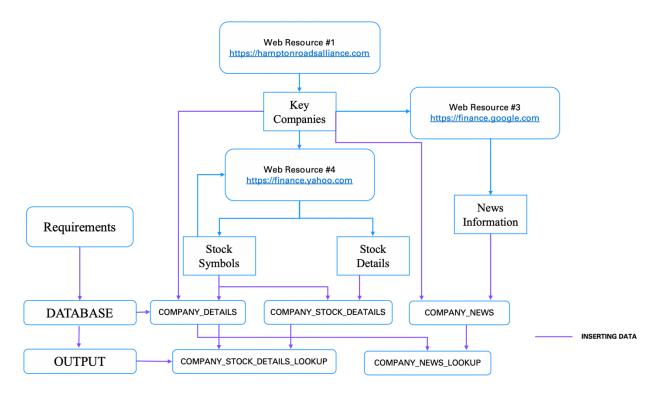
Task Report

Introduction:

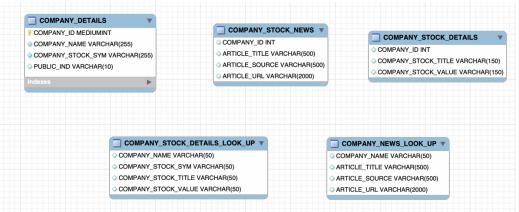
The goal is to obtain Stock Information and Latest News data from the given Web Resources on some key companies of Hampton Roads to track their overall performance.

Architecture:

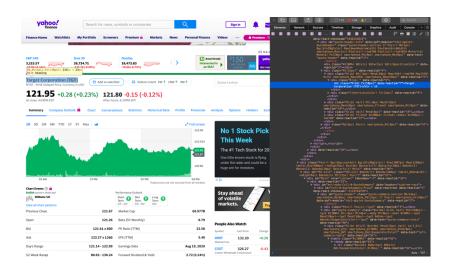


Approach:

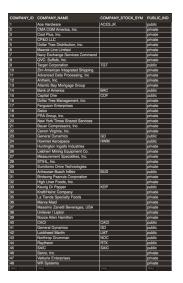
- Understood the Requirements
- Created the Database based on the requirements
- Database Overlook:



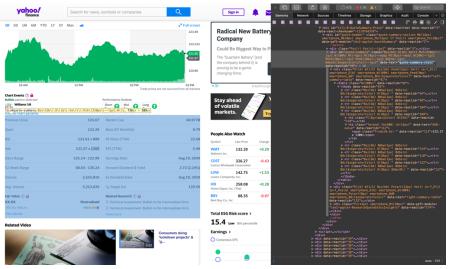
- By using Web Scrapping python package beautifulsoup obtained all key company names listed in Web Resource#1 (https://hamptonroadsalliance.com)
- Using the key companies information, I obtained stock symbols from the Web Resource#4 (https://finance.yahoo.com) which was obtained by finding all the h1 tags with attribute "data-reactid: 7"



 Inserted the acquired data (Company Names and Company Stock Symbols) into Database table "COMPANY_DETAILS"



- Retrieved the Stock Symbols from the Database Table "COMPANY_DETAILS" with a
 where clause to obtain only public companies. Then I used the obtained symbol as a
 parameter/attribute to get the URLs for all the companies by iterating it in a loop and
 parsed through the obtained URLs for stock details.
- Stock details are found by finding all the div tags with attribute "data-test: quote-summary-stats" then found all the tr tags and inner td tags which consists of required information.



 Inserted the acquired data (Company Stock Titles and Company Stock Values) into Database table "COMPANY_STOCK_DETAILS"

COMPANY_ID	COMPANY_STOCK_TITLE	COMPANY_STOCK_VALUE	
1	Previous Close	1,680.00	
1	Open	1,680.00	
1	Bid	1,645.00 x 0	
1	Ask	1,650.00 x 0	
1	Day's Range	1,630.00 - 1,685.00	
1	52 Week Range	970.00 - 1,890.00	
1	Volume	10,489,400	
1	Avg. Volume	14,724,053	
1	Market Cap	28.243T	
1	Beta (5Y Monthly)	0.70	
1	PE Ratio (TTM)	27.37	
1	EPS (TTM)	60.29	
1	Earnings Date	Oct 29, 2015 - Nov 03, 2015	
1	Forward Dividend & Yield	N/A (N/A)	
1	Ex-Dividend Date	May 24, 2019	
1	1y Target Est	1,588.20	
9	Previous Close	121.67	
9	Open	121.26	
9	Bid	122.42 x 800	
9	Ask	122.42 x 1300	
9	Day's Range	121.15 - 122.99	
9	52 Week Range	80.03 - 130.24	
9	Volume	1,431,706	
9	Avg. Volume	5,212,026	
9	Market Cap	61.342B	
9	Beta (5Y Monthly)	0.79	
9	PE Ratio (TTM)	22.71	
9	EPS (TTM)	5.40	
9	Earnings Date	Aug 19, 2020	
9	Forward Dividend & Yield	2.72 (2.24%)	
9	Ex-Dividend Date	Aug 18, 2020	
9	1y Target Est	129.59	

- Retrieved all the company names from the database table "COMPANY_DETAILS". Then I used the obtained names to get the URLs for all the companies by iterating it in a loop and parsed through the obtained URLs for article titles, article source and article URL.
- Now Inserted the acquired data (Article Title, Article Source and Article URL) into Database table "COMPANY_STOCK_NEWS"

COMPANY_ID	ARTICLE_TITLE	ARTICLE_SOURCE	ARTICLE_URL
1	Driver crashes into Ace Hardware in Friday Har	SanJuanIslander.com	http://sanjuanislander.com/news-article
1	Perry Ace Hardware Finds New Home in Forme	raccoonvalleyradio.com	https://www.raccoonvalleyradio.com/20
1	Olthof Homes seeking to build new subdivision i	nwitimes.com	https://www.nwitimes.com/news/olthof-h
1	Ace Hardware relocating Tampa distribution cen	LBM Journal	https://lbmjournal.com/ace-hardware-rel
1	Finding the Best Grill with Ace Hardware I River	WJXT News4JAX	https://www.news4jax.com/river-city-live
1	Sales of Bugs Off® Pads Exceed Expectations i	PRNewswire	https://www.prnewswire.com/news-rele
1	Ace Hardware Indonesia: Relatively Resilient B	Seeking Alpha	https://seekingalpha.com/article/435837
1	Letter to the editor: Thanks to Georgetown Divid	gtgazette.com	https://www.gtgazette.com/2020/07/13/l
1	Jobs, jobs, jobs at Tennies Ace Hardware in We	washingtoncountyinsider.com	https://www.washingtoncountyinsider.co
1	Ace Hardware trucker vindicated second time b	Land Line Media	https://landline.media/ace-hardware-tru
2	CMA CGM draws clear trans-Pacific service lines	FreightWaves	https://www.freightwaves.com/news/cm
2	CMA CGM end of PSS from North Europe, Sca	American Journal of Transp	https://ajot.com/news/cma-cgm-end-of
2	CMA CGM PSS for Middle East / ISC to US and	American Journal of Transp	https://ajot.com/news/cma-cgm-pss-for
2	GLOBAL CONTAINER FLEET MARKET:GROW	Jewish Life News	https://jewishlifenews.com/uncategorize
2	Container Deport Market: Global Industry Analy	Cole of Duty	https://coleofduty.com/news/2020/07/14
2	Tremendous Business Growth of Freight Forwa	Owned	https://primefeed.in/news/475086/treme
2	GLOBAL Medical Freight Trucking Industry MA	Daily Research Chronicles	https://dailyresearchchronicles.com/202
2	Covid-19 Outbreak: Refrigerated Transport Mar	3rd Watch News	https://3wnews.org/uncategorised/2717
2	Key Players Analysis of Refrigerated Sea Trans	Daily Research Chronicles	https://dailyresearchchronicles.com/202
2	Container Fleet Market Is Thriving Worldwide I	Cole of Duty	https://coleofduty.com/news/2020/06/17

• Created a table "COMPANY_STOCK_DETAILS_LOOKUP" in the Database by joining "COMPANY_DETAILS" and "COMPANY_STOCK_DETAILS".

COMPANY_NAME	COMPANY_STOCK_SYM	COMPANY_STOCK_TITLE	COMPANY_STOCK_VALUE
Ace Hardware	ACES.JK	Bid	1,645.00 x 0
Ace Hardware	ACES.JK	Ask	1,650.00 x 0
Ace Hardware	ACES.JK	Day's Range	1,630.00 - 1,685.00
Ace Hardware	ACES.JK	52 Week Range	970.00 - 1,890.00
Ace Hardware	ACES.JK	Volume	10,489,400
Ace Hardware	ACES.JK	Avg. Volume	14,724,053
Ace Hardware	ACES.JK	Market Cap	28.243T
Ace Hardware	ACES.JK	Beta (5Y Monthly)	0.70
Ace Hardware	ACES.JK	PE Ratio (TTM)	27.37
Ace Hardware	ACES.JK	EPS (TTM)	60.29
Ace Hardware	ACES.JK	Earnings Date	Oct 29, 2015 - Nov 03, 2015
Ace Hardware	ACES.JK	Forward Dividend & Yield	N/A (N/A)
Ace Hardware	ACES.JK	Ex-Dividend Date	May 24, 2019
Ace Hardware	ACES.JK	1y Target Est	1,588.20
Target Corporation	тат	Previous Close	121.67
Target Corporation	TGT	Open	121.26
Target Corporation	TGT	Bid	122.42 x 800
Target Corporation	TGT	Ask	122.42 x 1300
Target Corporation	TGT	Day's Range	121.15 - 122.99
Target Corporation	TGT	52 Week Range	80.03 - 130.24
Target Corporation	TGT	Volume	1,431,706
Target Corporation	TGT	Avg. Volume	5,212,026
Target Corporation	TGT	Market Cap	61.342B
Target Corporation	TGT	Beta (5Y Monthly)	0.79
Target Corporation	TGT	PE Ratio (TTM)	22.71

 Created one more table "COMPANY_NEWS_LOOKUP" in the Database by joining "COMPANY_DETAILS" and "COMPANY_STOCK_NEWS".

COMPANY_NAME	ARTICLE_TITLE	ARTICLE_SOURCE	ARTICLE_URL
Ace Hardware	Driver crashes into Ace Hardware in Friday Harbor	SanJuanIslander.com	http://sanjuanislander.com/news-articles/govern
Ace Hardware	Perry Ace Hardware Finds New Home in Forme	raccoonvalleyradio.com	https://www.raccoonvalleyradio.com/2020/07/15
Ace Hardware	Olthof Homes seeking to build new subdivision i	nwitimes.com	https://www.nwitimes.com/news/olthof-homes-s
Ace Hardware	Ace Hardware relocating Tampa distribution cen	LBM Journal	https://lbmjournal.com/ace-hardware-relocating
Ace Hardware	Finding the Best Grill with Ace Hardware I River	WJXT News4JAX	https://www.news4jax.com/river-city-live/2020/0
Ace Hardware	Sales of Bugs Off® Pads Exceed Expectations i	PRNewswire	https://www.prnewswire.com/news-releases/sal
Ace Hardware	Ace Hardware Indonesia: Relatively Resilient B	Seeking Alpha	https://seekingalpha.com/article/4358374-ace-h
Ace Hardware	Letter to the editor: Thanks to Georgetown Divid	gtgazette.com	https://www.gtgazette.com/2020/07/13/letter-to-t
Ace Hardware	Jobs, jobs, jobs at Tennies Ace Hardware in We	washingtoncountyinsider.com	https://www.washingtoncountyinsider.com/jobs-j
Ace Hardware	Ace Hardware trucker vindicated second time b	Land Line Media	https://landline.media/ace-hardware-trucker-vin
CMA CGM Ameri	CMA CGM draws clear trans-Pacific service lines	FreightWaves	https://www.freightwaves.com/news/cma-cgm-d
CMA CGM Ameri	CMA CGM end of PSS from North Europe, Sca	American Journal of Transp	https://ajot.com/news/cma-cgm-end-of-pss-from
CMA CGM Ameri	CMA CGM PSS for Middle East / ISC to US and	American Journal of Transp	https://ajot.com/news/cma-cgm-pss-for-middle-e
CMA CGM Ameri	GLOBAL CONTAINER FLEET MARKET:GROW	Jewish Life News	https://jewishlifenews.com/uncategorized/global
CMA CGM Ameri	Container Deport Market: Global Industry Analy	Cole of Duty	https://coleofduty.com/news/2020/07/14/contain
CMA CGM Ameri	Tremendous Business Growth of Freight Forwar	Owned	https://primefeed.in/news/475086/tremendous-b
CMA CGM Ameri	GLOBAL Medical Freight Trucking Industry MA	Daily Research Chronicles	https://dailyresearchchronicles.com/2020/07/14/
CMA CGM Ameri	Covid-19 Outbreak: Refrigerated Transport Mar	3rd Watch News	https://3wnews.org/uncategorised/2717673/covi
CMA CGM Ameri	Key Players Analysis of Refrigerated Sea Trans	Daily Research Chronicles	https://dailyresearchchronicles.com/2020/07/08/
CMA CGM Ameri	Container Fleet Market Is Thriving Worldwide I L	Cole of Duty	https://coleofduty.com/news/2020/06/17/contain
Cost Plus, Inc.	Bed Bath & Beyond Selling Christmas Tree, Co	Bloomberg	https://www.bloomberg.com/news/articles/2020
Cost Plus, Inc.	Bed Bath & Beyond to close 200 stores	Foothills Sun Gazette	https://thesungazette.com/article/business/2020
Cost Plus, Inc.	Raytheon Technologies Awarded \$88 Million Mo	ClearanceJobs	https://news.clearancejobs.com/2020/07/15/rayt
Cost Plus, Inc.	Contracts Briefs	Aerotech News	https://www.aerotechnews.com/blog/2020/07/15
Cost Plus, Inc.	Bed Bath & Beyond sees up to \$450M from ass	Crain's New York Business	https://www.crainsnewyork.com/retail-apparel/b

• Finally, now we can obtain details about any required company by simply entering its company name or stock symbol as shown below.

```
In [*]: import mysql.connector
import requests
import pandas as pd
from bs4 import BeautifulSoup
from mysql.connector import Error
                                                                                                                                                                                                                                                                                         Enter the Stock Symbol: TGT
                                                                                                                                                                                                                                                                                         Total number of rows 16
                          sql_Query = """SELECT * FROM COMPANY_STOCK_DETAILS_LOOK_UP WHERE COMPANY_STOCK_SYM = %s""
                          cursor = connection.cursor(dictionary=True)
#wal = 'Ace Hardware'
val = input("Enter the Stock Symbol: ")
cursor.execursor(Query.(val.))
records = cursor.fetchall()
print("Total number of rows ", cursor.rowcount)
                                                                                                                                                                                                                                                                                         Printing each Stock details
                                                                                                                                                                                                                                                                                             | Target Corporation | TGT
                                                                                                                                                                                                                                                                                                                                                                                                              | Previous Close | 121.67
                                                                                                                                                                                                                                                                                                                                                                                                                    Open | 121.26
Bid | 122.42 x 800
Ask | 122.42 x 1300
                                                                                                                                                                                                                                                                                                                                                                                                         | Ask | 122.42 x 1300 |
| Day's Range | 121.15 - 122.99 |
| 52 Week Range | 88.03 - 130.24 |
| Volume | 1,431,706 |
| Avg. Volume | 5,212,026 |
| Market Cap | 61.342B |
| Beta (SY Monthly) | 0.79 |
| PE Ratio (TTM) | 22.71 |
| EPS (TTM) | 5.40 |
| Earnings Date | Aug 19, 2020 |
| Forward Dividend & Yield | 2.72 (2.24%) |
| Ex-Dividend Date | Aug 18, 2020 |
| 1y Target Est | 129.59
                                                                                                                                                                                                                                                                                                  Target Corporation
Target Corporation
Target Corporation
Target Corporation
Target Corporation
Target Corporation
                                  #print(tabulate(|name, symbol, stock_title, stock_value), headers=['Name', 'Sym', 'Title', 'Value']))
print(" | "+name, " | "+symbol, " | "+stock_title, " | "+stock_value)
                                                                                                                                                                                                                                                                                                                                                                                        TGT
                                                                                                                                                                                                                                                                                                                                                                                       TGT
TGT
TGT
                                                                                                                                                                                                                                                                                                   Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
Target Corporation | TGT
                 print("suces")

finally:

if (connection.is, connected()):

connection.close()

sprint("%)SQL connection is closed")
                   Enter the Stock Symbol: TGT
                                                                                                                                                                                                                                                                                          sucess
```

```
In [*]: import mysql.connector
import requests
import pandas as pd
from bs4 import BeautifulSoup
from mysql.connector import Error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Enter the Company Name: Target Corporation
Total number of rows 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Target Corporation | Target Corporation - Consensus Indicates Potential 9.8% Upside | DirectorsTalk Interviews https://www.directorstalkinterviews.com/target-corporation-consensus-indicates-potential-9-8-upside-3/412842753&s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | https://www.directorstalkinervises.com/raget-corporation-consensus-indicates-petential_orecupied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_applied_app
                                                            sql_Query = """SELECT * FROM COMPANY_NEWS_LOOK_UP WHERE COMPANY_NAME = %s"""
                                                            cursor = connection.cursor(dictionary=True)
#val = "Ace Hardware"
val = input("Enter the Company Name: ")
cursor.execute(sql_Query,(val,))
records = cursor.fetchall()
print("Total number of rows ", cursor.rowcount)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             print("\n NEWS \n\n")
for row in records:
name = row["COMPANY_NAME"]
title = row["ARTICLE_ITILE"]
source = row["ARTICLE_SOURCE"]
url = row["ARTICLE_URL"]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The Notice of Control of the Notice of Control of the Notice of Control of Co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               print (" | "+name, " | "+title, " | "+source, " | "+url)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indites, year-washed Managed Control of the State of Fundamental vs. Technical | The News Heater |
| Target Corporation | Target Corporation (TGT) and the Battle of Fundamental vs. Technical | The News Heater |
| The News Heater | The News Heater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   wixg5aA3dDqAhUTilwHZQMBKCQXfQBMA26BAgCEA8Exug=AOvVaw1aZURx0g2X7WeofVqZ_SHW
| Target Corporation | Where Will Target Be in 1 Year] | Motley Fool | https://www.fool.com/investing/2020/07/1
|/where-will-target-be-in-1-vear_asxx5xa=HWxed=2AhUKFwixo5aA3dDqAhUTilwKfZONBKcDxfDBMAd6BAABEAF&uxom=AOvVaw3fbXZYSoD
                                        elss:

print("sucess")

finally:

if (connection.is_connected()):

cursor.close()

connection.close()

#print("MySQL connection is closed")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rist_EL=MMTE|
| Target Corporation | Is Target Corporation's Dividend Hike a Surprise to Income Investors? | Income Investors | Income Investors | Income Investors | https://www.incomeinvestors.com/is=target=corporations=dividend=hike-a=surprise/56512/6sa=U6ved=2ahUKEwixg5aA3dDq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hhuTilwGZQNBKcQxfQBMh6BagGEAESusg=ACV9w3dYfVDBafSTzltBnxdeGX)
| Target Corporation | An Essential Trade on Target, an Essential Business | Investorplace.com | https://investorplace.com/2020/87/an-essential-trade-on-target-an-essential-business/ss=uSved=2ahUKEvixgSaA3dDqhhUTilwGZQNBKcA
                                             Enter the Company Name: Target Corporation
```

Note:

CompanySymbol.ipynb

StockDetails.ipynb

News.ipynb

Stocks_Lookup.ipynb News_Lookup.ipynb Code for obtaining Company names and Stock Symbols

Code for obtaining Stock Details

Code for obtaining NEWS Articles

Code for Retrieving the stock details of a company

- Code for Retrieving the news regarding a company