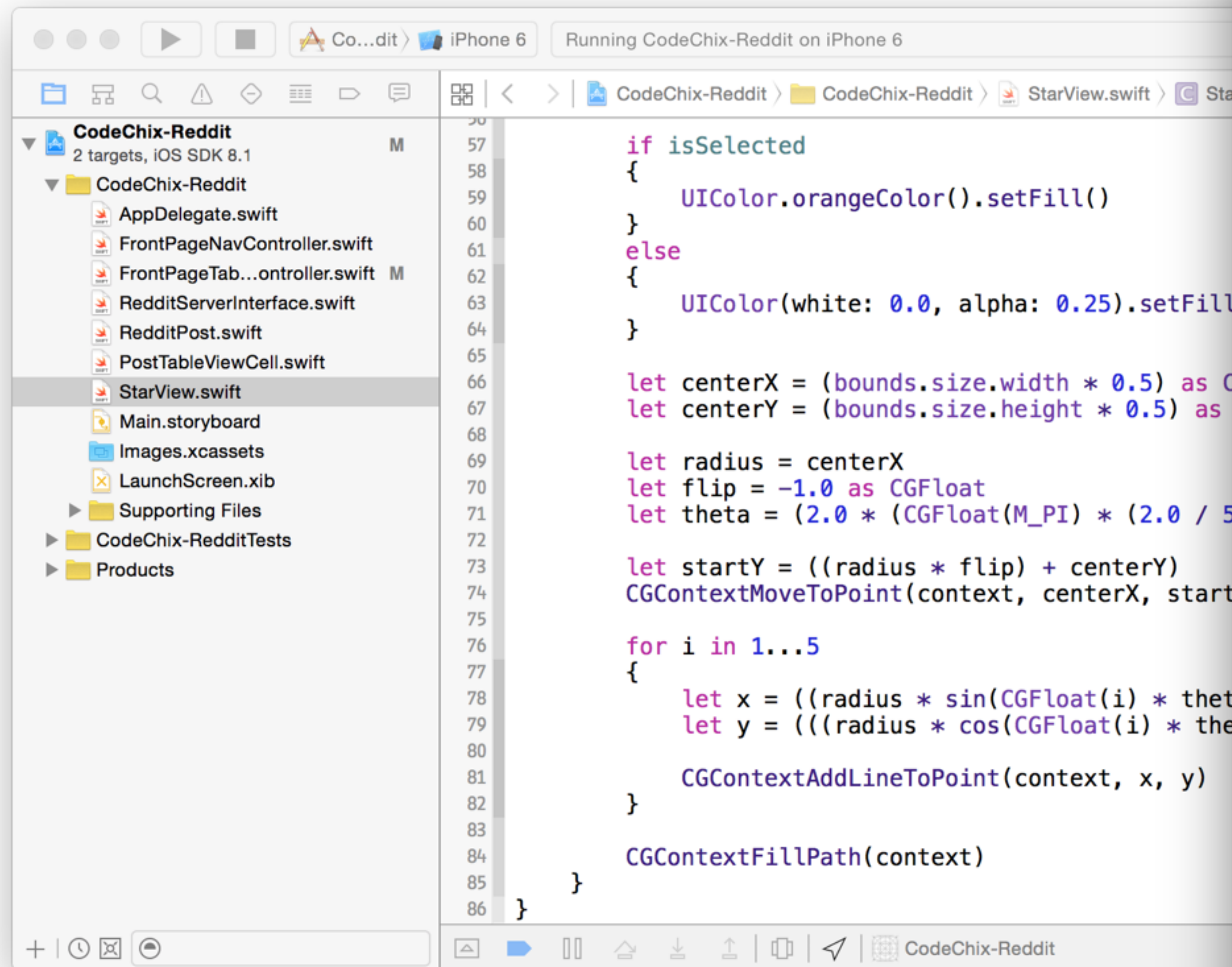
// Bottom right
//
CGContextAddLineToPoint(context, frame.size.width, frame.size.height)

// Bottom left
//
CGContextAddLineToPoint(context, 0.0, frame.size.height)

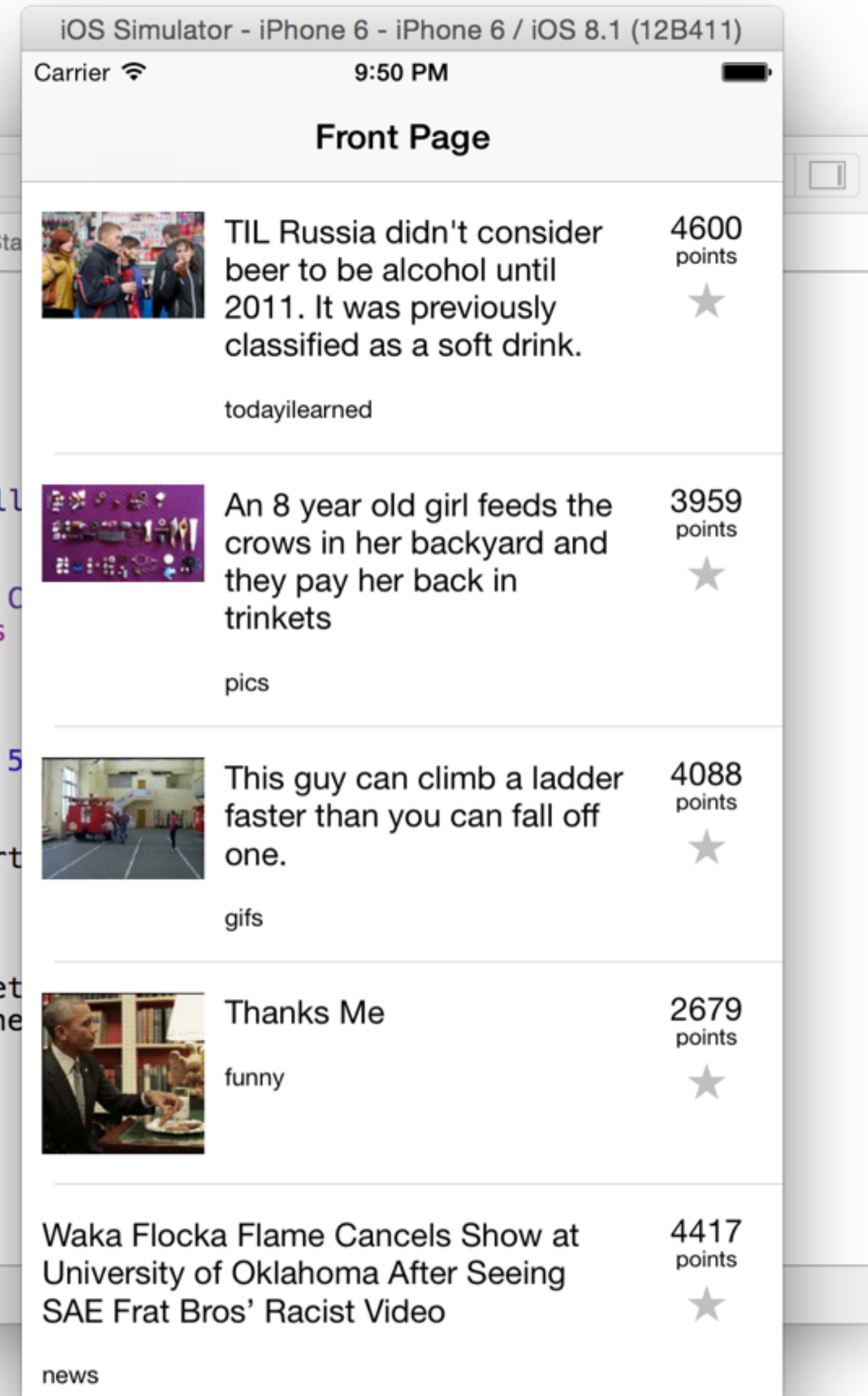
CGContextFillPath(context)
```

Code

Star View



```
57     if isSelected
58     {
59         UIColor.orangeColor().setFill()
60     }
61     else
62     {
63         UIColor(white: 0.0, alpha: 0.25).setFill()
64     }
65
66     let centerX = (bounds.size.width * 0.5) as CGFloat
67     let centerY = (bounds.size.height * 0.5) as CGFloat
68
69     let radius = centerX
70     let flip = -1.0 as CGFloat
71     let theta = (2.0 * (CGFloat(M_PI) * (2.0 / 5.0)))
72
73     let startY = ((radius * flip) + centerY)
74     CGContextMoveToPoint(context, centerX, startY)
75
76     for i in 1...5
77     {
78         let x = ((radius * sin(CGFloat(i) * theta)) + centerX)
79         let y = (((radius * cos(CGFloat(i) * theta)) + centerY) * flip) + startY
80
81         CGContextAddLineToPoint(context, x, y)
82     }
83
84     CGContextFillPath(context)
85 }
86 }
```

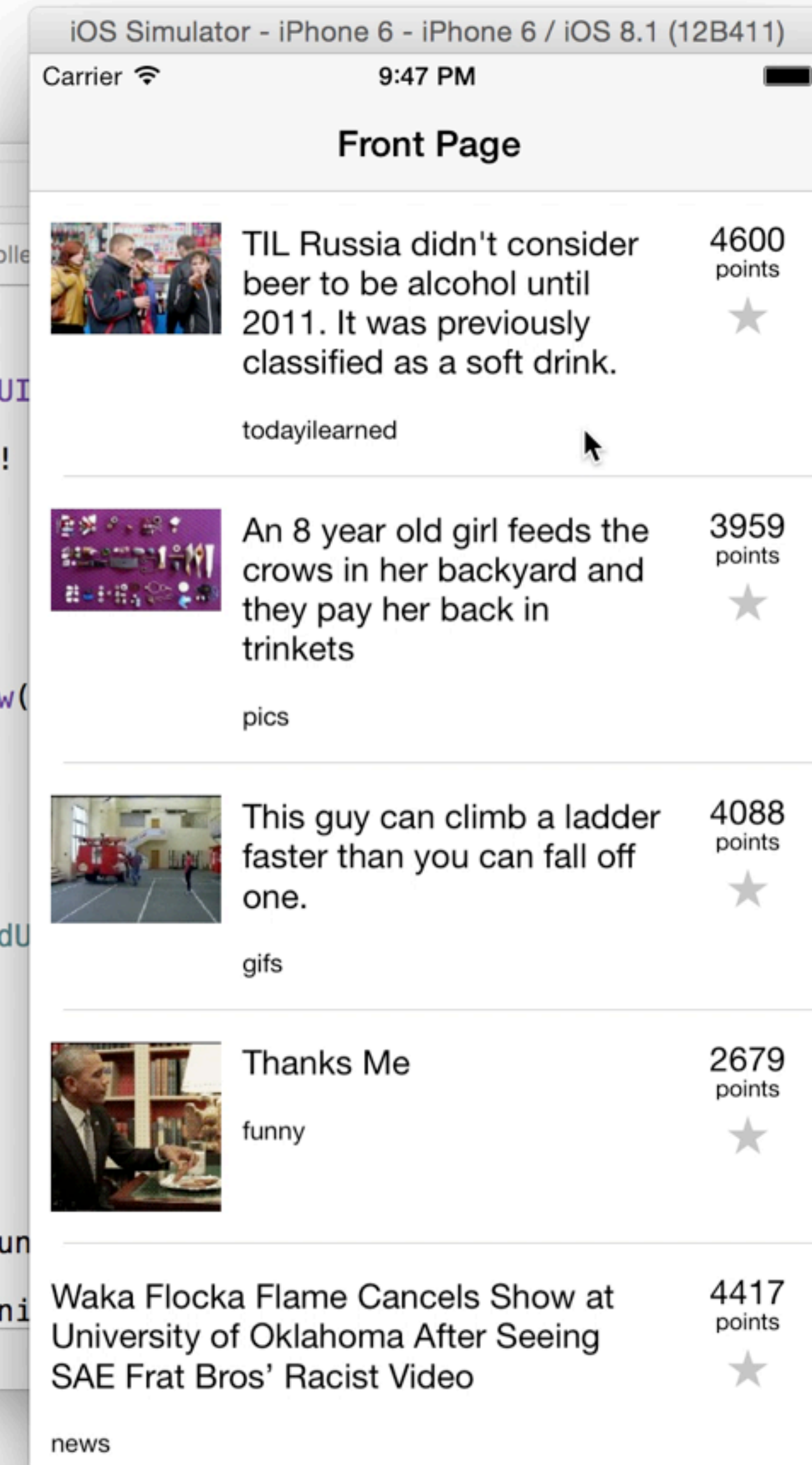


Code

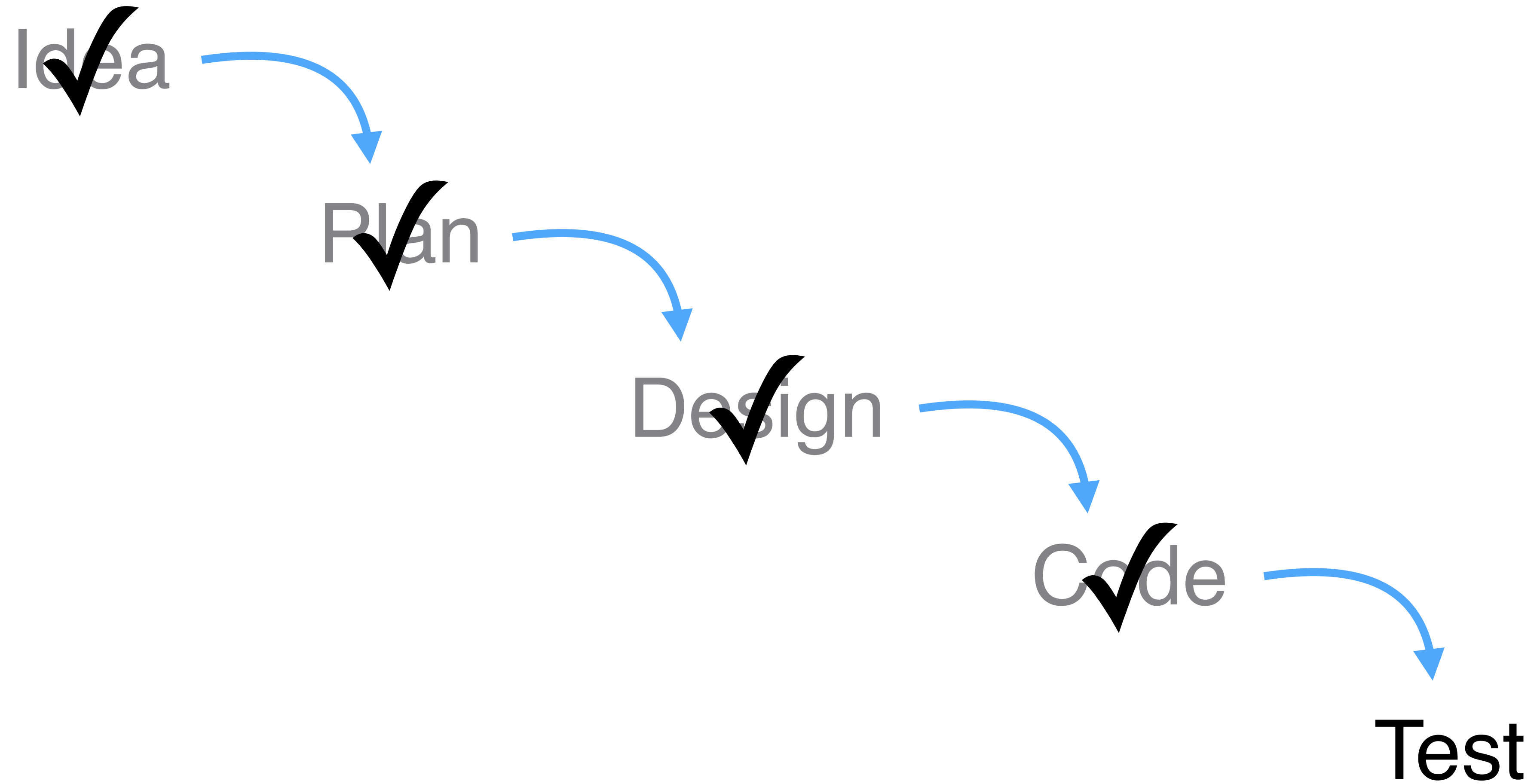
Post Details

```
CodeChix-Reddit
├── AppDelegate.swift
├── FrontPageNavController.swift
├── FrontPageTableViewController.swift
├── RedditServerInterface.swift
├── RedditPost.swift
├── PostTableViewCell.swift
├── StarView.swift
├── PostDetailViewController.swift
├── Main.storyboard
├── Images.xcassets
├── LaunchScreen.xib
├── Supporting Files
├── CodeChix-RedditTests
└── Products
```

```
9  import UIKit
10
11  class PostDetailViewController: UIViewController, UIWebViewDelegate {
12  {
13      var activityIndicator: UIActivityIndicatorView!
14      var webView: UIWebView!
15
16      init(post: RedditPost)
17      {
18          super.init()
19
20          activityIndicator = UIActivityIndicatorView(
21              UIActivityIndicatorViewStyle.Gray)
22
23          webView = UIWebView()
24          webView.delegate = self
25          webView.scalesPageToFit = true
26
27          let request = NSURLRequest(URL: post.postedURL)
28          webView.loadRequest(request)
29      }
30
31      required init(coder aDecoder: NSCoder)
32      {
33          super.init(coder: aDecoder)
34      }
35
36      override init(nibName nibNameOrNil: String?, bundle nibBundleOrNil: Bundle?)
37      {
38          super.init(nibName: nibNameOrNil, bundle: nibBundleOrNil)
39      }
40  }
```



My Development Process



Test

Always test on a device!

Test

Xcode Simulator

Unsupported

~~Accelerometer~~

~~Gyroscope~~

~~Camera~~

~~Microphone~~

~~GPS~~

~~Location Data~~

Test

Developer License

iOS Developer Program

The fastest path from code to customer.

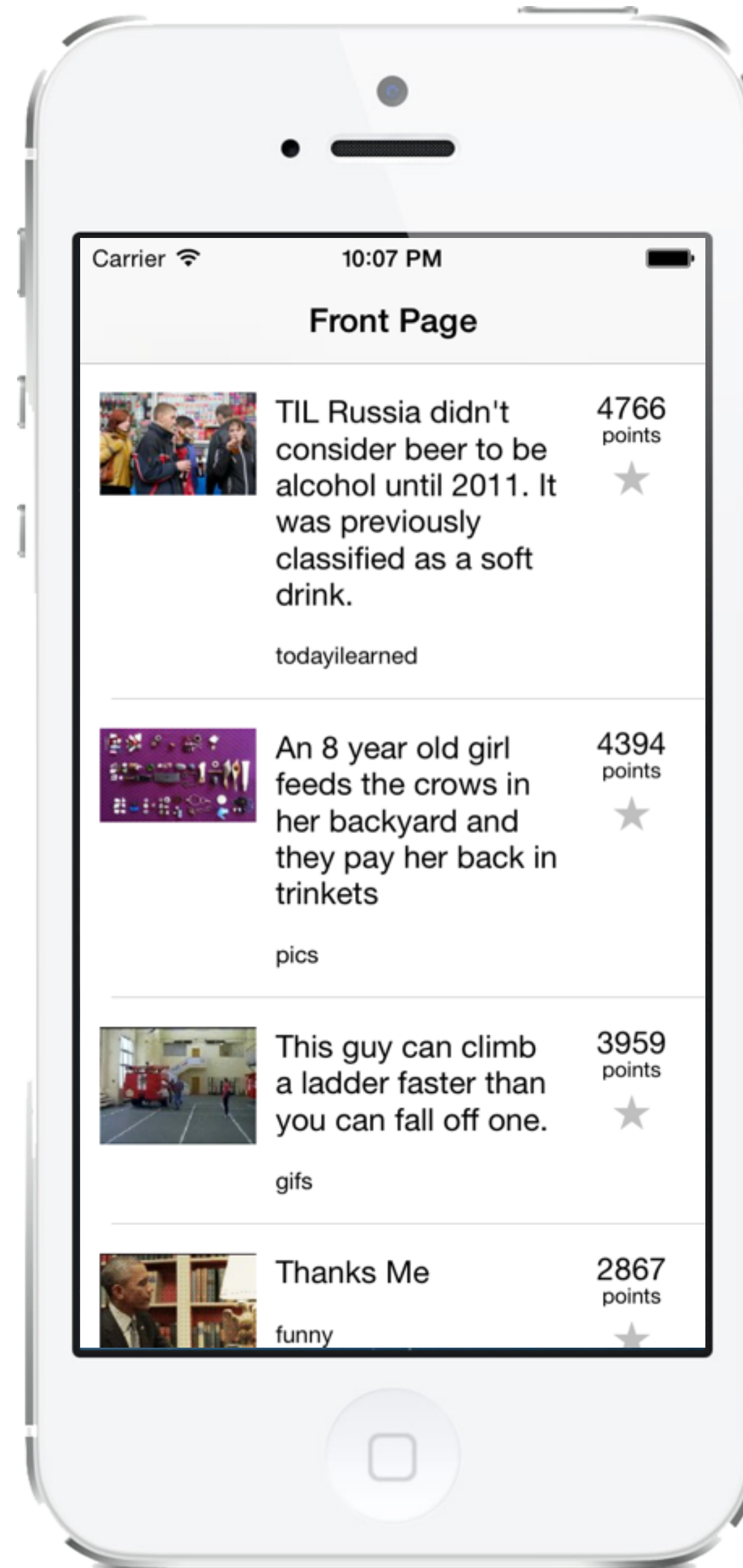
[Enroll now](#)

\$99/year

<https://developer.apple.com/programs/ios/>

Test

On Your Device



Test

Make It Crash!

Test

Many Devices



Test Instruments

Instruments

iPhone 5s (8...) CodeChix-Reddit.app Run 1 of 1 00:00:44

Allocations

VM Tracker

Allocations Statistics Allocation Summary Instrument Detail

Graph	Category	Persistent By...	# Persistent	# Transient	Total Bytes	# Total	Transient/Total Bytes
<input checked="" type="checkbox"/>	All Heap & Anonymous VM	67.44 MB	152,519	6,391,762	981.94 MB	6,544,281	
<input type="checkbox"/>	All Heap Allocations	27.15 MB	152,161	6,391,432	868.21 MB	6,543,593	
<input type="checkbox"/>	All Anonymous VM	40.29 MB	358	330	113.73 MB	688	
<input type="checkbox"/>	VM: JS garbage collector	16.50 MB	264	144	26.12 MB	408	
<input type="checkbox"/>	VM: Dispatch continuations	16.00 MB	1	0	16.00 MB	1	
<input type="checkbox"/>	Malloc 132.00 KB	6.06 MB	47	290	43.44 MB	337	
<input type="checkbox"/>	VM: CoreAnimation	3.96 MB	39	38	60.67 MB	77	
<input type="checkbox"/>	VM: WebCore purgeable...	3.56 MB	41	0	3.56 MB	41	
<input type="checkbox"/>	CFData (store)	1.58 MB	111	5,081	15.52 MB	5,192	
<input type="checkbox"/>	ImageIO_jpeg_Data	1.11 MB	5	8	7.46 MB	13	
<input type="checkbox"/>	Malloc 48 Bytes	1.01 MB	22,060	1,175,185	54.81 MB	1,197,245	
<input type="checkbox"/>	Malloc 512.00 KB	1.00 MB	2	0	1.00 MB	2	
<input type="checkbox"/>	Malloc 4.00 KB	732.00 KB	183	11,651	46.23 MB	11,834	
<input type="checkbox"/>	Malloc 37.50 KB	675.00 KB	18	12	1.10 MB	30	
<input type="checkbox"/>	CFBufferConstantSize<...	487.50 KB	15	5	650.00 KB	20	
<input type="checkbox"/>	CFString (immutable)	471.50 KB	9,897	89,325	8.18 MB	99,222	
<input type="checkbox"/>	Malloc 2.00 KB	460.00 KB	230	6,117	12.40 MB	6,347	
<input type="checkbox"/>	Malloc 8.00 KB	376.00 KB	47	732	6.09 MB	779	
<input type="checkbox"/>	Malloc 16 Bytes	344.52 KB	22,049	777,146	12.19 MB	799,195	
<input type="checkbox"/>	CFData	305.30 KB	880	6,890	2.52 MB	7,770	
<input type="checkbox"/>	Malloc 24 Bytes	294.30 KB	12,557	55,021	1.55 MB	67,578	
<input type="checkbox"/>	Malloc 32.00 KB	288.00 KB	9	209	6.81 MB	218	
<input type="checkbox"/>	Malloc 18.00 KB	288.00 KB	16	12	504.00 KB	28	
<input type="checkbox"/>	Malloc 128 Bytes	282.50 KB	2,260	179,252	22.16 MB	181,512	

iOS Simulator - iPhone 5s - iPhone 5s / iOS 8...

Carrier 10:13 PM

Front Page

TIL Russia didn't consider beer to be alcohol until 2011. It was previously classified as a soft drink. 4825 points

todayilearned

An 8 year old girl feeds the crows in her backyard and they pay her back in trinkets. 4460 points

pics

This guy can climb a ladder faster than you can fall off one. 3971 points

gifs

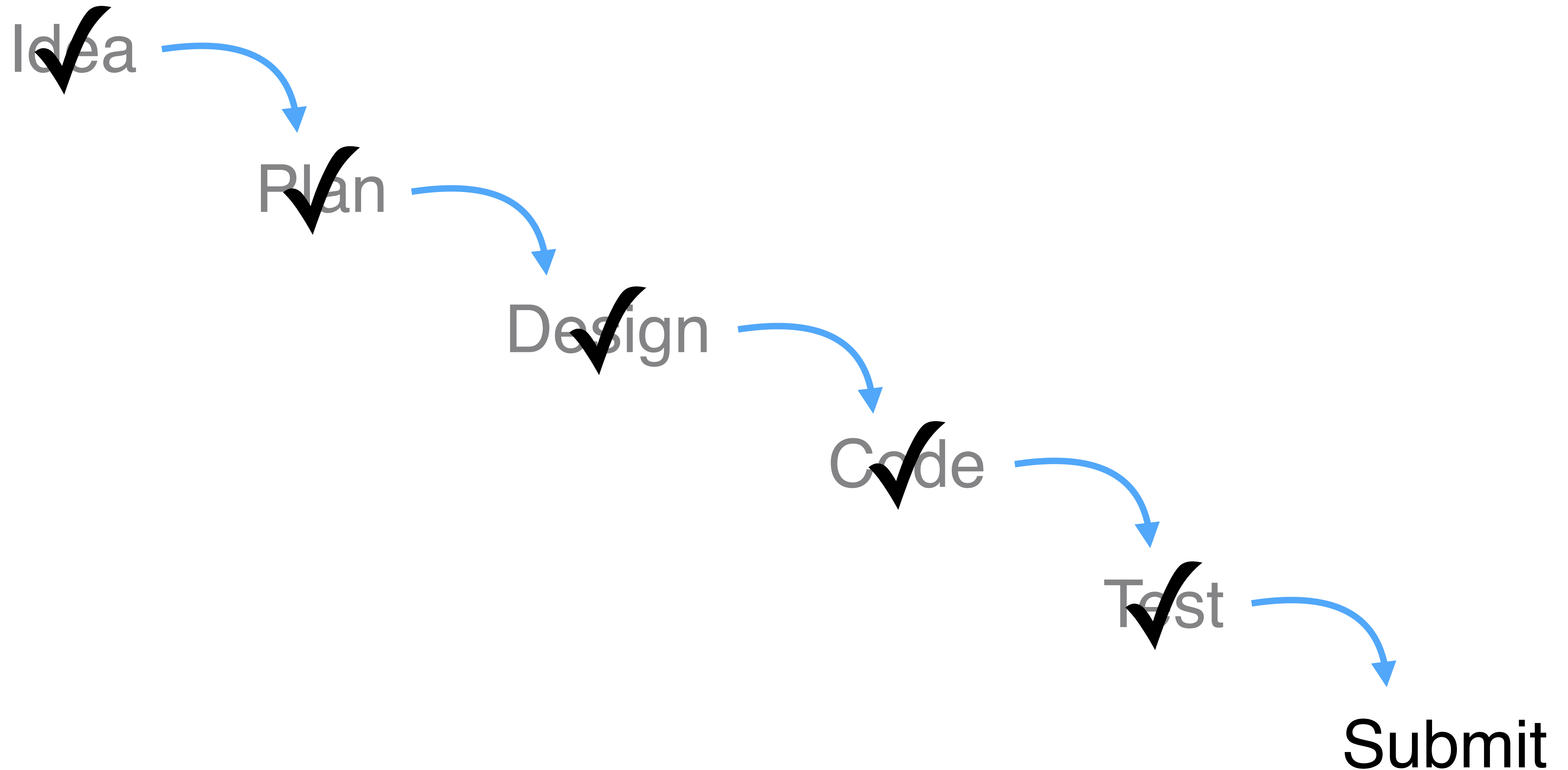
Smile 3100 points

funny

Test

Test It Again!

My Development Process



Submit

Status

Prepare for Submission



Waiting for Review



In Review



Processing for App Store



Ready for Sale

Submit

Did we follow the rules?

<https://developer.apple.com/app-store/review/>

Submit

Did we follow the rules?

Provisioning profiles

Submit

Did we follow the rules?

Provisioning profiles

App Store graphics

Submit

Did we follow the rules?

Provisioning profiles

App Store graphics

App metadata

Submit

Did we follow the rules?

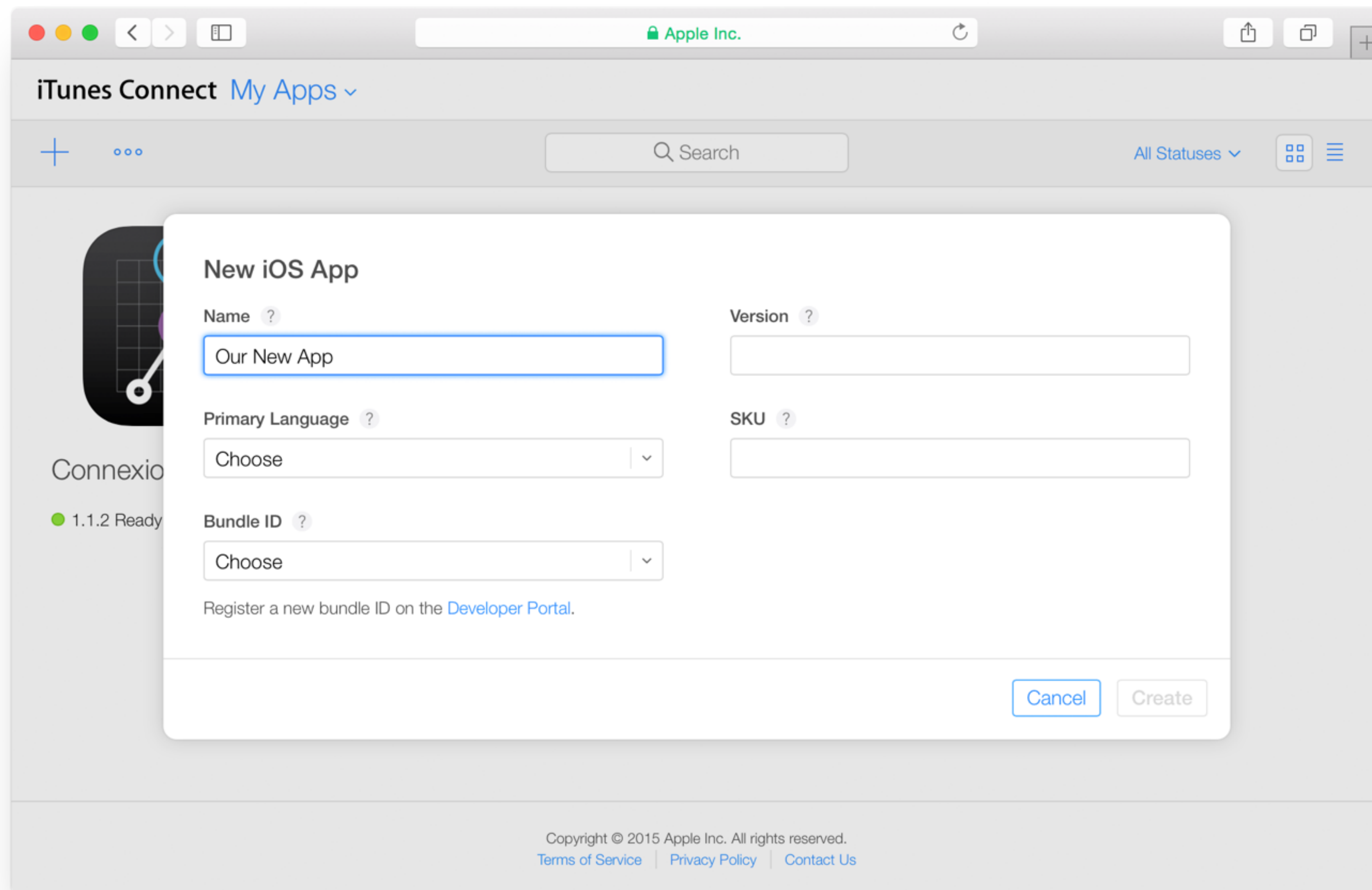
Provisioning profiles

App Store graphics

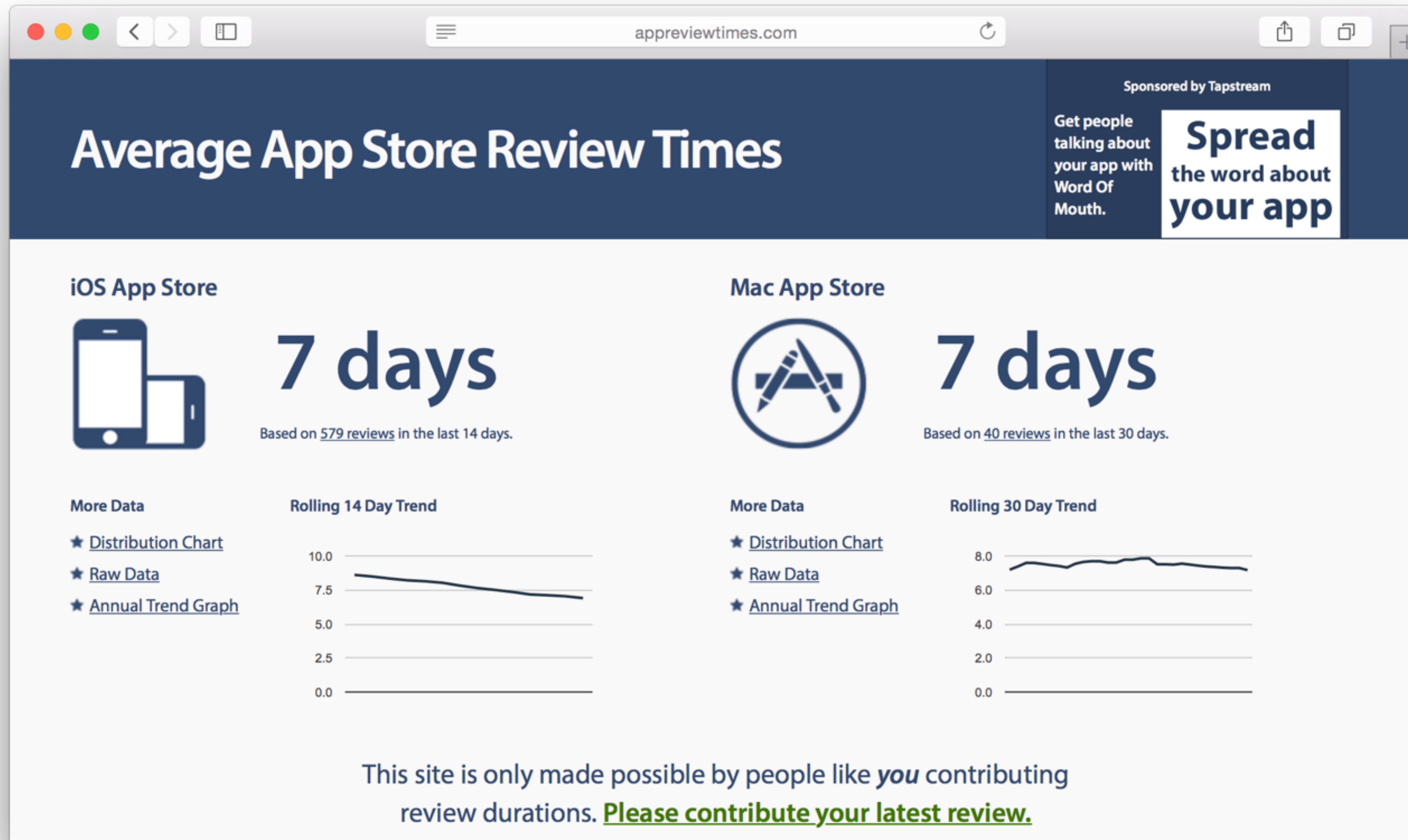
App metadata

Price point

Submit



Submit




<http://appreviewtimes.com>

Submit

iTunes Connect

Dear Viridian Ink Design LLC,

The following app has been approved and the app status has changed to Ready for Sale:

App Name: Connexio 
App Version Number: 1.1.2
App Type: iOS App
App SKU: com.viridianink.Connexio

If your contracts are not in effect at this time, your app status will be Pending Contract. You may track the progress of your contracts in the [Contracts, Tax, and Banking](#) module in iTunes Connect.

To make changes to this app, sign in to iTunes Connect and open the [Manage Your Applications](#) module.

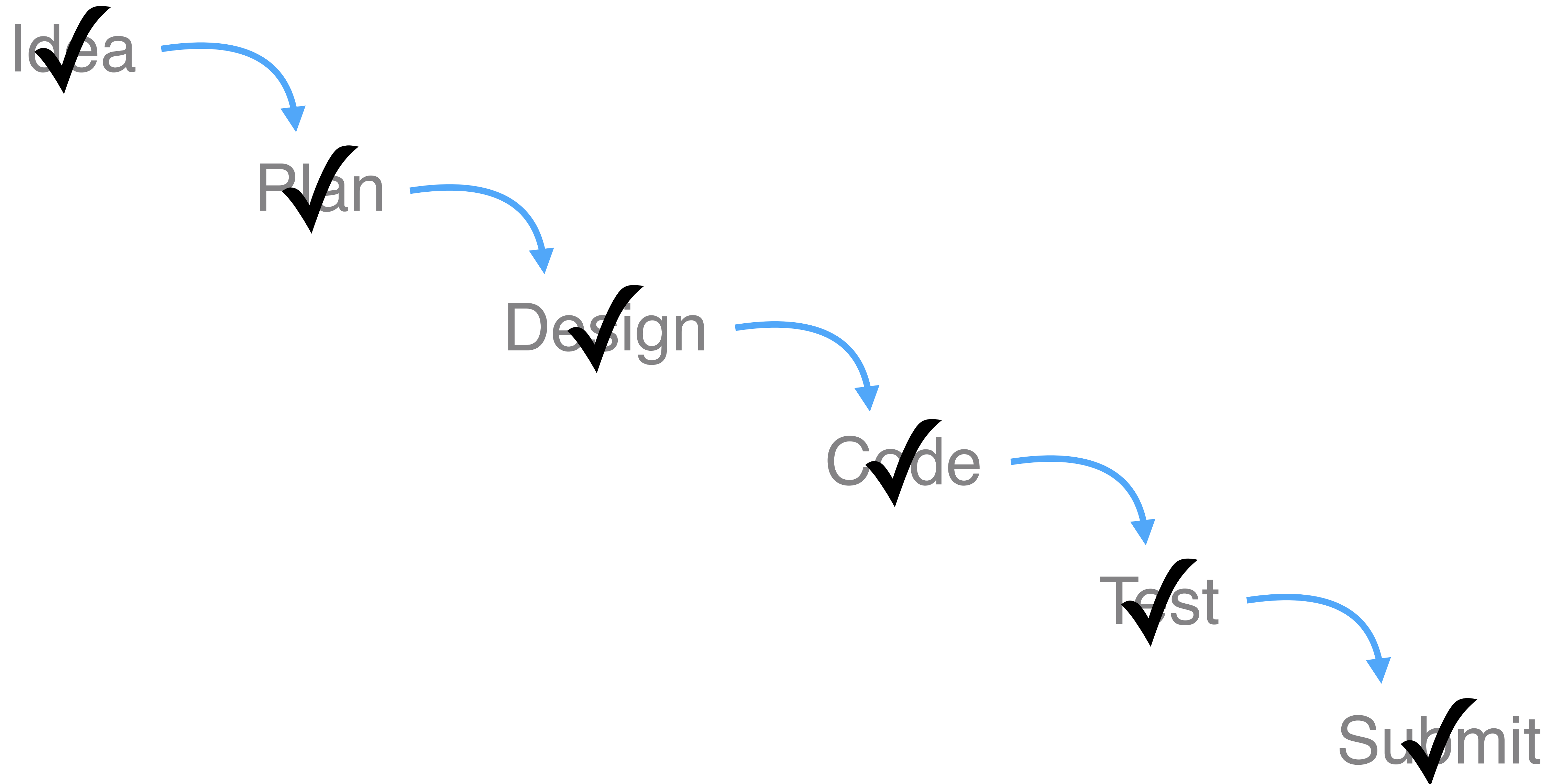
It can take up to 24 hours before your app is available on the App Store. This delay is dependent on any app availability issues.

Before you market your app, read the [App Store Marketing and Advertising Guidelines](#) for Developers. The guidelines include information on using the App Store badge, best practices to market apps on the App Store, and details on the use of Apple product images.

If you have any questions regarding your app, use the [Contact Us](#) module on iTunes Connect.

Regards,
The App Store team

My Development Process



Thank You

<http://viridianink.com/ios-talk>