Stock Chart:

Problem Statement: Build a single web page stock chart.

Solution:

Designed the program adhering to MVC architecture.

**Technologies used are:**

* Python
* Flask
* D3
* JavaScript
* JQuery
* Html
* Bootstrap
* ajax.

Model: (Model.py)

Data can be

* extracted from a given company with quandl code
* filtered out for a range of years
* used to get the required category of stock prices (Open, close, etc)
* used to calculate moving average of a list considering a factor of previous values
* used to create label to display

View: (baseTemplate.html, index.html)

* Provides a “stock prices” home screen button
* Uses radio buttons to list the different companies from which we can choose
* Two text inputs to take years
* A submit button to generate the stock chart
* Reset button to reset the page
* A loading bar showing that its loading not crashed
* Chart which is displayed

Controller: (stockPrices.py)

* It defines routes
* “/” is the root directory when http makes a get request on it, its redirected to index method displaying elements in index.html
* “/stockchart” when the http makes a post request to it a chart is generated and displayed.
* Uses the model.py to get the result and process the obtained result
* Sends it to the View to be displayed.

Error handling and Testing:

* Tested the case when api returns an error
* Performed unit testing on filtering and calculating moving average
* Performs client-side validation on the years specified

Required Libraries:

* Flask
* Mpld3
* Matplotlib
* Unittest
* Numpy
* Pandas
* Threading
* Datetime
* Quandl
* Json

Running the script

* Run the controller script, stockPrices.py
* Open “http://localhost:7777”
* Add quandl key in Model.py file

Deliverable:

* stockPrices.py to run
* with additional html and Java Script file