

# Exam - 2

October 19, 2023

## Objective

Develop 'Somewhere near me' app.

## Motivation

Table view, map kit, auto layout, stacked views, data transfer.

## \*\*\*Must Follow\*\*\*

You must follow the rules below.

1. Start your XCode project "**Exam2\_LastName\_FirstName**" (replace **LastName** with your last name and **FirstName** with your first name).
  - a. **DON'T DO** the following:
    - i. Start with any other project name and change the zip file name later.
    - ii. This will not be accepted at all.
2. You must have to do the exercise compatible with **XCode version 14.3.1** or higher.

## Tips

- **Read the question carefully, then start coding!**
- **Build, Build, and Build**
  - If you add anything on storyboard -> **Build**
  - If you make a reference from storyboard -> **Build**
  - Do not wait until finishing all parts and build.
  - It is easier to debug after each single feature added.

## Details

Create a multiple view iOS application using Swift as a programming language. Start your XCode project “**Exam2\_LastName\_FirstName**” (replace **LastName** with your last name and **FirstName** with your first name).

**[4 pts]** Design your interface to look like the screenshots [Figures 1 - 8]

- Design your UI for **iPhone 14 or 15** in both **Portrait** and **Landscape** modes
- Pay attention to images, icons, colors, fonts and font sizes

Fonts: System 45, 35 (filter options), 25 (names in the table), 15 (miles)

Icons: system.image: “info.square”, “map”

**[3 pts]** Application gets the data from the remote json file, located at the address:

<https://m.cpl.uh.edu/courses/ubicomp/fall2022/webservice/people.json>

Your app should download and parse that file. Data is populated to the table. At the initial screen [Figure 1] everyone’s names and distances are depicted. ‘Default’ filter state is ‘Everyone’.

**[3 pts]** Once user clicks on the top part of the screen (“... somewhere near me”) they are transferred to another screen with filtering options [Figure 2]. Here they can select the group of people to display. For instance, if user clicks ‘Friends’ only records with type ‘Friends’ will be displayed [Figure 3].

**[3 pts]** When user press on any of the table lines / persons, they will be transferred to the ‘Details’ screen [Figure 4]. Display distance, location, and type on that screen. Also notice that we have tab view navigation with ‘Details’ and ‘Map’ tabs.

**[2 pts]** From the ‘details’ screen user can open the map [Figure 5]. The map has a pin with the person’s name and “... is here” tag.

**[Bonus points: 2pts]** Calculate **actual** distance between user and person (get user current coordinates to do that), populate table and ‘Details’ with **actual** distance values. Sort ascending cells in the table view by the **actual** distance (top to bottom).

---

Good luck and happy coding! 😊

## Submission

Zip XCode project and submit to the Teams. The name of your zip file should be “**Exam2\_LastName\_FirstName.zip**” (**LastName** is your last name and **FirstName** is your first name). One submission per person.

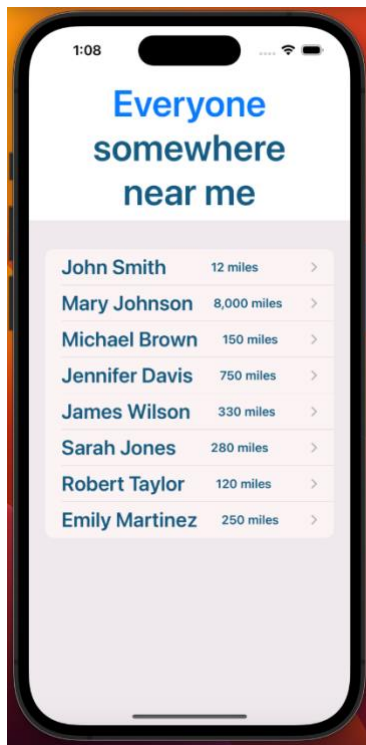


Figure 1

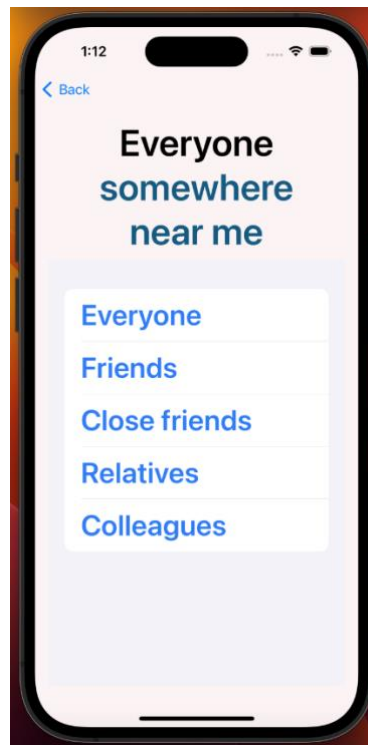


Figure 2

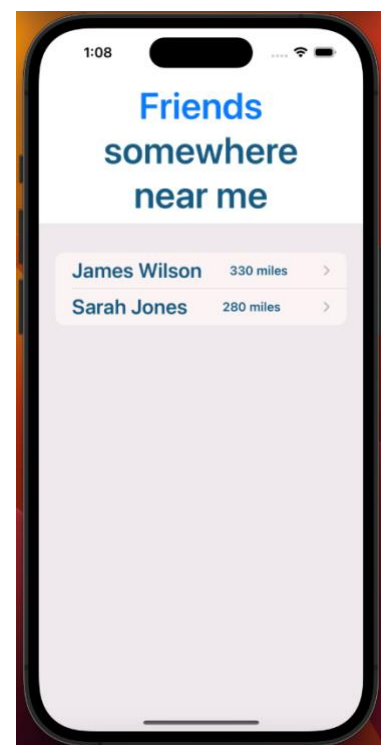


Figure 3

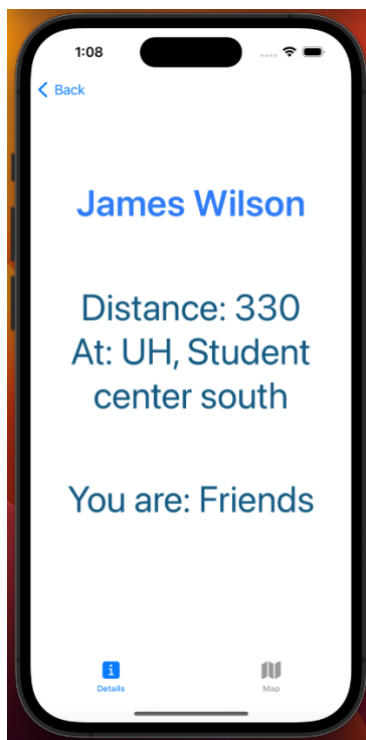


Figure 4

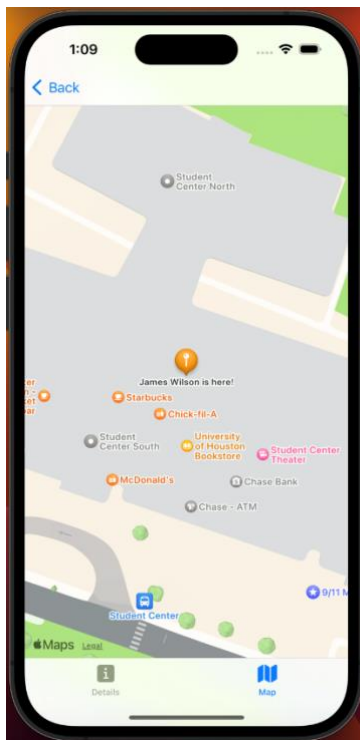


Figure 5

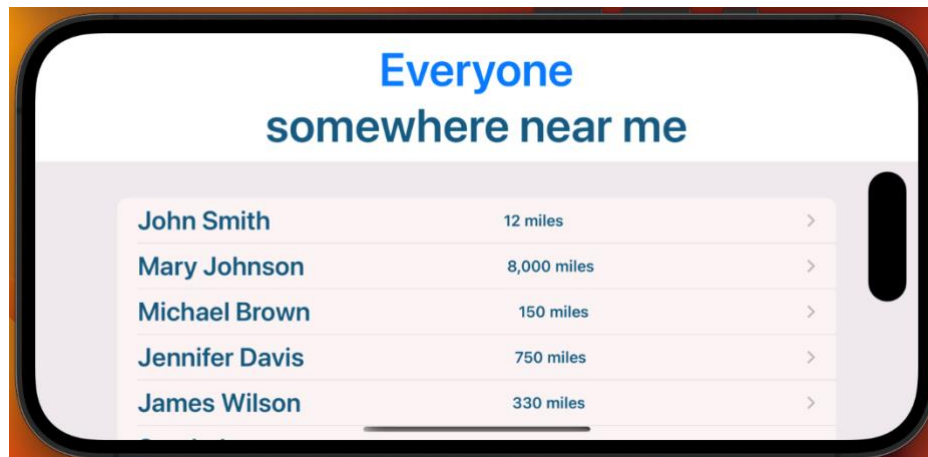


Figure 6

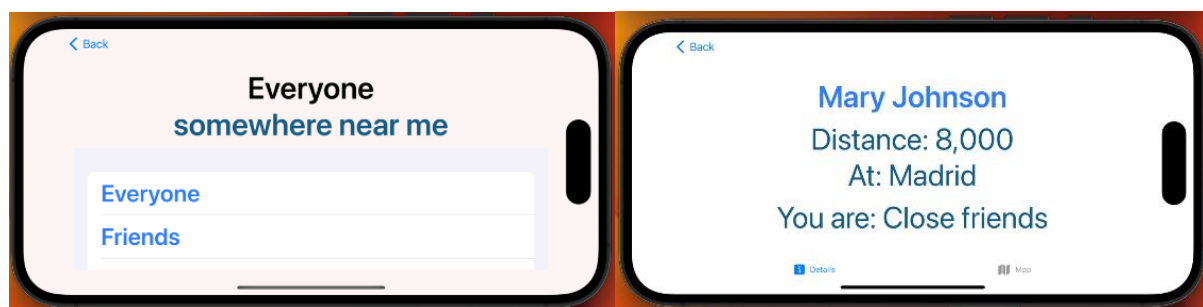


Figure 7

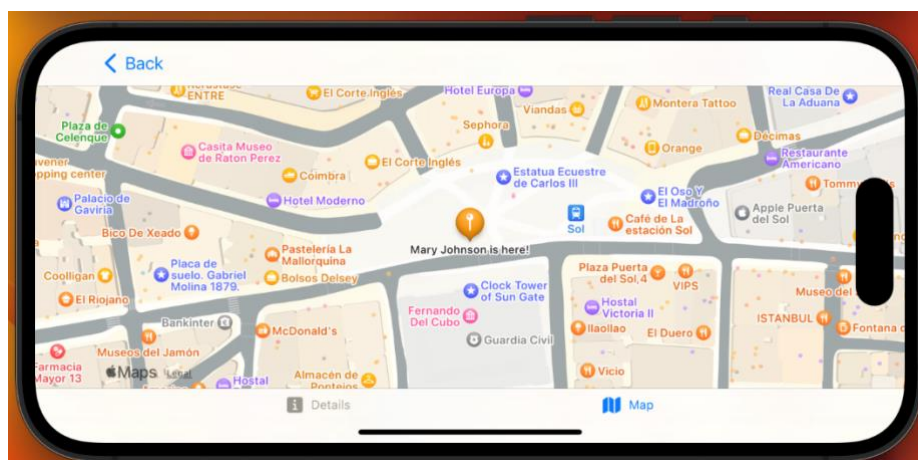


Figure 8