

Advanced Python Programming

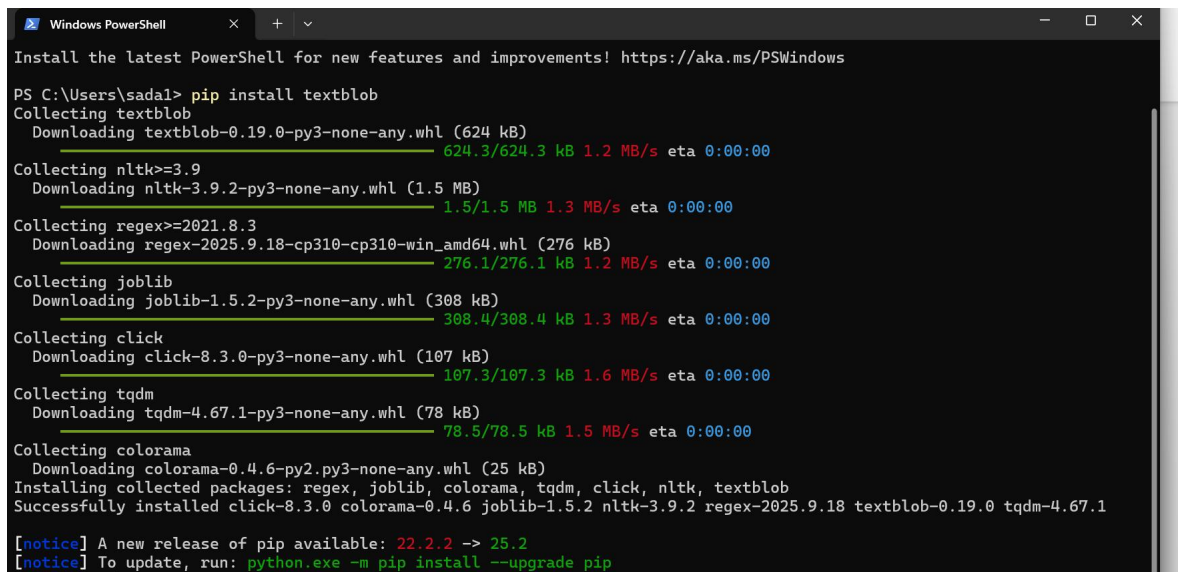
Fall Semester 2025-26

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Lab 18

Sentimental Analysis:

Package Installation:



```
Windows PowerShell
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\sada1> pip install textblob
Collecting textblob
  Downloading textblob-0.19.0-py3-none-any.whl (624 kB)
    624.3/624.3 kB 1.2 MB/s eta 0:00:00
Collecting nltk>=3.9
  Downloading nltk-3.9.2-py3-none-any.whl (1.5 MB)
    1.5/1.5 MB 1.3 MB/s eta 0:00:00
Collecting regex>=2021.8.3
  Downloading regex-2025.9.18-cp310-cp310-win_amd64.whl (276 kB)
    276.1/276.1 kB 1.2 MB/s eta 0:00:00
Collecting joblib
  Downloading joblib-1.5.2-py3-none-any.whl (308 kB)
    308.4/308.4 kB 1.3 MB/s eta 0:00:00
Collecting click
  Downloading click-8.3.0-py3-none-any.whl (107 kB)
    107.3/107.3 kB 1.6 MB/s eta 0:00:00
Collecting tqdm
  Downloading tqdm-4.67.1-py3-none-any.whl (78 kB)
    78.5/78.5 kB 1.5 MB/s eta 0:00:00
Collecting colorama
  Downloading colorama-0.4.6-py2.py3-none-any.whl (25 kB)
Installing collected packages: regex, joblib, colorama, tqdm, click, nltk, textblob
Successfully installed click-8.3.0 colorama-0.4.6 joblib-1.5.2 nltk-3.9.2 regex-2025.9.18 textblob-0.19.0 tqdm-4.67.1

[notice] A new release of pip available: 22.2.2 -> 25.2
[notice] To update, run: python.exe -m pip install --upgrade pip
```

Code:

The screenshot shows the Visual Studio Code interface. The top bar includes a search icon and the text "Search". Below it, the file explorer shows a project named "Python1.py". The editor window displays a Python script with the following code:

```
C:\Users\sada1> OneDrive > Desktop > Python1.py > ...  
1 from textblob import TextBlob  
2 text = input("Enter a sentence: ")  
3 blob = TextBlob(text)  
4 print("Polarity:", blob.sentiment.polarity)  
5 print("Subjectivity:", blob.sentiment.subjectivity)  
6 if blob.sentiment.polarity > 0:  
7     print("Sentiment: Positive")  
8 elif blob.sentiment.polarity < 0:  
9     print("Sentiment: Negative")  
10 else:  
11     print("Sentiment: Neutral")  
12
```

The bottom panel shows the "TERMINAL" tab with the following output:

```
PS C:\Users\sada1> & C:/python/python.exe c:/Users/sada1/OneDrive/Desktop/Python1.py  
Enter a sentence: Python is a programming language that is widely used  
in web applications, software development, data science, and machine  
learning  
Polarity: -0.1  
Subjectivity: 0.4  
Sentiment: Negative  
PS C:\Users\sada1>
```

Bar Graph Visualization

Package Installation:

```
PS C:\Users\sada1> pip install matplotlib
Collecting matplotlib
  Downloading matplotlib-3.10.7-cp310-cp310-win_amd64.whl (8.1 MB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 8.1/8.1 MB 1.3 MB/s eta 0:00:00
Collecting packaging>=20.0
  Downloading packaging-25.0-py3-none-any.whl (66 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 66.5/66.5 kB 1.2 MB/s eta 0:00:00
Collecting fonttools>=4.22.0
  Downloading fonttools-4.60.1-cp310-cp310-win_amd64.whl (2.3 MB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 2.3/2.3 MB 1.3 MB/s eta 0:00:00
Collecting cyclor>=0.10
  Downloading cyclor-0.12.1-py3-none-any.whl (8.3 kB)
Collecting kiwisolver>=1.3.1
  Downloading kiwisolver-1.4.9-cp310-cp310-win_amd64.whl (73 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 73.7/73.7 kB 1.4 MB/s eta 0:00:00
Collecting pyparsing>=3
  Downloading pyparsing-3.2.5-py3-none-any.whl (113 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 7.0/7.0 MB 1.3 MB/s eta 0:00:00
Collecting numpy>=1.23
  Downloading numpy-2.2.6-cp310-cp310-win_amd64.whl (12.9 MB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 12.9/12.9 MB 1.3 MB/s eta 0:00:00
Collecting six>=1.5
  Downloading six-1.17.0-py2.py3-none-any.whl (11 kB)
Installing collected packages: six, pyparsing, pillow, packaging, nump
y, kiwisolver, fonttools, cyclor, python-dateutil, contourpy, matplotl
ib
□
```

Code:

