COSC2659
IOS DEVELOPMENT

Assignment 1 Document

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I declare that in submitting all work for this assessment I have read, understood and agree to the content and expectations of the Assessment declaration.

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I. Introduction

Besides the pressure of the national high school exam, one of the problems that high school students worry about the most is choosing the right university to join after graduating. Only in Ho Chi Minh City, there are 37 public universities and 7 academies [1], which are different from each other in terms of majors, tuition fees, locations, and facilities, etc. Therefore, it can be challenging for students to choose the right university that is appropriate for their qualification and satisfy their requirements.

To minimize the difficulty in finding a suitable university for students, I decided to create an IOS application named "Uni in VN", which displays detailed information about some of the most popular universities in Vietnam. By reducing the effort of researching information about each university, the application can help students to make a good decision on selecting the right academic environment for their future study and career development.

II. Description

"Uni in VN" is an application that displays the most popular universities in Vietnam and allows users to select a university to view its detailed information such as location, name, address, annual tuition fee, description, and its images.

To use the application, first the user has to tap on the application icon in iPhone to open the application. After the application is opened, a list of popular universities appears for the user to view, and the user can also scroll down to view more of them. To view the detailed information of a university, the user can tap to a university that the user is interested in, and the user will be redirected to its detail page. The detail page contains a MapView that uses the latitude and longitude of the university to present its location, and the user can also zoom in or move the map to view the locations around. There is also a circle image to display the logo of the university, under of which is its address and annual tuition fee. The detail page also includes a description about the university, a button with a URL link to its website, as well as a slider that display some images of its appearance, theatre, library, computer lab and canteen.

To find the universities that satisfy the user's requirements, the user can use a search bar at the top of the application, which can be used with 2 options: search by name or by address. If the user wants to search by name, the application also provides some suggestions for users to easily identify the university that they are looking for. The user can also filter the universities based on 4 ranges of annual tuition fee including "Any" – which is the default one, "< 20M", "20M to 50M", and "> 50M". Moreover, the user can filter the results with all those conditions at the same time, and the filtered results will appear automatically.

III. Features

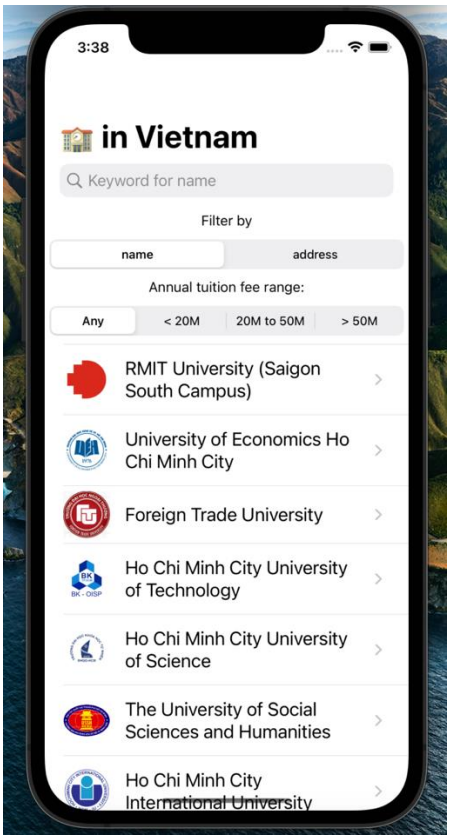
The application contains main features such as displaying a list of universities, which is retrieved from a JSON file, in a form of rows, and each row is a navigation link to the detailed page of a university. Each detailed page includes a map that can mark the university's location with MapMarker, and the user can also zoom in or move the map

to view all locations around the university. It also includes a logo of the university, which is displayed in a circle image. Essential information of the university is presented below such as the address and annual tuition fee of the university, as well as the description of that university.

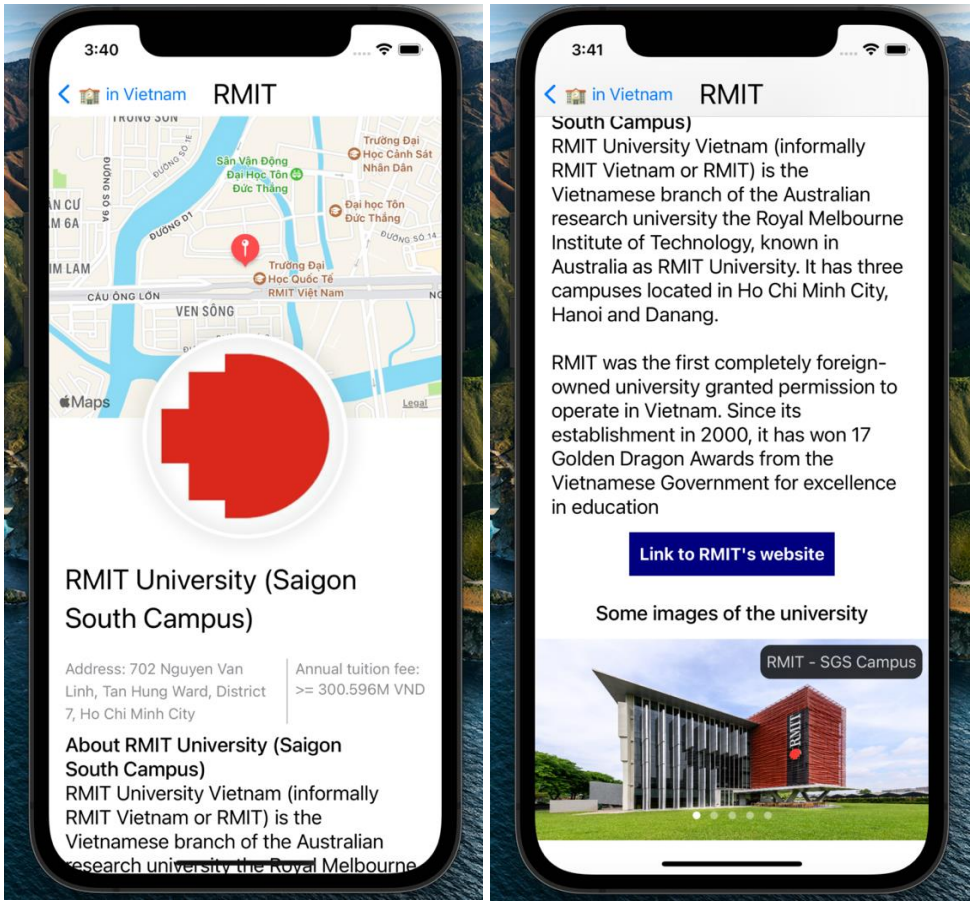
To make the application more usable and enhance the user experience, I also add some extra features such as a search bar for users to search by name or search by address, and by searching by name, the application also provides some suggestions to easily autocomplete the searching process. There is also a filter to filter the universities by annual tuition fee with 4 ranges: “Any”,” < 20M”, “20M to 50M”, and “> 50M”. In each detailed page, there is also a button that can lead user to the website of the university and an image slider for users to preview images of some locations in the university.

IV. Screenshots of the app

The icon of “Uni in VN” app



The navigation list of universities in “Uni in VN” app



The detailed view of a university in “Uni in VN” app

V. Future development

To improve my application to be better, I can develop my application to use Core Data for storing the data of the universities instead of a JSON file. I can also make my application to be used on other Apple devices such as iPad, MacBook, etc. Because the data is still limited, I can populate the application with more data in other locations in Vietnam such as Hanoi, Danang, etc., as well as provide more filters for users to find the universities that satisfy their requirements.

VI. Appendix

Link to the demonstration of the application:
https://www.youtube.com/watch?v=Ej0Y6NNpIWY

Link to the GitHub repository of the application:
https://github.com/TuanDao2002/COSC2659_Assignment1_s3877347.git

The source code of Views, Model, ViewModel, Data, and Extension are found in COSC2659_Assignment1_s3877347 folder.

The JSON file used to populate data is universityData.json, which is in Data folder.

All the data is found on Wikipedia, website of each university, and other online resources.

The application is responsive best on iPhone 12 and iPhone 13

VII. Reference:

[1] Huy A. “List of public universities in Top 1, 2 in Ho Chi Minh City.” Kenhtuyensinh.vn. https://kenhtuyensinh.vn/danh-sach-cac-truong-dai-hoc-cong-lap-top-1-2-tai-khu-vuc-tphcm (accessed Jul. 24, 2022)