Assignment 04 - Currency Converter & Yahoo Query Language

Instructions
Please submit your solution to the following exercise via a Github repository. Your submission must, at a minimum, include a README file with your name, short description of the assignment, and any third party material properly attributed. Make sure your commit messages are meaningful. Do not upload files directly through the github website. Do not copy and paste. Either use the git integration within Xcode or use the command line.

Add your files to the repository using `git add`. Then commit the files to the repository using the command `git commit -a`. Add the remote source with `git remote add origin` *`<remote repository URL>`*. Once you have added all your files, push the repository with the command `git push origin master`.

The objective of this assignment is to create an application with more than one view, serialize objects to files, and incorporate a web service within one or more of the application's models. The application presents the user a user interface to select one or more favorite currencies from a list of ISO 4217 currencies. The currencies can then be paired to form an exchange rate pair such that the user can convert from a home and foreign currency. The output from the conversion shall be rounded and formatted according to the rules of the currency.

You should fetch the exchange rates from Yahoo Finance by way of the community tables available through:
https://developer.yahoo.com/yql/#ios

You'll notice the code example they gave you is in Objective-C. In an effort to make this easier for you, I have provided a wrapper to make it easier to use:
https://github.com/Sirusblk/swift-YQL

Feel free to clone my repository and test it out. You'll need to include the YQL.swift file in your project. Plagiarism and academic dishonesty is not tolerated. Correctly and properly attribute all third party material and references. Failure to follow these instructions will detrimentally affect your assignment's score.

Rubric
The assignment is out of 100 points.
75 points for a correctly executing application
15 points for compiling with no errors or warnings
10 points for using the correct name for files, the program and documenting your code.

Not including a README forfeits 25 points. Your code is expected to be well organized and well documented.

Resources
Currency Symbols:
http://www.unicode.org/cldr/charts/latest/supplemental/detailed_territory_currency_information.html
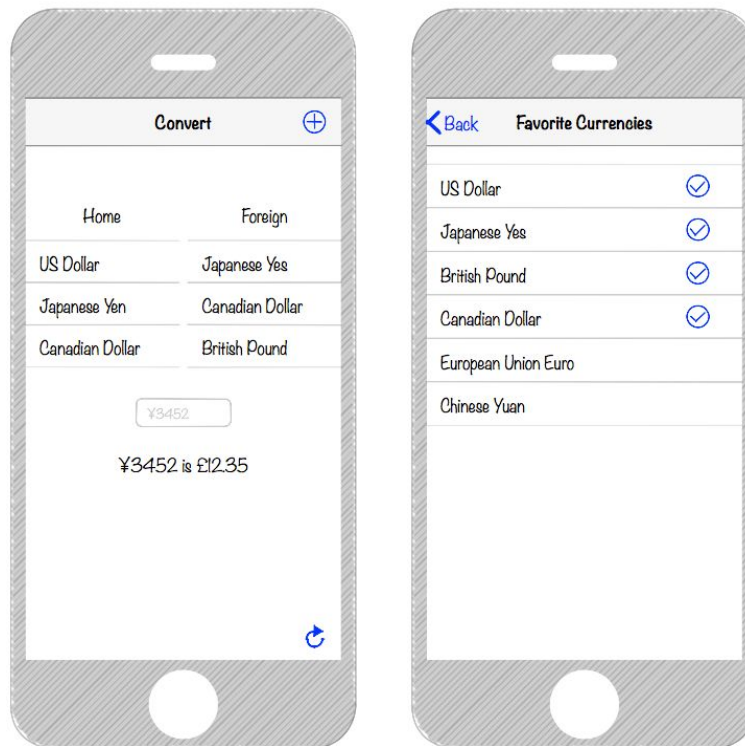ISO 4217 Currency Codes:
www.iso.org/iso/home/standards/currency_codes.htm

Requirements

The name of the application is `CurrencyExchange`. The application should have a minimum of two views. The first view provides the user with two subviews (`UITableView`, `UIPickerView` or similar) which facilitates selecting a home and foreign currency. Provide a text field that takes in the numeric input of the home currency to be converted to a selected foreign currency. Let the user select additional currencies from a second view. The list of currencies, the user's favorites, and the last used exchange rate should be stored and recalled whenever the application is loaded.

To learn more about saving values, look at object serialization with either `NSCoding` or `NSKeyedArchiver` covered in *Archives and Serializations Programming Guide*. To save the data between when the application is close and reopened, look at *File System Programming Guide*. Specifically save all data to `/Library/Private Documents/<AppName>` where *<AppName>* is the name of your application. Use the NSFileManager class to create any directories should the directories not already exist.

When displaying the home and foreign currency, ensure that the values are formatted with the correct currency symbol and the correct number of minor units.

Mock up of the application's user interface (Credit: Michael Shafae)

Links

Archives and Serializations Programming Guide
https://developer.apple.com/library/content/documentation/Cocoa/Conceptual/Archiving/Archiving.html

File System Programming Guide
https://developer.apple.com/library/content/documentation/FileManagement/Conceptual/FileSystemProgrammingGuide/FileSystemOverview/FileSystemOverview.html

Credit to Michael Shafae for the assignment idea and the vast majority of the assignment text