HUY TRAN - Mingle - Weather App

(Documented - Feb 11, 2020)

Weather app

You will create a simple version of Yahoo Weather
https://apps.apple.com/us/app/yahoo- weather/id628677149

View the current weather and the next 05 days of weather forecast in selected cities. User can add / remove cities

App Description

Minimum deployment target: iOS 10
Device: iPhone only
Orientation: Portrait only
Language: Swift 5

Run App

1. *CocoaPod*

Please install Cocoapod: https://cocoapods.org/

Project Structure

2. *App-Config*

This folder stores all configs of application such as constants, global variable, resources, testing id.

3. *Api*

API service helps applications call web api.

4. Entity

This folder stores all models and responses of applications such as cityModel, weatherModel, dayModel, TempModel.

5. ViewController

This folder stores all controllers to process UI.

6. View

Custom views have been stored, process UI and model.

7. Common Extension

Extension such as UI Element Extension, type extension ...

Third Party

1. Alamofire

Alamofire is an HTTP networking library written in Swift.

Alamofire makes developing networking layers easier, faster and cleaner.

Using Alamofire we will have a cleaner project. API call interactions (POST/GET/PUT/etc.) will be easier and more understable.

2. AlamofireObjectMapper

An extension to Alamofire which automatically converts JSON response data into swift objects using ObjectMapper.

Extension

1. UIImageView
Loads image from web asynchronously and caches it, in case you have to load url again, it will be loaded from cache if available

Testing

1. *Device*

Iphone 8 and Iphone 11 (Simulator with ios 13)

2. *UITest*

● App launch.

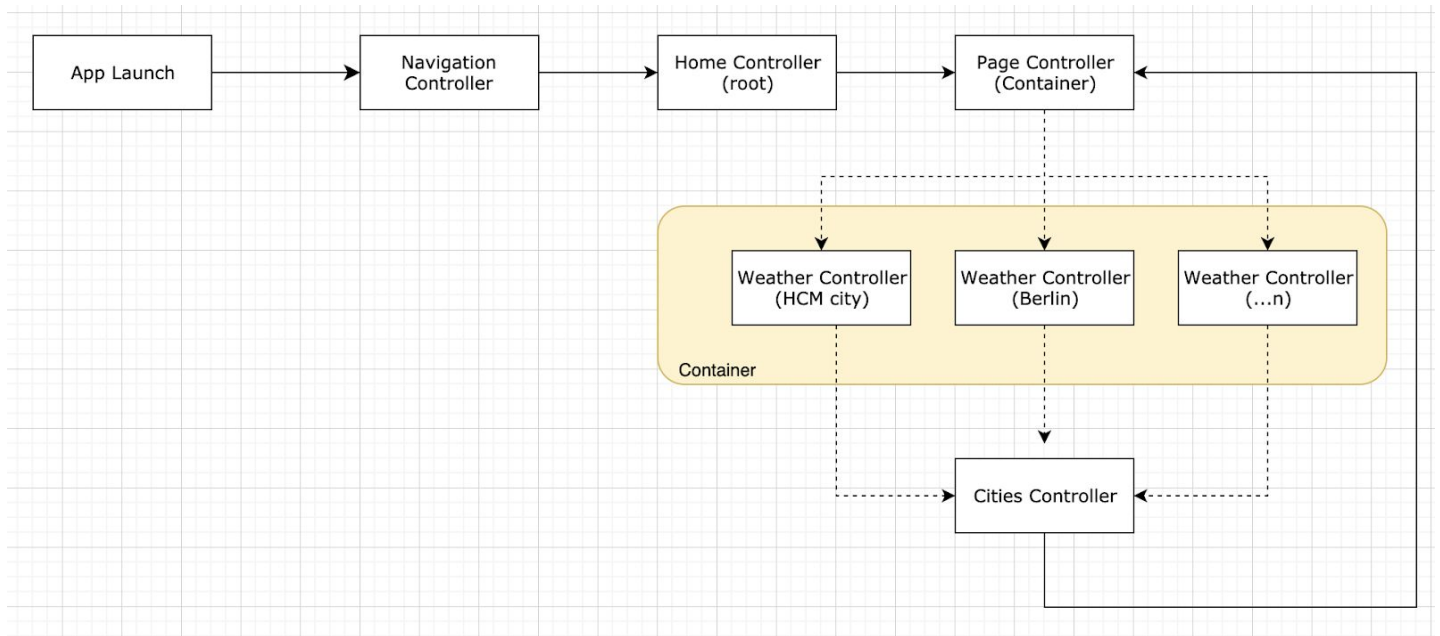● Display Today Weather information (HCM).

● Display 5 Days Weather information.

● Display City Name label.

● Display Location button.

● Show list of cities screen.

● Select other cities.

● Swipe to another city on the main screen.

3. *Unit Test (Test API)*

● Get City info from city id.

● Get List of weather from city id.

● Fail when getting data from incorrect id.

Workflow of Application

```
App Launch  →  Navigation      →  Home Controller  →  Page Controller
               Controller          (root)              (Container)

                              ┌─────────────────────────────────────────────┐
                              │  Weather Controller   Weather Controller   Weather Controller │
                              │  (HCM city)           (Berlin)             (...n)             │
                              │                                                               │
                              │  Container                                                    │
                              └─────────────────────────────────────────────┘

                                              Cities Controller
```

Models

```
┌──────────────────────────────────────────────────┐
│                 Weather Response                   │
│  ┌────────────┐   ┌──────────────────────────────┐│
│  │ City Model │   │          Day Model           ││
│  │            │   │  ┌────────────┐ ┌───────────┐ ││
│  │            │   │  │ Temp Model │ │Weather Model│││
│  │            │   │  └────────────┘ └───────────┘ ││
│  └────────────┘   └──────────────────────────────┘│
└──────────────────────────────────────────────────┘
```