

Exam - 2

October 20, 2022

Objective

Develop 'Cheap gas' app.

Motivation

Table view, tab bar controller, 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 13.4.1** or **XCode version 14**.

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).

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

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

Fonts: System

[2 pts] Application gets the data from the remote JSON file, located at:

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

You need to download and parse that file. Data is populated to the cell prototype. In the initial screen [Figure 1] station names and gas prices are depicted. ‘Default’ gas grade is regular.

[2 pts] Once user clicks on any gas station new ‘details’ screen with the station name, station logo, and gas prices is shown [Figure 2]. This screen also contains a link to the map screen.

[2 pts] When users press the button representing the fuel grade, they will be transferred to the initial screen [Figure 3, ‘Mid-grade’ button was pressed]. Now the table view screen shows updated gas grade and prices (based on the selected fuel type) [Figure 4].

[1 pt] From the ‘details’ screen users can open the map [Figure 5]. The map has a pin with the station name and some geographical information (administrative area, ISO country code) [Figure 6].

[1pt] App needs to have universal auto-layout that work well across all iPhone types and all orientations.

[Bonus points: 2pts] Sort ascending cells in the table view by the gas price (of the selected grade). For the ‘Regular’ gas it will be: Shell, Exxon, Chevron, Dunlap, Valero (top to bottom).

Good luck and happy coding! 😊

Submission

Zip XCode project and submit to the blackboard. The name of your zip file will be automatically “**Exam2_LastName_FirstName.zip**” (**LastName** is your last name and **FirstName** is your first name). One submission per person.

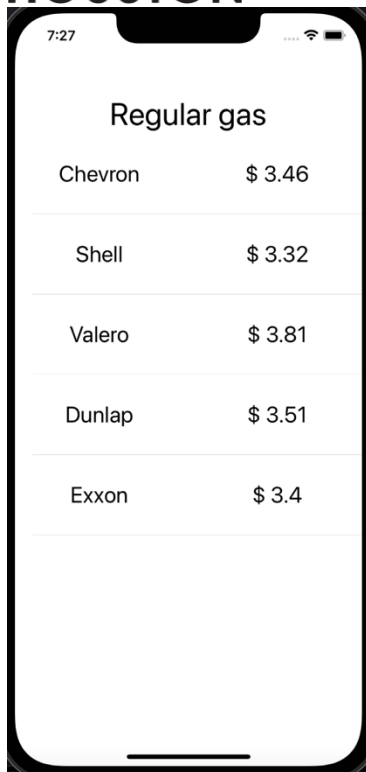


Figure 1

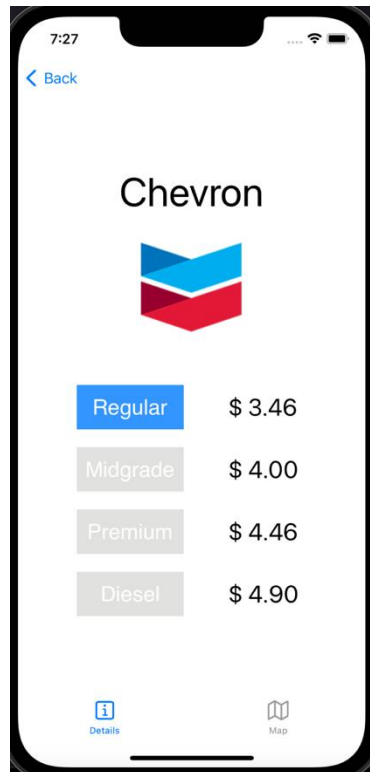


Figure 2

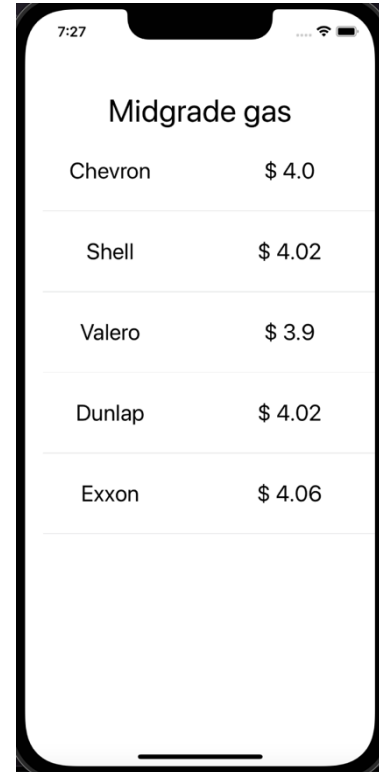


Figure 3

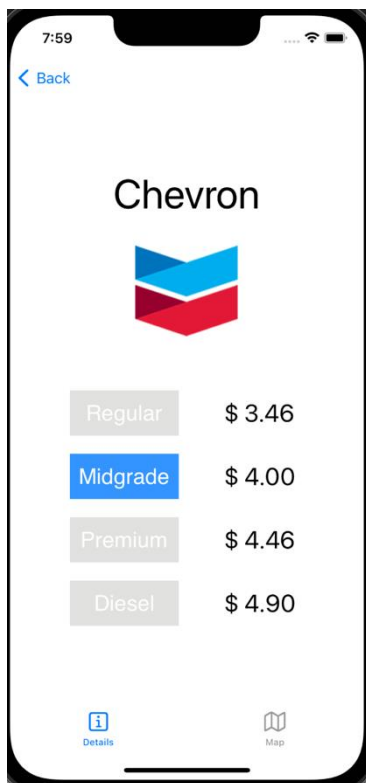


Figure 4

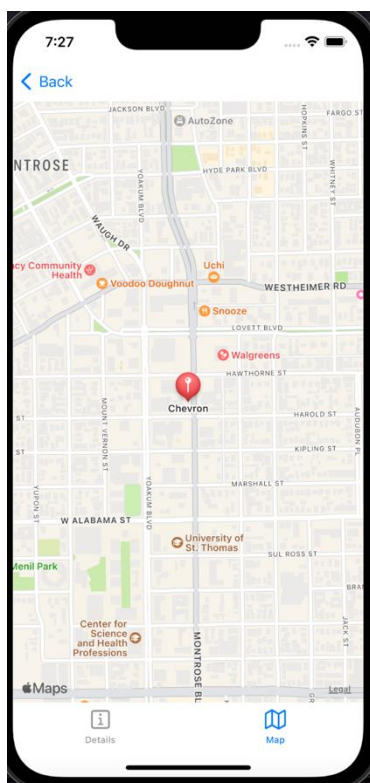


Figure 5

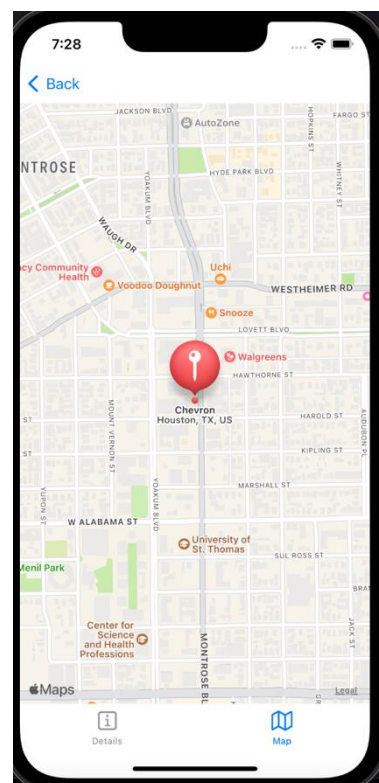


Figure 6

Midgrade gas	
Chevron	\$ 4.0
Shell	\$ 4.02
Valero	\$ 3.9
Duplex	\$ 4.02

Figure 7


< Back	
<div>Chevron</div> <div></div> <div>Details</div>	Regular \$ 3.46
	Midgrade \$ 4.00
	Premium \$ 4.46
	Diesel \$ 4.90
	Map

Figure 8

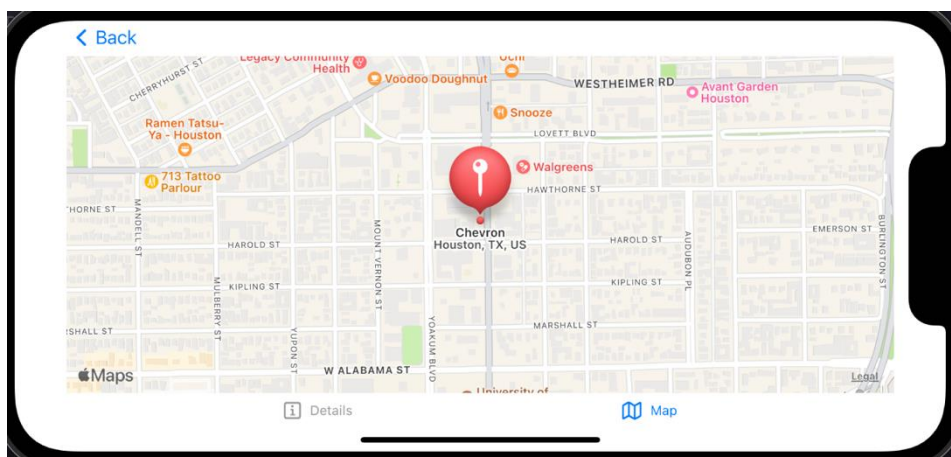


Figure 9