Question 1 - Extracting Tesla Stock Data Using yfinance - 2 Points

```
!pip install yfinance
```

```
Requirement already satisfied: yfinance in
/opt/conda/lib/python3.12/site-packages (0.2.52)
Requirement already satisfied: pandas>=1.3.0 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2.2.3)
Requirement already satisfied: numpy>=1.16.5 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2.2.2)
Requirement already satisfied: requests>=2.31 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2.32.3)
Requirement already satisfied: multitasking>=0.0.7 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (0.0.11)
Requirement already satisfied: lxml>=4.9.1 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (5.3.0)
Requirement already satisfied: platformdirs>=2.0.0 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (4.3.6)
Requirement already satisfied: pytz>=2022.5 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2024.2)
Requirement already satisfied: frozendict>=2.3.4 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2.4.6)
Requirement already satisfied: peewee>=3.16.2 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (3.17.8)
Requirement already satisfied: beautifulsoup4>=4.11.1 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (4.12.3)
Requirement already satisfied: html5lib>=1.1 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (1.1)
Requirement already satisfied: soupsieve>1.2 in
/opt/conda/lib/python3.12/site-packages (from beautifulsoup4>=4.11.1-
>yfinance) (2.5)
Requirement already satisfied: six>=1.9 in
/opt/conda/lib/python3.12/site-packages (from html5lib>=1.1->yfinance)
(1.17.0)
Requirement already satisfied: webencodings in
/opt/conda/lib/python3.12/site-packages (from html5lib>=1.1->yfinance)
(0.5.1)
Requirement already satisfied: python-dateutil>=2.8.2 in
/opt/conda/lib/python3.12/site-packages (from pandas>=1.3.0->yfinance)
(2.9.0.post0)
Requirement already satisfied: tzdata>=2022.7 in
/opt/conda/lib/python3.12/site-packages (from pandas>=1.3.0->yfinance)
(2025.1)
Requirement already satisfied: charset_normalizer<4,>=2 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31-
>yfinance) (3.4.1)
```

```
Requirement already satisfied: idna<4,>=2.5 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31-
>yfinance) (3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31-
>yfinance) (2.3.0)
Requirement already satisfied: certifi>=2017.4.17 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31-
>yfinance) (2024.12.14)
```

```
import yfinance as yf
tesla_stock = yf.Ticker("TSLA")
tesla_data = tesla_stock.history(period="max")
print(tesla_data.head(5))
```

```
                                 Open      High       Low     Close
Volume  \
Date

2010-06-29 00:00:00-04:00  1.266667  1.666667  1.169333  1.592667
281494500
2010-06-30 00:00:00-04:00  1.719333  2.028000  1.553333  1.588667
257806500
2010-07-01 00:00:00-04:00  1.666667  1.728000  1.351333  1.464000
123282000
2010-07-02 00:00:00-04:00  1.533333  1.540000  1.247333  1.280000
77097000
2010-07-06 00:00:00-04:00  1.333333  1.333333  1.055333  1.074000
103003500

                           Dividends  Stock Splits
Date
2010-06-29 00:00:00-04:00        0.0           0.0
2010-06-30 00:00:00-04:00        0.0           0.0
2010-07-01 00:00:00-04:00        0.0           0.0
2010-07-02 00:00:00-04:00        0.0           0.0
2010-07-06 00:00:00-04:00        0.0           0.0
```

Question 2 - Extracting Tesla Revenue Data Using Webscraping - 1 Points

```
url = "https://cf-courses-data.s3.us.cloud-object-
storage.appdomain.cloud/IBMDeveloperSkillsNetwork-PY0220EN-
SkillsNetwork/labs/project/revenue.htm"
html_data  = requests.get(url).text

soup = BeautifulSoup(html_data, 'html.parser')
```

```
tesla_revenue=pd.DataFrame(columns=["Date", "Revenue"])

for row in soup.find("tbody").find_all('tr'):
    col = row.find_all("td")
    date = col[0].text
    Revenue = col[1].text

    tesla_revenue = pd.concat([tesla_revenue,pd.DataFrame({"Date":
[date], "Revenue":[Revenue]})], ignore_index=True)

tesla_revenue["Revenue"] = tesla_revenue['Revenue'].str.replace(',|\
$', "")

tesla_revenue.dropna(inplace=True)

tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]

tesla_revenue.head()
```

	Date	Revenue
0	2021	$53,823
1	2020	$31,536
2	2019	$24,578
3	2018	$21,461
4	2017	$11,759

Question 3 - Extracting GameStop Stock Data Using yfinance - 2 Points

```
gamestop_stock = yf.Ticker("GME")
gamestop_data = gamestop_stock.history(period="max")
print(gamestop_data.head())
```

```
                                 Open      High       Low     Close
Volume  \
Date

2002-02-13 00:00:00-05:00  1.620129  1.693350  1.603296  1.691667
76216000
2002-02-14 00:00:00-05:00  1.712707  1.716074  1.670626  1.683250
11021600
2002-02-15 00:00:00-05:00  1.683250  1.687458  1.658002  1.674834
8389600
2002-02-19 00:00:00-05:00  1.666418  1.666418  1.578047  1.607504
7410400
2002-02-20 00:00:00-05:00  1.615920  1.662210  1.603296  1.662210
6892800
```

```
                           Dividends  Stock Splits
Date
2002-02-13 00:00:00-05:00        0.0           0.0
2002-02-14 00:00:00-05:00        0.0           0.0
2002-02-15 00:00:00-05:00        0.0           0.0
2002-02-19 00:00:00-05:00        0.0           0.0
2002-02-20 00:00:00-05:00        0.0           0.0
```

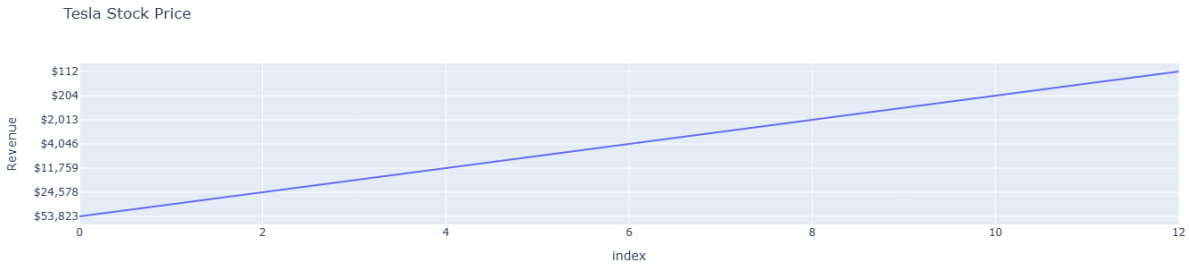
Question 4 - Extracting GameStop Revenue Data Using Webscraping - 1 Points

```
url= "https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBMDeveloperSkillsNetwork-PY0220EN-SkillsNetwork/labs/project/stock.html"
html_data_2  = requests.get(url).text
soup = BeautifulSoup(html_data_2, 'html.parser')
gme_revenue=pd.DataFrame(columns=["Date", "Revenue"])

for row in soup.find("tbody").find_all('tr'):
    col = row.find_all("td")
    date = col[0].text
    Revenue = col[1].text

    gme_revenue = pd.concat([gme_revenue,pd.DataFrame({"Date":[date], "Revenue":[Revenue]})], ignore_index=True)
gme_revenue.head()
```

```
   Date Revenue
0  2020  $6,466
1  2019  $8,285
2  2018  $8,547
3  2017  $7,965
4  2016  $9,364
```

Question 5 - Tesla Stock and Revenue Dashboard - 2 Points

```
import plotly.express as px

fig = px.line(tesla_revenue, x=tesla_revenue.index, y="Revenue", title="Tesla Stock Price")
fig.show()
```



Question 6 - GameStop Stock and Revenue Dashboard- 2 Points

```
fig = px.line(gme_revenue, x=gme_revenue.index, y="Revenue",
title="GameStop Stock Price")
fig.show()
```