STOCK MARKET ANALYSIS

ABOUT

The stock market is extremely volatile and complex in nature, but it is crucial to the financial element of the country's progress. Significant political issues, analyst calls, news stories, firm expansion and growth goals, and many other factors influence it. Hence, any investor would be curious on how the stock market changes over time and how the variables affect the stock market's behavior.

DATASET

The datasets used are imported live from Quandl. Quandl is a premier publisher of alternative data for institutional investors. A dedicated team of data scientists, quants and engineers combine uncompromising curation, high quality standards and experienced data science application to provide some of the most powerful data available today. Quandl also publishes free data, scraped from the web, and delivered via Nasdaq Data Link's industry-leading data delivery platform.

PYTHON GUI

Python offers multiple options for developing GUI (Graphical User Interface). Out of all the GUI methods, Tkinter is the most used method. It is a standard Python interface to the Tk GUI toolkit shipped with Python. Python with Tkinter is the fastest and easiest way to create the GUI applications. Creating a GUI using Tkinter is an easy task.
To create a Tkinter app:

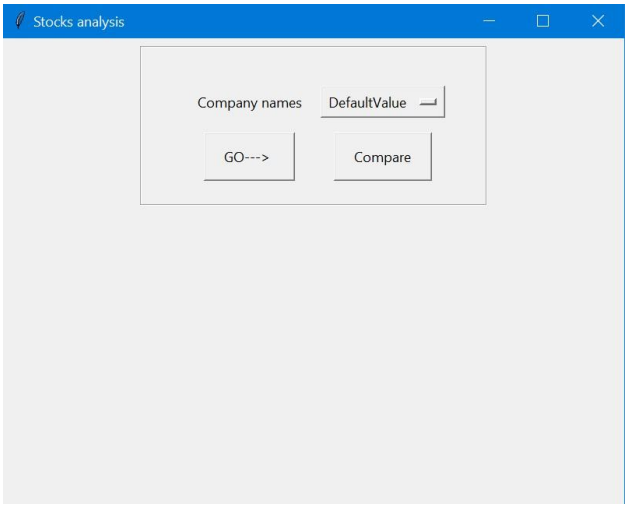
1. Importing the module – Tkinter
2. Create the main window (container)
3. Add any number of widgets to the main window
4. Apply the event Trigger on the widgets.

IMPLEMENTATION

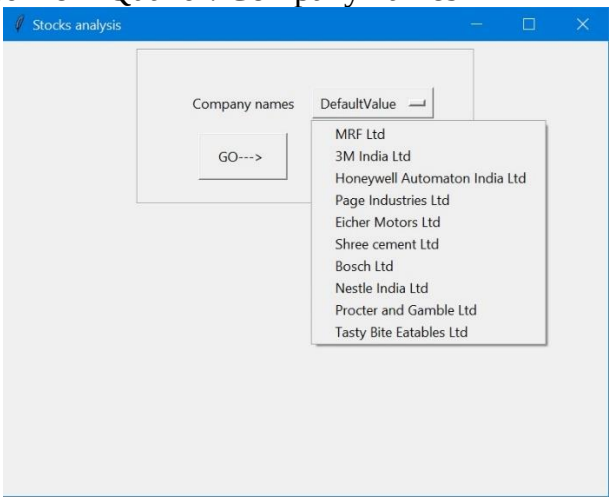
1. Retrieving the data from Quandl

```
def go1():
    compName = c.get()
    if compName == "MRF Ltd":
        my_data = quandl.get("BSE/BOM539397", authtoken="XEzc8Qx5FsuaVTCe1Ern")
    elif compName == "3M India Ltd":
        my_data = quandl.get("BSE/BOM523395", authtoken="XEzc8Qx5FsuaVTCe1Ern")
    elif compName == "Honeywell Automaton India Ltd":
        my_data = quandl.get("BSE/BOM517174", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="1991-06-26")
    elif compName == "Page Industries Ltd":
        my_data = quandl.get("BSE/BOM532827", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="1991-01-03")
    elif compName == "Eicher Motors Ltd":
        my_data = quandl.get("BSE/BOM505200", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="2007-03-16")
    elif compName == "Shree cement Ltd":
        my_data = quandl.get("BSE/BOM500387", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="1991-10-26")
    elif compName == "Bosch Ltd":
        my_data = quandl.get("BSE/BOM500530", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="1992-03-02")
    elif compName == "Nestle India Ltd":
        my_data = quandl.get("BSE/BOM500790", authtoken="XEzc8Qx5FsuaVTCe1Ern")
    elif compName == "Procter and Gamble Ltd":
        my_data = quandl.get("BSE/BOM500459", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="1991-01-03")
    elif compName == "Tasty Bite Eatables Ltd":
        my_data = quandl.get("BSE/BOM519091", authtoken="XEzc8Qx5FsuaVTCe1Ern", start_date="1992-03-02")
    to_plot = my_data
    my_data = my_data.reset_index()
    my_data = my_data[["Date", "Open", "Close", "High", "Low", "No. of Shares", "No. of Trades"]]
```

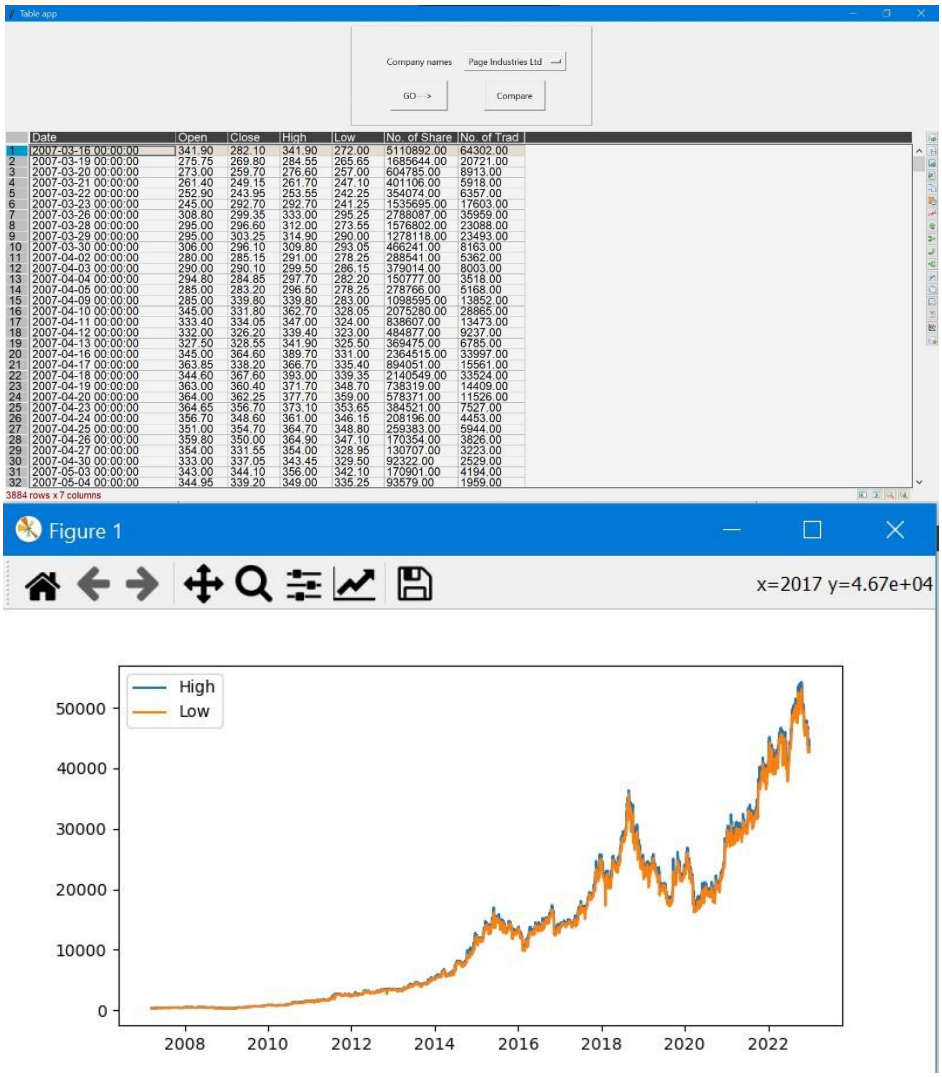
2. Working of the GUI
   a) The main window



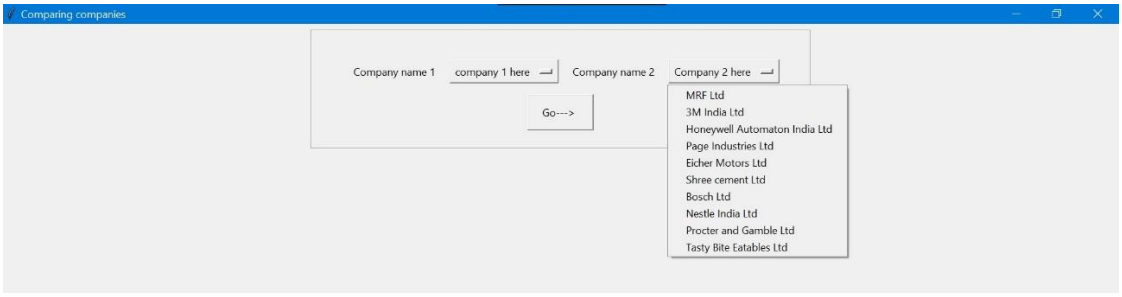
   b) Datasets obtained from Quandl: Company names

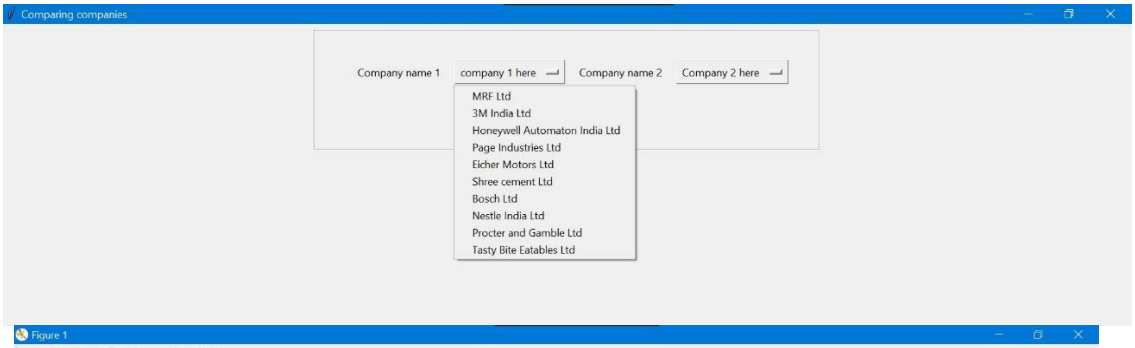


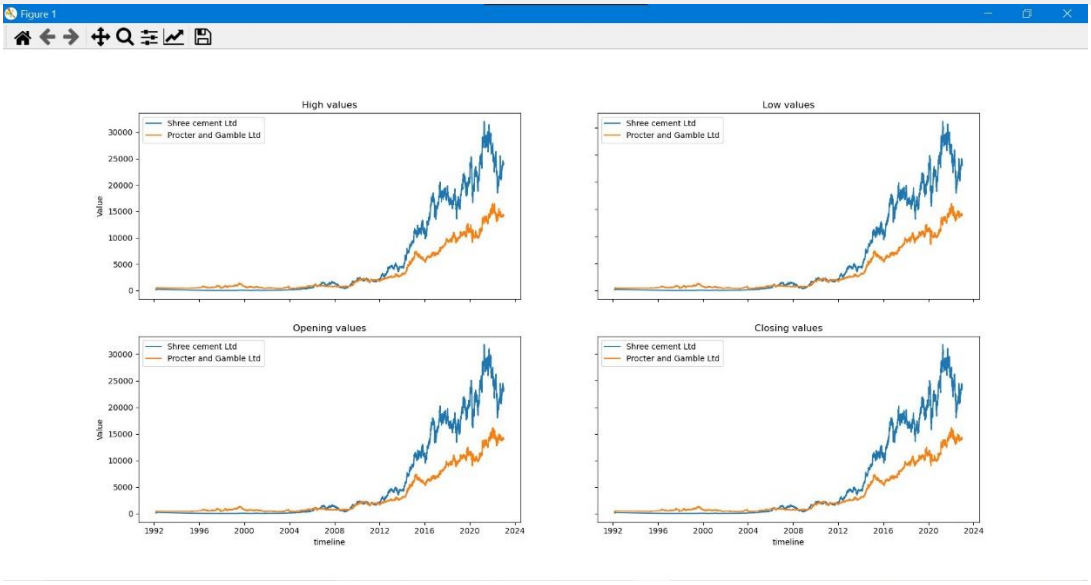
3. For example, if company name=" Page Industries Ltd" and "GO" button is chosen, the results are:
   Any company name can be chosen and it retrieves the stock price data of that company and the graphical representation is displayed.



4. When "COMPARE" button is selected, it opens a new window and there are two options: To input "Company 1" and "Company 2"
   After selecting from the options, a new window opens which shows the comparison in the form of graphical representations.







CONCLUSION

This project is extremely user friendly and can give updates to the user depending on his interest. Visual representations are the best way to explain analysis to the user.