

CIT 591 Group Project Design - CRC (Class Responsibility Collaborators):

Proposal: Our team members are Tiffany Choi, Rob Stanton, and Joseph Kravets. Our project is a program where a user can enter a stock ticker and get useful technical and statistical analysis of its trading history. For example, a user will enter the ticker "AAPL" and can see a linear regression of the price, the 200 day moving average, the 50 day moving average, the zscore of the price, and other useful metrics.

Joseph Kravets will pull the stock data and make sure it is usable. Tiffany will choose and implement the financial metrics. Rob Stanton will design and implement the user interface.

ConsoleUI Class

- The basic responsibility of the ConsoleUI class is to prompt the user entry of the stock ticker and desired indicator. Will be used for coverage on headless environments.

Class: ConsoleUI	Rob Stanton
Responsibility: <ul style="list-style-type: none">• Prompt the user for the stock ticker• Prompt the user for the desired indicator	Collaborators: Scanner Stock Alerts

DataPull Class

- The basic responsibility of the DataPull class is to pull the data for the stock from an external source and store the data in an internal file.

Class: DataPull	
Responsibility: <ul style="list-style-type: none">• Read data from external source• Store data in separate file	Collaborators: RefreshData

RefreshData Class

- This class should refresh the stock data

Class: RefreshData	
Responsibility: <ul style="list-style-type: none">• Refreshes the stock data	Collaborators: DataPull

Stock Class

- The basic responsibility of the Stock object is to maintain information about a single stock.

Class: Stock implements Serializable	
Responsibility: <ul style="list-style-type: none">• Create new object given the stock ticker• Read data from file• Store the stock's ticker• Store the stock's name• Store the stock's date, time, and price• Update the stored information about the stock• Updates itself	Collaborators: DataPull

FinancialIndicators Class

- The basic responsibility of the FinancialIndicators object is to calculate the financial indicators for the selected stock.

Class: FinancialIndicators	
Responsibility: <ul style="list-style-type: none">• Calculate the Moving Average• Display the Moving Average• Calculate the Bollinger Bands• Display the Bollinger Bands• Calculate the RSI• Display the RSI• Calculate the MACD• Display the MACD	Collaborators:

Alerts Class

- Maintains list of Stocks with their respective chosen alerts

Class: Alerts implements Serializable	
Responsibility: <ul style="list-style-type: none">• HashMap<Stock, List<StringInd>• Calculates each Indicator	Collaborators: FinancialIndicators Stock

BaseGUI Class

- This class should create the base GUI (without the stock information).

Class: BaseGUI	Rob Stanton
Responsibility: <ul style="list-style-type: none">• Creates the Base GUI• Contains functionality between components	Collaborators: Menu ChartGUI TableGUI

ChartGUI Class

- This class should plot the selected stock and its metrics on the GUI.

Class: ChartGUI	Rob Stanton
Responsibility: <ul style="list-style-type: none">• Plots the details and metric from a chart object on the GUI	Collaborators: Chart

Chart Class

- This class will take a stock and assemble all necessary details to form a ChartGUI.

Class: ChartData	Rob Stanton
Responsibility: <ul style="list-style-type: none">• Calculates plot locations for specific ticks as well as prices and indicators.• Should be passed to ChartGUI for construction of a chart	Collaborators: Stock Alerts

TableGUI Class

- This class should list elements of Portfolio and contain information concerning their indicators and price as well as weightings in the portfolio

Class: TableGUI	Rob Stanton
Responsibility: <ul style="list-style-type: none">• Display all stocks in Portfolio and their respective Alerts• Allows adding alerts or removing	Collaborators: Alerts

ProgramController Class

- The basic responsibility of the ProgramController object is to carry out the various use cases.

Class: ProgramController	
Responsibility: <ul style="list-style-type: none"> • Calls UI based on Environment • Calls Refresh Class • Calculate the FinancialMetrics • Create the StockGUI (from inputted data) • Saves State • Loads Previous State if available • Handles responses from User 	Collaborators:

Runner Class

- The basic responsibility of the Runner class is to run the program.

Class: Runner	
Responsibility: <ul style="list-style-type: none"> • Run the program 	Collaborators: