

Assignment 2: Server-side Scripting using Python Flask, JSON and Finnhub Stock API

Grading Guidelines

Graders will test your homework on **Firefox and Chrome**.

Total Points: 10

Grading Guidelines:

Search Form (1.5 points in total)

- The initial web page with proper fields in the search form, along with “Stock Search” header and mandatory fields validation for the search input (**0.25 points**).
- Appropriate background image attached (**0.25 points**).
- “Clear” button clears the input textbox and all the search results. (**0.25 point**).
 - If your page fails to clear the search form or the previous results, **0.25 points** will be deducted.
- The “Search” button, the page maintains the previous input values (**0.75 points**).
 - If your page fails to maintain the original input value, **0.25 points** will be deducted
 - Failure to handle the case when the Finnhub API returns no matching result, **0.5 points** will be deducted.

Search Results (8.5 points in total)

- **Display Company tab: (1.5 points)**
 - Showing the company information retrieved and calculated from Web Service in **tabular format** as described in the homework description. (**1 point**).
 - **0.25 points** will be deducted for every field displaying incorrect **value or format**. Maximum 1 point can be deducted this way.
 - Showing the company logo appropriately as per homework description. (**0.5 points**).
- **Display Stock Summary tab: (2 points)**
 - Showing the stock information retrieved and calculated from Web Service in **tabular format** as described in the homework description (**1.0 points**).
 - **0.25 points** will be deducted for every field displaying incorrect **value or format along with the change symbols**. Maximum 1 point can be deducted this way.
 - Showing buy/sell indicator appropriately (**0.50 point**).
 - Showing Recommendation THrens appropriately (**0.50 points**).
- **Display the Charts tab: (3.5 points)**
 - Display chart title with correct name and date in correct format (**0.5 points**).
 - If the title text is not correct, **0.25 points** will be deducted.
 - If the title date for stock quote is not correct or not in correct format, **0.25 points** will be deducted.

- o Display stock price and volume in correct value and format (**1.0 points**)
 - o If the stock price doesn't show the correct value, **0.25 points** will be deducted.
 - o If the stock price interval is not by day, **0.25 points** will be deducted.
 - o If the area below the stock price series line is not filled with blue gradient color, **0.25 points** will be deducted.
 - o If the volume doesn't show the correct value, **0.25 points** will be deducted.
 - o If the volume is not shown as the gray column bar, **0.25 points** will be deducted.
 - o If the volume interval is not by day, **0.25 point** will be deducted.
 - o Maximum 1 point can be deducted this way.
- o Display zoom level in correct value and format (**2 points**)
 - o If the zoom level doesn't show the correct value or misses any value, **0.25 points** will be deducted for **each value**. Maximum 1 point can be deducted this way.
 - o If the chart display doesn't change on change of any of the zoom levels, **1 point** will be deducted.
- **Display the Latest News tab: (1.5 points)**
 - o Display stock news cards (**1.5 points**)
 - o For each missing data in the card, **0.25 points** will be deducted with a maximum of **0.5 points**.
 - o The styling and structure of the card should be similar to the reference video; **0.5 points** will be deducted otherwise.
 - o Displaying an incorrect number of articles will result in a **0.25 points** deduction.
 - o If the "See Original Post" doesn't hyperlink to the correct news, **0.25 points** will be deducted.

****IMPORTANT****

- You may call HighCharts API from JavaScript
- You should not call any Finnhub or Polygon.io APIs directly from JavaScript. Doing this will result in a **4-point** penalty.
- If Bootstrap is used, **4 points** will be deducted.
- JQuery may be used, with no penalty.
- You should implement Assignment 2 using Python.
- You should deploy Assignment 2 on AWS/GCP/Azure cloud server as described in the **Cloud Set up (Python)** documentation. Otherwise, **3 points** will be deducted. This will be verified with an additional link in the Table of Assignments, showing a sample API call to your "cloud" service and verifying the corresponding JSON result.
- Use of code downloaded from GitHub for any component of the app front-end will result in a 5-point penalty.
- Use of Python "templates" will result in a 5-point penalty.

Source code submission:

Students should submit their source code electronically on D2L Brightspace as a single ZIP file containing all front-end and back-end code and any additional files. In addition, on your course homework page, you **must** update the Assignment 2 link to refer to your new home page in the cloud. Also provide an additional link to one of your cloud query entry points, below the homepage link.