Extracting and Visualizing Stock Data

Description

Extracting essential data from a dataset and displaying it is a necessary part of data science. Therefore individuals can make correct decisions based on the data. In this assignment, you will extract some stock data, you will then display this data in a graph.

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Estimated Time Needed: **10 min**

Note: If you are working Locally using anaconda, please uncomment the following code and execute it.

```
~pip install yfinance==0.2.38
~pip install pandas==2.2.2
~pip install nbformat
```

```
~pip install yfinance
~pip install pandas
~pip install matplotlib
~pip install lxml
```

```
Requirement already satisfied: multitasking>=0.0.7 in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (0.0.11)
Requirement already satisfied: platformdirs>=2.0.0 in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (4.3.6)
Requirement already satisfied: pytz>=2022.5 in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (from pandas) (2024.1)
Requirement already satisfied: tzdata>=2022.7 in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (from pandas) (2025.1)
Requirement already satisfied: numpy>=1.26.0; python_version >= "3.12" in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (from pandas) (2.2.5)
Requirement already satisfied: python-dateutil>=2.8.2 in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (from pandas) (2.9.0post0)
Requirement already satisfied: six>=1.5 in /home/jupyterlab/conda/envs/python/lib/python3.12.9/site-packages (from python-dateutil>=2.8.2; python_version >= "2.7") (1.16.0)
Collecting matplotlib
  Downloaded matplotlib-3.10.1-cp312-cp312-pyodbc_linux_x86_64.whl (8.3 MB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 8.3/8.3 MB 12.2 MB/s eta 0:00:00
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloaded contourpy-1.3.2-cp312-cp312-pyodbc_linux_x86_64.whl (323 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 323.1/323.1 kB 12.2 MB/s eta 0:00:00
Collecting cycler>=0.10 (from matplotlib)
  Downloaded cycler-0.12.1-pyodbc_linux_x86_64.whl (8.3 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
  Downloaded fonttools-4.57.0-cp312-cp312-pyodbc_linux_x86_64.whl (4.9 MB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 4.9/4.9 MB 12.2 MB/s eta 0:00:00
Collecting kiwisolver>=1.3.1 (from matplotlib)
  Downloaded kiwisolver-1.4.8-cp312-cp312-pyodbc_linux_x86_64.whl (1.5 MB)
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Collecting pillow>=8 (from matplotlib)
  Downloaded pillow-11.2.1-cp312-cp312-pyodbc_linux_x86_64.whl (4.6 MB)
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Collecting pyparsing>=2.3.1 (from matplotlib)
  Downloaded pyparsing-3.2.3-pyodbc_linux_x86_64.whl (1.1 MB)
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Collecting packaging>=20.0 (from matplotlib)
  Downloaded packaging-25.0-pyodbc_linux_x86_64.whl (1.1 MB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 1.1/1.1 MB 12.2 MB/s eta 0:00:00
Collecting matplotlib-inline
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Collecting nbformat
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Collecting fastjsonschema>=2.15 (from nbformat)
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Collecting jsonschema>=2.6 (from nbformat)
  Downloaded jsonschema-4.23.0-pyodbc_linux_x86_64.whl (1.1 MB)
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Collecting jsonschema-specifications>=2023.03.6 (from jsonschema>=2.6 (from nbformat))
  Downloaded jsonschema_specifications-2025.4.1-pyodbc_linux_x86_64.whl (18 kB)
Collecting referencing>=0.28.4 (from jsonschema>=2.6 (from nbformat))
  Downloaded referencing-0.36.2-pyodbc_linux_x86_64.whl (26 kB)
Collecting rpds-py>=0.7.1 (from jsonschema>=2.6 (from nbformat))
  Downloaded rpds_py-0.24.0-pyodbc_linux_x86_64.whl (1.1 MB)
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Collecting jupyter_core!=5.0.*,>=4.12 (from nbformat)
  Downloaded jupyter_core-5.7.2-pyodbc_linux_x86_64.whl (28 kB)
Collecting traitlets>=5.1 (from nbformat)
  Downloaded traitlets-5.14.3-pyodbc_linux_x86_64.whl (85 kB)
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Collecting typing_extensions>=4.4.0; python_version < "3.13" (from referencing>=0.28.4 (from jsonschema>=2.6 (from nbformat)))
  Downloaded typing_extensions-4.13.2-pyodbc_linux_x86_64.whl (37 kB)
Collecting attrs>=22.2.0 (from jsonschema>=2.6 (from nbformat))
  Downloaded attrs-25.3.0-pyodbc_linux_x86_64.whl (63 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 63.815/63.815 kB 12.2 MB/s eta 0:00:00
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Collecting mistune>=0.99.1 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded mistune-3.1.3-pyodbc_linux_x86_64.whl (53 kB)
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Collecting nbclient>=0.5.0 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded nbclient-0.10.2-pyodbc_linux_x86_64.whl (85 kB)
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Collecting nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert))
  Downloaded nbconvert-7.16.6-pyodbc_linux_x86_64.whl (257 kB)
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Collecting beautifulsoup4 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
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Collecting bleach!=5.0.0 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded bleach-6.2.0-pyodbc_linux_x86_64.whl (162 kB)
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Collecting defusedxml (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded defusedxml-0.7.1-pyodbc_linux_x86_64.whl (84 kB)
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Collecting jinja2>=3.0 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded jinja2-3.1.6-pyodbc_linux_x86_64.whl (134 kB)
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Collecting markupsafe>=2.0 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
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  Downloaded nbclient-0.10.2-pyodbc_linux_x86_64.whl (85 kB)
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Collecting nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert))
  Downloaded nbconvert-7.16.6-pyodbc_linux_x86_64.whl (257 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 257.139/257.139 kB 12.2 MB/s eta 0:00:00
Collecting nbformat (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded nbformat-5.10.4-pyodbc_linux_x86_64.whl (78.6 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 78.6/78.6 kB 12.2 MB/s eta 0:00:00
Collecting pandocfilters>=1.4.1 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded pandocfilters-1.5.1-pyodbc_linux_x86_64.whl (20 kB)
Collecting pygments>=2.4.1 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded pygments-2.19.1-pyodbc_linux_x86_64.whl (1.2 MB)
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Collecting tinycss2 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded tinycss2-1.4.0-pyodbc_linux_x86_64.whl (28 kB)
Collecting webencodings (from bleach!=5.0.0 (from nbconvert>=4.5.1 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded webencodings-0.5.1-pyodbc_linux_x86_64.whl (11 kB)
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  Downloaded jupyterlab_pygments-0.3.0-pyodbc_linux_x86_64.whl (15 kB)
Collecting jupyterlab_widgets>=3,<3.0.15 (from ipywidgets>=7.6.5 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
  Downloaded jupyterlab_widgets-3.0.14-pyodbc_linux_x86_64.whl (1.1 MB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 1.1/1.1 MB 12.2 MB/s eta 0:00:00
Collecting widgetsnbextension>=3.6.0 (from ipywidgets>=7.6.5 (from jupyterlab-pygments>=0.1.1 (from nbconvert)))
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     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 1.1/1.1 MB 12.2 MB/s eta 0:00:00
Collecting ipywidgets>=7.6.5 (from jupyterlab-pygments>=0.1.1 (from nbconvert))
  Downloaded ipywidgets-8.1.5-pyodbc_linux_x86_64.whl (139 kB)
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```