



COSC2659 - IOS Development

Assignment 1

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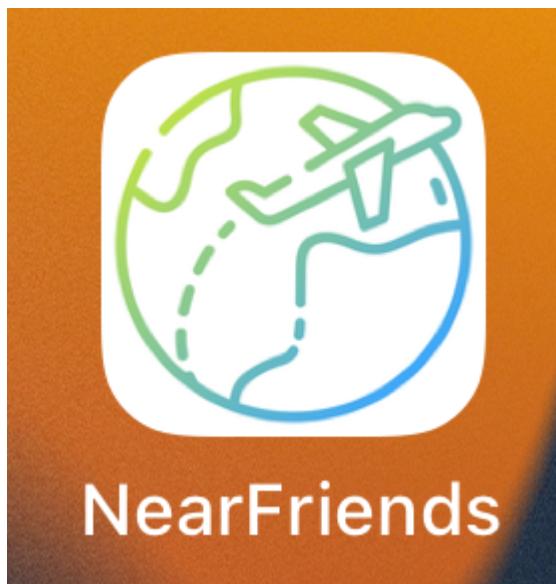
- Introduce the app.

App review:

Video Link about Viet Nam Travel:

<https://web.microsoftstream.com/video/1a0a7e15-6e58-4e91-9093-f96e772aceb8>

Icon App:



Why do i choose topic VietNam travel

While I was in the hospital recovering from a critical operation at that time, I came to the realization that once I had fully recovered, I would go across Vietnam. On the other hand, I do not have any time to travel since I do not have any vacation, therefore I wish that I had created this app so that at a given time I could follow that list and go on my own.

To tell you the truth, I have no clue where my drive or inspiration comes from. The only reason I started the app was because I wanted it to offer me a list of potential destinations for when I travel in the future.

Application about and how to use it:

This application provides a list of the most popular tourist destinations in Vietnam and is compatible with iOS 15.0 and later.

Because of the Splash Screen animation, the currently running application will start up correctly even when the user has their phone set to dark mode. I can't get it to operate in either the dark or the bright mode for some reason.

Here is video Link help you change to light mode in Iphone simulator:

<https://web.microsoftstream.com/video/fdd36425-babc-4681-95b5-380e19d58ec6>

Main features:

Map display location of all list of travel array:

Explain:

You need import library that support in ios is mapkit

```

// This one is Main Map display location of each Places
private var MapDesigner: some View{
    Map(coordinateRegion: $vm.mapRegion,
        // Location latitude and longitude
        annotationItems: vm.locations,
        // Grab all detail of places
        annotationContent: { lo in
            // Show annotation detail
            MapAnnotation(coordinate: lo.coordinates){
                // Map annotation need coordinates to show it in main map
                LocationAnnotationViews()
                //Struct View custom Annotation
                .scaleEffect(vm.mapLocation == lo ? 1 : 0.7)
                //Need scale Effect while use click it bigger and other places is keep the same size
                .shadow(radius: 10)
                // Customer
                .onTapGesture {
                    vm.showNextLocation(location: lo)
                }
                //While we click it we change to that location and tab header change to another location
            }
        })
    }
}

```

Map need parameter call coordinateRegion:

CoordinateRegion is A rectangular region on a map that is specified by a center coordinate and a span coordinate, with both the center coordinate and the span coordinate represented in degrees of latitude and longitude. as well as annotationItems that stand for the map's longitude and latitude coordinates. Then, if you want annotation to simply specify that position for you, you may declare that as the annotationContent property.

```

// MARK: - Current Region on map
@Published var mapRegion: MKCoordinateRegion = MKCoordinateRegion()
let mapSpan = MKCoordinateSpan(latitudeDelta: 0.05, longitudeDelta: 0.05)

```

Config a rectangular geographic region centered around a specific latitude and longitude.

```

9
10   // MARK: - Load data
11   @Published var locations : [Location]
12   |
13
14   // MARK: - Current Location on map
15   @Published var mapLocation: Location{
16       didSet{
17           updateMapRegion(location: mapLocation)
18       }
19   }
20

```

We call didSet to update the new value region from the old value.

Display List of Travel Places:

Explain:

```

extension LocationView {
    private func listRowViews(location: Location) -> some View{
        HStack{
            //Async Image Load Image From Version 15.0.0 or above
            if let imageName = location.imageNames.first{
                AsyncImage(url: URL(string: imageName)) { image in
                    image.resizable().scaledToFill()
                } placeholder: {
                    ProgressView()
                }
                .frame(width: 50, height: 50)
                .cornerRadius(10)
            }
            TextComponents(inputText: location.name)
        }
    }
}

```

List includes One image and Text next to it. In this case, all image load image from url so i will using AsyncImage that can help us to load image from Apple but disadvantage of AsyncImage is need ios above ios version 15.0.0 other way to load that we need to download that image then store in buffer memory or cache and while we not using or out of scope of view it will remove it.

TextComponents is an extra function I will explain below?

List has been currently shown as a scroll while the user clicks it, at which point an animation will pop out showing the arrow changing from its present value to ninety degrees. Because it is so difficult to describe animation, you just have to appreciate it in view, and you will notice a variety of various things.

```
private var tabHeader: some View {
    VStack{
        Button(action: vm.toggleLocationList){
            let title : String = vm.mapLocation.name + " , " + vm.mapLocation.cityName;

            Button(action: vm.toggleLocationList){
                HStack{
                    //Arrow down while use not click while user click it will change to 90 degrees
                    Image(systemName: "arrow.down")
                        .font(.headline)
                        .foregroundColor(.primary)
                        .padding()
                        .rotationEffect(Angle(degrees: vm.showLocationsList ? 90 : 0))

                    //Handle long text
                    TextComponents(inputText: title)
                        .foregroundColor(.primary)
                        .animation(.none, value: vm.mapLocation)
                }.frame(width: UIScreen.screenWidth - 25, height: 65)
            }
        }
    }
}
```

Bottom Sheet show detail of places:

Explain:

sheet box is different due to the fact that

```
}.sheet(item: $vm.showLocationDetail, onDismiss: nil) { lo in
    ReadDetail(location: lo)
}

//Instance using navigation View, i change to use sheet box,
//Navigation To Read Detail but this one using sheet box
}
```

Similar to `navigationLink` that helps us to read another detail in other places however, the it doesn't have a back button or navigation header.

```
--.
30    // MARK: - Show Locations Detail
31    @Published var showLocationDetail: Location? = nil
32
```

ShowLocationDetail is the object location of List Array that has been provided as a file 'locationdataservice'. as

As this mean while user not click sheet box still null value but while click it will pass value of location to showListDetail object then pass it to Read Detail view

```
.sheet(item: $vm.showLocationDetail, onDismiss: nil) { lo in
    ReadDetail(location: lo)
}
//Instance using navigation View, i change to use sheet box,
//Navigation To Read Detail but this one using sheet box
```

Extra features (all explanation have been add in each line of code in File swiftUI)

Handle Long Text:

The problem is that when we have a LONG TEXT, for instance the view screen of an iPhone 5 is quite tiny, so for text such as "Cu chi khu di tích lịch sử, Hồ Chí Minh," it will break as Cu chi khu di tích or move down. This is a problem since we need to be able to read the whole thing. In such a scenario, there are a lot of things that need to be fixed with the text. count more than 30, we concatenate it to '...'

Splash Screen animation (support only for dark mode):

The idea started when, I felt at startup was too empty, then I realized I needed a function called splash screen, but if I made this function too monotonous, it wouldn't

make a strong impression on users. viewers so I came up with a splash screen similar to tripadvisor.

Java program to grab Bigger data detail:

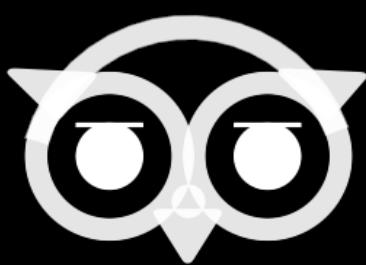
In the beginning, all of the data for the regions of places had been profiled as MapKit sdk. However, the images and other details of places that were not present in MapKit sdk showed that we needed another way to grab that data. At first, I tried using the Google API, but it cost \$5 a month for map detail and image. Therefore, I created my own code in Java to get that data. The method that is currently being used will collect the data header or js file from Google Places using Jsoup. After that, it will convert all of the data to String. After that, I will use a brute force approach to locate all of the values that have <https://lh5.googleusercontent.com/p/> in them. After that, I will enter 44 characters below so that it may form a picture.

Here is my full code:

<https://replit.com/@Dathuynh379/BiigerLocation?v=1>

Screenshots of different views of the app:

00:34



Viet Nam Travel

20:10



← Khu di tích lịch sử Địa đạo Củ Chi) , Hồ Chí Minh



Cu Chi Tunnel (Khu di tích lịch sử Địa đạo Củ Chi)



War Remnants Museum (Bảo tàng Chứng tích chiến tranh)



Dinh Độc Lập



Temple Of Literature (Văn Miếu – Quốc Tử Giám)



Bến Thành Market (Chợ Bến Thành)



The world cultural heritage My Son (Di sản thế giới)



Phong Nha - Ke Bang National Park

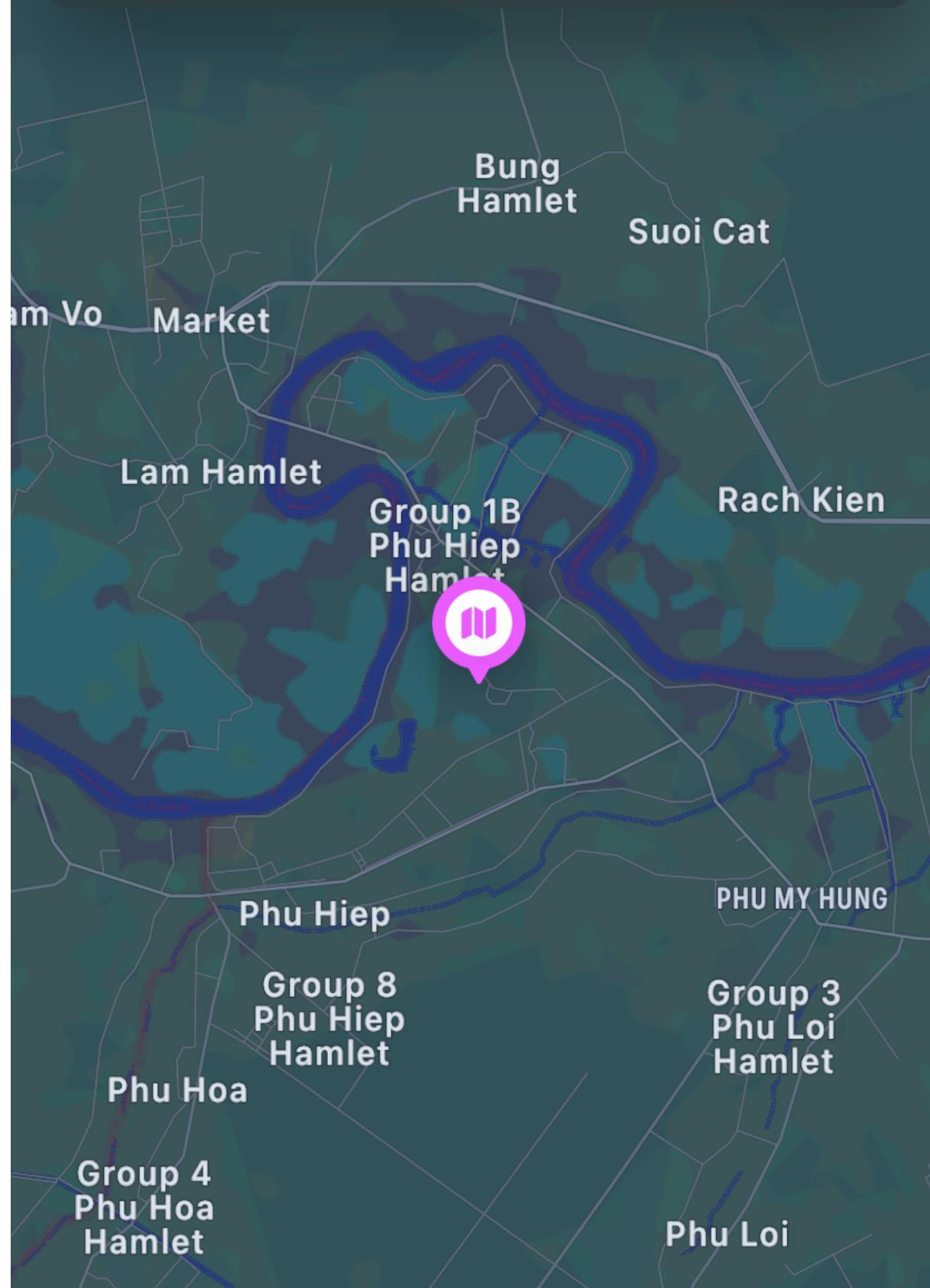


Hang Sơn Đoòng

00:30



ích lịch sử Địa đạo Củ Chi) , Hồ Chí Minh



00:30



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Hang Sơn Đoòng

Quảng Bình

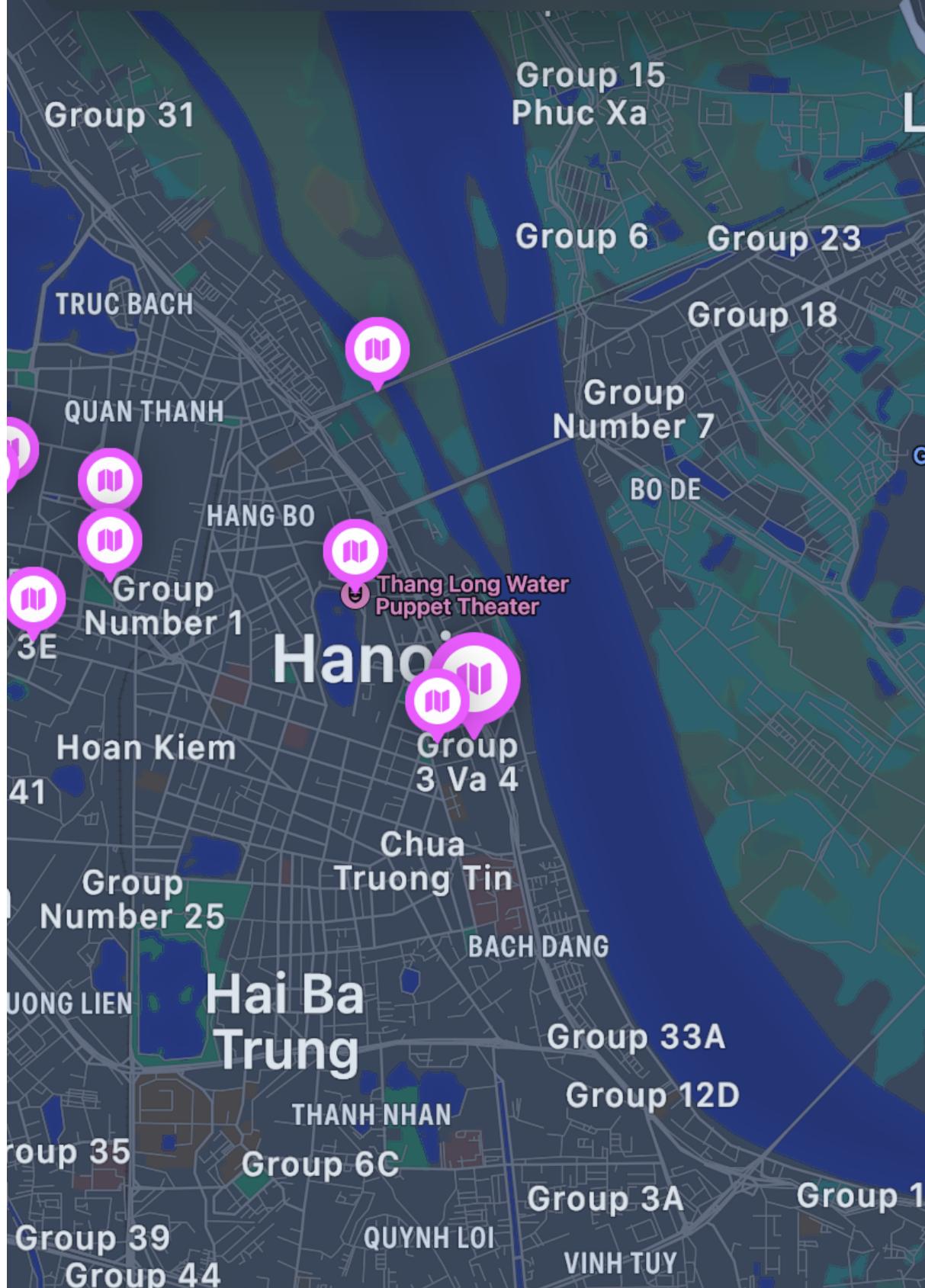
Sơn Đoòng cave, in Phong Nha-Kẻ Bàng National Park, Bố Trạch District, Quảng Bình Province, Vietnam, is one

00:31



Group

↓ ích lịch sử Địa đạo Củ Chi) , Hồ Chí Minh



Potential idea for future features:

Only manual data entry is supported by the app at this time. In the not too distant future, I plan to switch it over to an API that was developed in the Spring boot api. Users are aided in their search for nearby places by the API feature. For instance, if you want to get some coffee, you might search for coffee, and it would then provide many establishments that serve coffee in your area. At the moment, you are able to achieve so using Apple's MapKit software development kit (sdk) support; but, it does not provide detail locations such as a picture, a description, or a review of that place, which is why I need to add api data to support that.

App that has a list of travel destinations that I would want to visit; however, it lacks a toggle that allows me to see which recent destinations I have already been; hence, the next feature must have that function.