School of Science, Engineering and Technology (SSET)

RMIT UNIVERSITY

Semester B, 2023

Assignment 1

Favourite location list application

Course: COSC2659 – iOS Development

Group: Individual

Lecturers: Mr. Tom Huynh

Submission Date: 06/08/2023

• Lai Nghiep Tri – s3799602

"I declare that in submitting all work for this assessment, I have read, understood and comply to the content and expectations of the Academic Integrity."

Table of Contents

ABBREVIATION	MEANING
TBH	The Baker House
APP	Application
CRUD	Create, Retreive/ Read, Update, Delete

Introduction

The bakery market of Vietnam has maintained the sustainable growth, reaching the compounded annual growth worth 700 million USD and is considered to be the fastest growth in the Southeast Asian region [1]. Beside the development of large bakery chain (.i.e ABC Bakery, Duc Phat Bakery, Tous les Jours, etc), there are many newly local store has joined in the party, leading to the diversity of bakery models. This motivates to the launch of the application, named *The Baker House*, where people are able to have chances reaching these stores in a fast and convenient way.

Project Description

The Baker House is a list-based application, run on iOS platform, developed as an education app by student in the course iOS Development. The purpose of this app is to provide a list of navigation list of bakery shops in Ho Chi Minh city in details where users are driven to the detailed page, containing the useful information (.i.e type of bakeries, their story, serving menu and their location). Users are able to perform their manual search to look up for their desired shops.

Implementation Details

The app serving for this assignment is built on the Xcode IDE using the Swift language and only developed to run on iOS platform. For technical elements, TBH is a combination of View layers (ZStack, HStack, VStack, NavigationView and NavigationStack), each layer is a mix of using color pallete, shape, text and button. Moreover, the MapKit library is used to embed the Apple Map which respect to the instance location. These used elements are guaranteed to fall in scope week 1 to 5 of the course.

In terms of design layout, TBH is organised in three main views (Welcome view, List view and Detail view) along with some component views. The Welcome View is what user will see after opening the app, then it drive to the List view where a catalog of objects (Baker shop) is provided. As soon as user click into one of the displayed shops, they are driven to a Detail view, which gives a set of described information such as shop name, category, story, opening hours and location map.

Welcome View

The Welcome view consists of a child view (Onboarding view) where all the components are wrapped up by the outermost ZStack, followed by background image and a VStack for placing content. All the components are organized in the inner VStack in an order:

Info button -> App name -> Slogan -> Start.

A State variable is used as the active flag with always on whenever the app is launched, the app will move to the next view as soon as user click the Start button, indicating the active value is turned off.

Figure 1: Welcome view

A small alert view will pop-up whenever an Info button (top right corner) is clicked on, showing the assignment and author information.
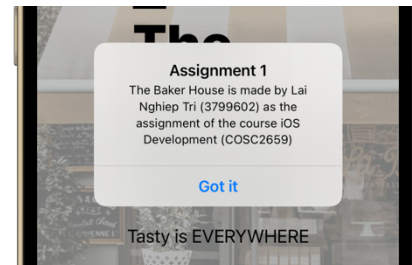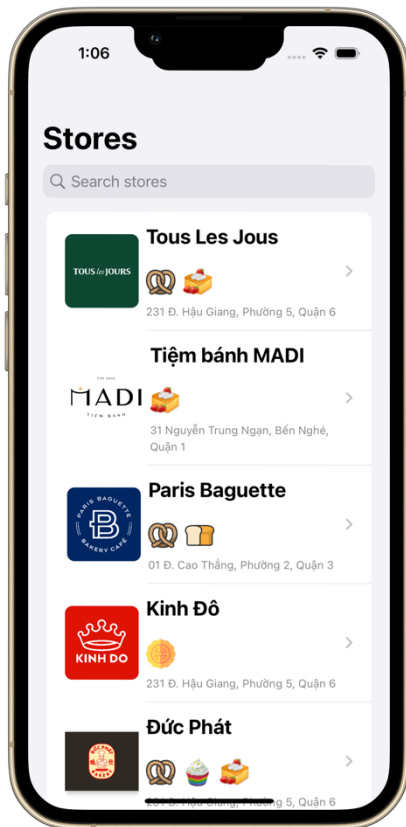

Figure 2: Student info

Figure 4: List view

List View

There are two sub-views of List View (Row View and Detailed View). It organizes all the baker shops as list of NavigationLink and these direct user to the Detailed View which respects to the store client clicked on, labeled by RowView. And RowView represents for each object in the list, containing the store logo, name, type of bakery and its address.

These NavigationLink are covered by an outermost NavigationStack to perform a manual search.

Detail View

Detailed View wraps up everything inside the NavigationView as a destination after user tap on the store card in the previous view. It is followed by a ScrollView to make the page scrollable as the content exceed the screen display. Inside ScrollView, the content is placed in the VStack in an order:

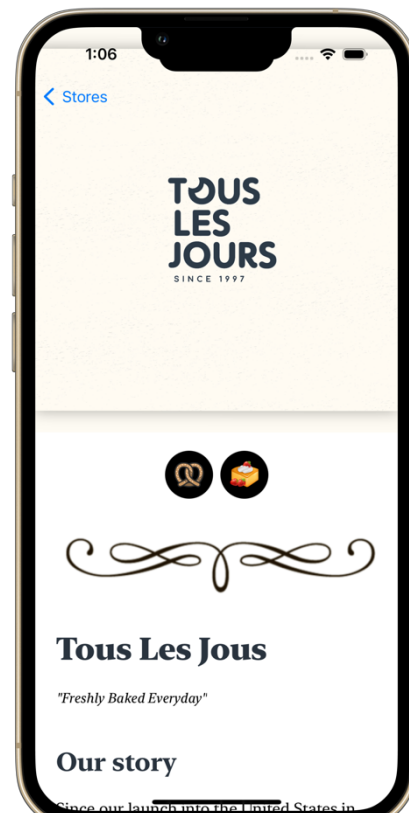**Image header -> Category -> Name -> Slogan -> Description/ Story -> Opening hours -> Menu -> Map -> Social icons.**

Figure 3: Detailed View

App icon

Figure 5: App icon

Data

The data structure of bakery store is organized as follow: shop name, slogan/ subheading, description, address, rating, category, list of serving menu and location).

```
BakerShop(name: "Paris Baguette",
        subheading: "Happy to see you. Even happier to serve you. Welcome to your neighborhood bakery café.",
        description: "The spirit of Sangmidang\\nOur origins were formed in 1945, in the heart of a small bakery in South Korea named
            Sangmidang. The spirit of Sangmidang, which is to not leave a single piece of bread unchecked, is still with us 76 years
            later.\\nBorn from a love of bread and a passion for quality\\nIn 1988, Paris Baguette began with its first store in South
            Korea. And now, we are an international fast-casual bakery and franchise specializing in French-inspired goods.",
        address: "01 Đ. Cao Thắng, Phường 2, Quận 3, Thành phố Hồ Chí Minh 70000",
        rating: 3.9,
        category: ["Pastry",  "Gourmet"],
        imageName: "paris-baguette-logo",
        foods: [
          Food(imageName: "Buttercream_bread"),
          Food(imageName: "Caramel_Apple_Pie"),
          Food(imageName: "Choco_Cloud"),
          Food(imageName: "Cloud_Cake"),
          Food(imageName: "Cloud_Piece_Cake"),
          Food(imageName: "Croissant"),
          Food(imageName: "Fruit_Pastry"),
          Food(imageName: "Mango_Cloud"),
          Food(imageName: "Multi-Grain_Pan_Bread"),
          Food(imageName: "Pain_Au_Chocolat"),
          Food(imageName: "Party_Bear"),
          Food(imageName: "Potato_Cheese_Bread"),
          Food(imageName: "Red_Bean_Bread"),
          Food(imageName: "Red_Bean_Donut"),
          Food(imageName: "Strawberry_Cloud_Cake"),
          Food(imageName: "Tiramisu")
        ],
        location: CLLocationCoordinate2D(latitude: 10.784205162009378,
                                         longitude: 106.69686768593894)),
```
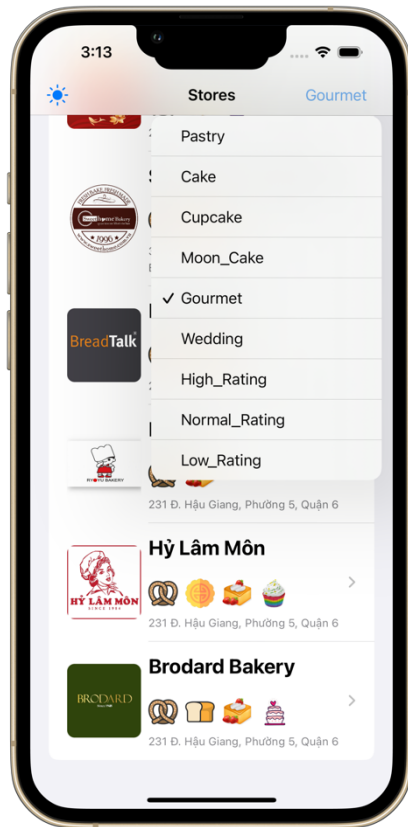
Figure 6: Data structure

Advanced features

Figure 7: Filter feature

Filter

The filter locates at the top right corner the List View, displaying stores corresponding to their category (Pastry, Cake, Cupcake, etc) and also the ratings.

Search bar

User can type any name they like to the search bar, and it will return the list of matching records. If the search box is empty, all the available stores will be sent back.
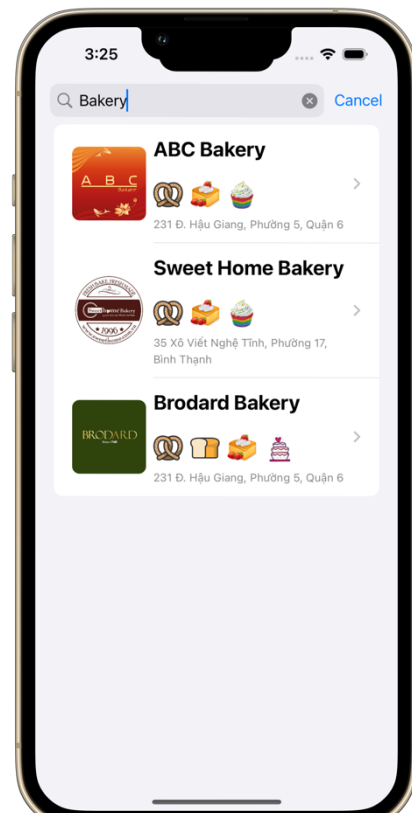

Figure 8: Search bar feature
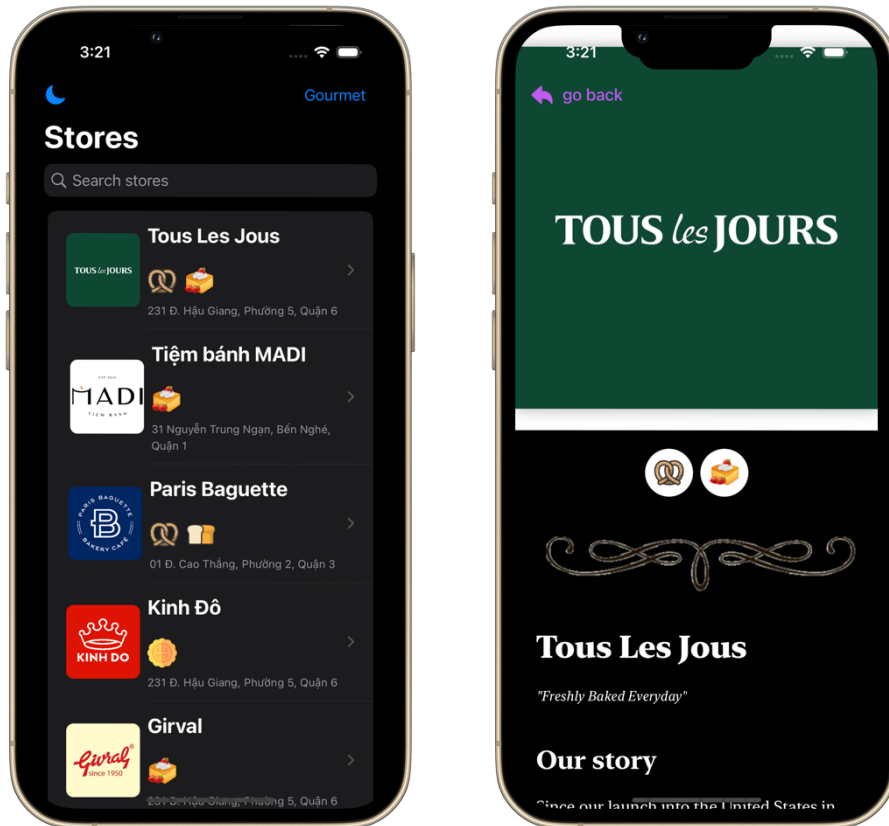
Dark mode switcher

Figure 9: Dark mode

Dark mode switcher locates at the top left corner of the List View that change the display mode from light (indicated by sun) to dark (indicated by moon). The change also affects to the Detail View.

Map pin marker

The map view locates inside the Detail View, it takes the coordinates (latitude and longitude) which respect to address to determine the location of store, indicated by a marker.
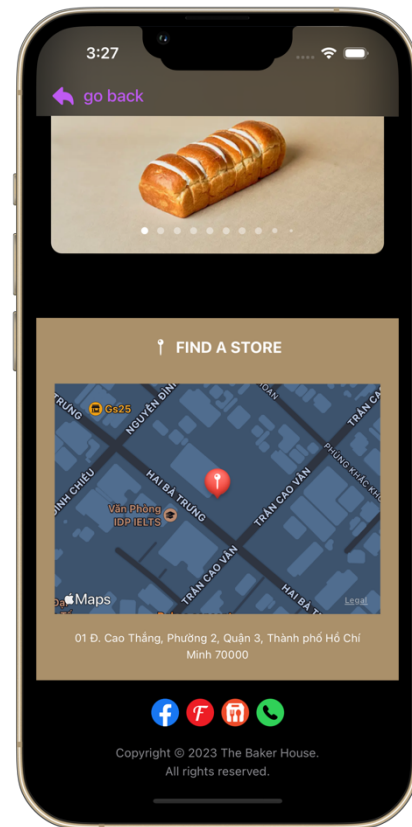

Figure 10: Pin mark in MapView

	Components
Layouts	Vstack, Hstack, ZStack
Page transition	NavigationView & Navigation Link
Decoration	Color, Text, Image, Shape, Fonts, Overlay, SF Symbols
Map	MapKit library
Source control	Github
Emulator	iPhone 14 Pro

Figure 11: Summary of all used components

Demonstration

The app demo has 5 videos (Welcome view, List view (light + dark mode), Detail View and full app walkthrough) and they are placed into OneDrive folder. Please check this link.

https://rmiteduau-my.sharepoint.com/:f:/g/personal/s3799602_rmit_edu_vn/Eg0IWYSMbslCppm76hD5SGwBlB7Uya96Y_zdug4bEd2D9Q?e=yX2n6a

Known bugs and problems.

There are some bugs during the development stage as well as problems that have not been fixed yet and those are represented in the tables as follow:

Bugs/ Problems	Description
Filter not working	The filter does not return the shop respect to its category. Illustrated in the demo (List View).
JSON data loading failure	The JsonDecoder have a trouble when parse a Json file containing nested object. The temporary solution is to use the data declared in the Swift file.
Inaccurate location on MapView	The address is taken from Google Maps along with its coordinate (latitude and longitude) but there is high tolerance between the pin location in the MapView with the actuals (compared in Google Maps).
No homepage button	N/A

Figure 12: List of bugs and problems

Conclusion

In a nutshell, the purpose of The Baker House is to help citizen have chances to explore local bakery stores within their area, although the app is suffering with some problems. At the later development stages, those issues are guaranteed to be fixed and the app will come up with some potentially new features.

- The app is expected to allow more CRUD operations beside reading, so that users are able to add, edit and delete the list of stores.

- The social icons are expected to display pop-up homepage of shop whenever user make a tap into them.
- A rating form is expected to be appeared in the app, allowing user can rate the store and those ratings can be viewed via an independent view which linked to the Detailed View.
- List View will offer an independent page of history which contatins the most recent viewed shops so that user can travel back without searching them manually or going through the long list.
- A dashborad view is another needed feature as it gives some useful information such as highest rating shop, most diverse food serving shop, etc.

References

[1] VietNamNet News, "Vietnam's bakery market shows fast growth," VietNamNet News, https://vietnamnet.vn/en/vietnams-bakery-market-shows-fast-growth-579004.html (accessed Aug. 6, 2023).