Austin Thiele

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Software Development 1

12/18/17

Milestone

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| Fixer |
|  |
| - <https://api.fixer.io/latest> String |
| +ApiResponse String |
|  |
| retrieveCurrentRates() |

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| FixerModel |
|  |
| - base String |
| - date String |
| - rates HashMap |
|  |
| + getBase String |
| + getDate String |
| +getRates HashMap |
|  |
| FixerModel() |
|  |

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| --- |
| Main |
|  |
| Main() |

These are the UML diagrams for the classes that I intend on creating. Firstly, the Fixer class will retrieve the current exchange rates from the API. This is where I think I will find the most difficulty, in retrieving information from the internet and returning the values that I need. However, once I have the values from the Fixer Class, my FixerModel class will organize the data requested into a format that I can easily manipulate and retrieve the specific information that I want.

The FixerModel class has been worked on, where the private variables base, date, and rates all have getters to retrieve the information. The getters retrieve the closing day prices and stores them. I hope to be able to design a way to select what date of rates you want to look at, as the API I hope to use has exchange rate data dating back to 1999.

The main class will execute the function of searching for triangular arbitrage. The relationship between the currencies to identify an arbitrage condition is very simple, where you compare the value of two currencies based upon the same base currencies and verify that this value is the same as the one being offered by the market. If it is not, then an arbitrage condition will exist. I need to determine the best way to execute this relationship, and inform the user if an arbitrage condition exists or not. In addition, I want to implement a user interface into the main class, where the user can determine the date or range of dates they want to look at, the base currency that the rest are calculated off of, and also intend to implement some currency symbols.