COMP 2601 Winter 2021

Assignment Proposal: Stock Viewer App

Background

The purpose of this assignment is to give you practice building an IOS app that interacts with a JSON RESTful-API server and parses the JSON data to display on the app. The data you will be working with is stock. The documentation about the API that you will be using to receive the stock data can be found at this link: https://financialmodelingprep.com/developer/docs/.The assignment is based on the following tutorials numbers: 9A (touch events), 9B (multi-touch and gestures), 10A (Web Access Part A), 10B (Web Access Part B).

Assignment Requirements

In this assignment, we want you to build an IOS-based stock-viewer app that has three different screens. The first screen allows the user to see the most active stocks. The second screen allows the user to search for a stock using a query and view the results. The last screen allows for a user to search and view a stock profile. If you have seen the yahoo finance app, this is like that. The stock-viewer app must have a user interface built using GUI objects and interacted using simple gestures like double-tap. How you build the user interface is up to you, whether it is programmatically or using SwiftUI.

Design Requirements

R1.1 The stock viewer app should be built with Xcode 12.x and Swift 5 or later. When the app launches, it should be on one of three screens (Stock Profile Screen, Most Active Stocks, Search Stock Screen). The user should be able to switch between screens, whether that be using a tab bar or menu.

R1.2 When the user goes on the Most Active Stocks screen, if the API call was successfully made and the JSON data parsed, then the list of stocks should appear on the screen. Each stock in the list should at least contain the company name, the symbol (ticker) of that stock, the change percentage in price, and the stock's current price. It should also have the date where indicates the last time an API call was made.

R1.3 When a user double taps on the Most Active Stocks screen, the date and data should update by making another API call and refreshing the view.

R1.4 For each stock results display on the Most Active Stocks screen, it should be highlighted red if the change percentage in price is negative and green if it is positive.

R1.5 When a user is on the Search Stock screen, the user should be able to choose between the type of stock they would like to search in and enter a query to search on.

R1.6 Once the user has typed a query and click on the keyboard's search button, if the API call was successfully made and the JSON data parsed, then the list of stock results should appear on the screen. Each stock result must contain at least the company name, the symbol (ticker) of the stock, the exchange that it is found in and the currency.

R1.7 When a user is on the Search Stock Profile screen, a user should be able to search for a stock profile by entering the symbol (ticker).

R1.8 Once the user has typed a query and clicks on the keyboard's search button; the stock profile should be displayed on the screen. For example, if a user searches AAPL, then Apple's profile should appear on the screen. The stock profile screen must contain at least the company name, the symbol (ticker), the exchange that it is found in, an image of the company logo, the current price, the industry, and the sector.

R1.9 Whenever an API call was unable to be completed or parse, an error message should pop up and notify the user.

R1.10 When the user rotates their device between landscape and portrait mode, the screen should show all available information and not be cut out. This feature can be implemented by either handling the rotation or restricting the app not to allow rotation.