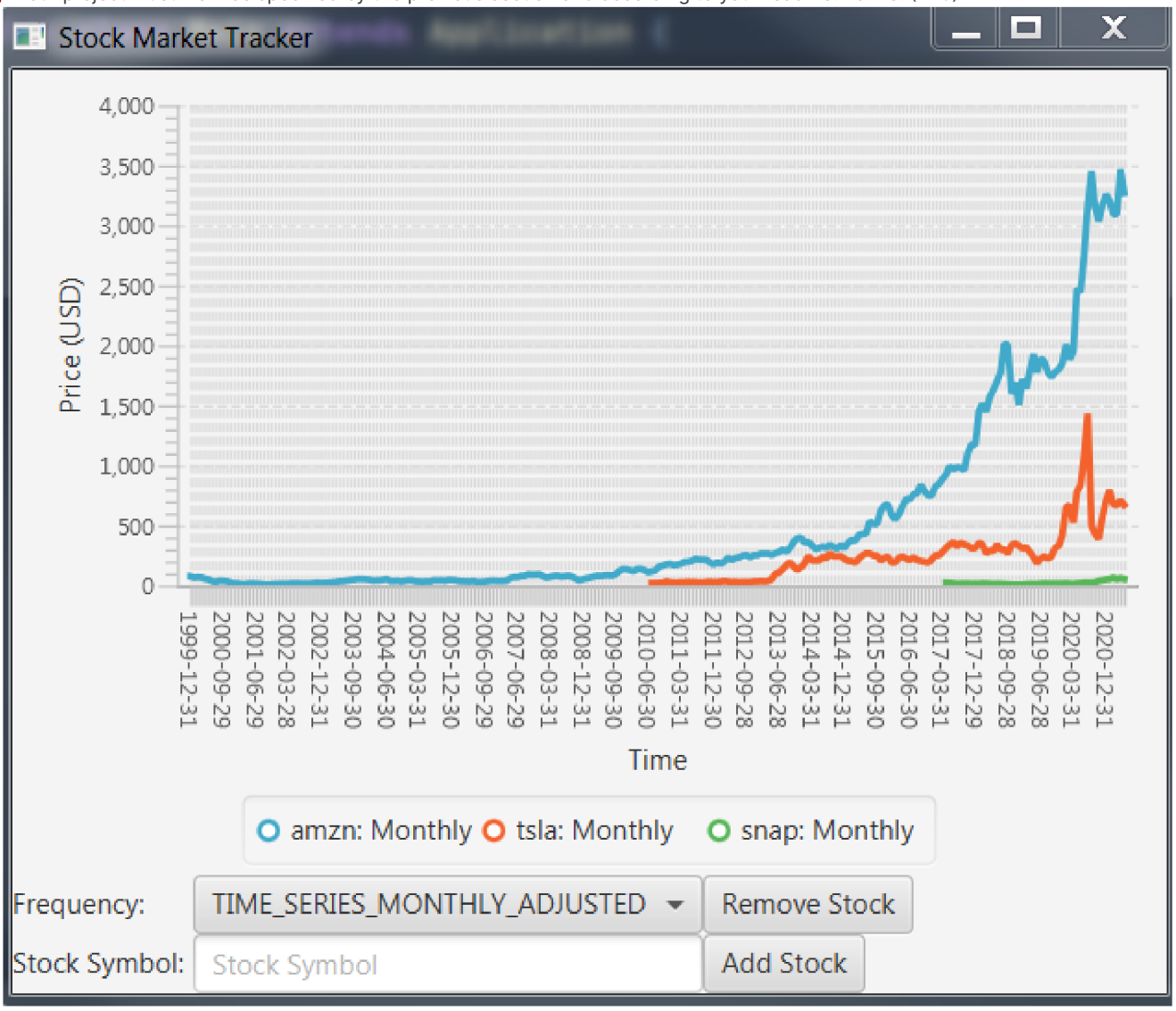
Stock Market Tracker

- [x] Your projects must use the techniques listed (+30)
  - JavaFX
  - IO online
  - Json
  - **javafx linechart**
- [x] Your project must also use at least one inner class and one lambda expression.(+10)
- [x] Your project will use something we have not covered in class (in bold). (+20)
- [x] Your must have a Readme.md file in your repository, indicating:
  - What your project is,
  - what the program does, and then,
  - a technical section indicating the classes, and methods in which the above requirements are contained.
  - You must also indicate which is the main class to run the program.(+10)
- [x] Your project must compile.(+10)
- [x] Your project must work as specified by the previous section and according to your readme.md file. (+20)



Readme

Project Topic #3

A stock market tracker: Can check whatever stock using https://www.alphavantage.co/ and plots its trend.

Usage

Stock Market Tracker can be used to view and compare the trends of the closing price of a stock over time. A user can add or remove a stock to the graph by following these steps:

Add a Stock

1. Select a Frequency by selecting a 'Weekly' or 'Monthly' series using the dropdown menu
2. Type in the desired stock in the 'Stock Symbol' text field
3. Click 'Add Stock' button

Remove a Stock

1. Click the 'Remove Stock' button to remove the most recently added stock from the graph

Technical Overview

Description of classes and methods

Main

The Main class contains the entire application (except for json_simple). It extends the javafx.Application class and has the following methods:

Method	Visibility	(Parameters) : Return	Description
start	public	(Stage) : void	initializes the JavaFX application; defines, constrains and displays elements; uses lambdas
formUrl	private	(funcs) : void	creates the API request URL
url2json	private	( ) : JsonObject	queries the API and returns a JSON object that represents the API response
getPriceData	private	(JsonObject) : Arraylist<String[]>	converts the JSON object into an ArrayList, which makes it easier to process the pricing data
~~getOverviewData~~	private	(JsonObject) : HashMap<String, String>	returns data about the company
main	public	(string[]) : void	used to run the program; calls `launch` method (required to launch standalone app)

Main > linechart

linechart is an inner class of Main and is used to create and use LineChart objects. It has the following two methods:

Method	Visibility	(Parameters) : Return	Description
linechart	public	*constructor*	initializes a new `LineChart` object
addSeries	private	( ) : void	uses `formURL`, `getPriceData` and `url2json` to add a new series to the member linechart

json_simple

json_simple is used to process json objects. Stock Market Tracker uses the `JsonObject` class to parse API results.