

# Action Plan

Sunday, December 15, 2024 9:47 AM

## Scraping the most active stocks from Yahoo Finance:

1. Visit the target URL: <https://finance.yahoo.com/>
2. Hover over the Markets menu
3. Click on Trending Tickers
4. Click on Most Active
5. Ensure to visit all pages of stocks
6. Scrape the necessary data

# Prerequisites

Tuesday, December 17, 2024 10:01 PM

## 1. Action Chains:

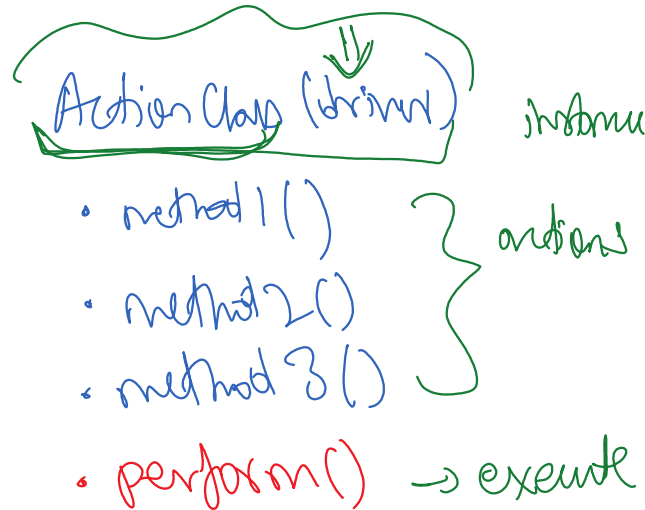
- Action Chains in Selenium is a feature that allows automating complex user interactions such as mouse and keyboard events.
- It is part of the `ActionChains` class in Selenium, designed to handle actions like clicking, dragging, hovering, and sending keyboard input.

### Working of Action Chains:

- An instance of ActionChains is created by passing the WebDriver instance
- Use various methods provided by the class to define a sequence of actions
- Call the `perform()` method to execute all actions in the defined sequence

### Common Methods:

- ✓ `click()`: Clicks on a specified web element
- ✓ `click_and_hold()`: Clicks without releasing the mouse button
- ✓ `double_click()`: Double-clicks on the element
- ✓ `context_click()`: Right-clicks on the element
- ✓ `move_to_element()`: Moves the mouse pointer to the element



## 2. Stocks Jargon:

### a. Symbol:

- This is a unique identifier for a particular stock listed on a stock exchange
- Ticker symbols are essential for identifying and trading stocks

### b. Price:

- The current trading price of the stock (in dollars)
- This is the most recent price at which the stock was bought/sold on the market

### c. Change:

- The difference in the stock's current price compared to the previous day's closing price
- +ve change indicates the price of the stock has increased from the previous day
- -ve change indicates the price of the stock has decreased from the previous day

### d. Volume:

- The total number of shares of the stock during the current trading session
- Indicates the trading activity of the stock.
- Higher volume usually means more interest in the stock

### e. Market Cap:

- Represents the total value of a company in the stock market
- Ex: If a company has 1,000 shares and each costs \$10, then the company's market value is \$10,000

A handwritten calculation showing the change in stock price for Tesla. It starts with 'TESLA:' followed by an equals sign. Below this, the expression '100 - 110' is written in blue. To the right of this is a red arrow pointing to the word 'Change' in red. Below '100' is a green upward arrow with the word 'current' in green. Below '110' is a green upward arrow with the words 'prev. days closing price' in green.

- The larger the cap, the more stable the company usually is

#### f. PE Ratio:

- Price to Earnings ratio
- Can be thought of as the ratio of the CP of a stock to the SP of the stock

$$PE = \frac{\text{Buying Price}}{\text{Selling Price}}$$

### 3. Loading a Webpage:

- We can use `return document.readyState` to retrieve the current loading state of the web page
- The values returned by this command can be:
  - `loading`: The document is still loading
  - `interactive`: The document has been loaded but external resources like images and stylesheets might still be loading
  - `complete`: The entire document, including external resources, has been fully loaded
- This is commonly used in Selenium scripts to wait until the page is fully loaded before interacting with elements

### 4. until():

- It has a parameter `method`
- This parameter must be a callable (function or lambda) which takes a `WebElement` as input and returns a boolean value
- If the callable doesn't return a truthy value within the timeout period, a `TimeoutException` exception will be raised

WebDriver Wait (driver, 10)  $\Rightarrow$  explicit wait

• until (EC. presence of element())

until (method)



callable

$\hookrightarrow$  inner element ✓

callable

↳ yes element ✓

↳ return boolean ✓

# Code Restructuring

Thursday, December 19, 2024 3:35 PM

## Steps Taken:

- Open the browser and maximize the window
- Initialize explicit wait instance
- Access the main URL and wait for page to load
- Hover over Markets menu
- Click on Trending Tickers
- Click on Most Active
- Extracted the stocks data from webpage as dictionaries
- Navigated until the last page for more data
- Stored the extracted data in a list
- Close the browser
- Clean the extracted data
- Export the cleaned data as an Excel file

Scraper Class

Access Main URL

Access Most Active Stocks

Extracting Stocks Data

Cleaning & Saving Data