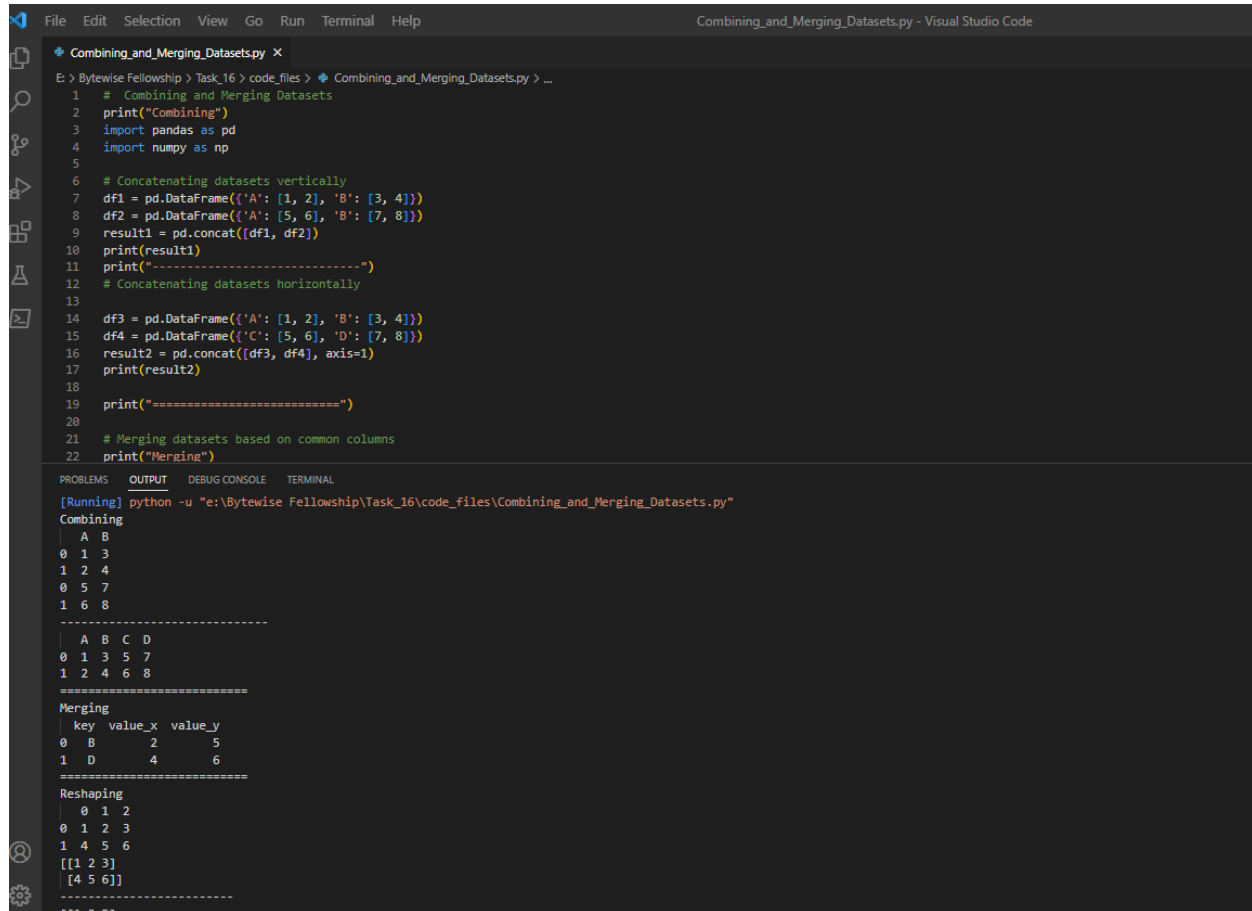


# Sania Bibi

## Task # 16



The screenshot shows a Visual Studio Code editor window titled "Combining\_and\_Merging\_Datasets.py - Visual Studio Code". The editor displays a Python script that demonstrates how to combine and merge datasets using pandas. The script is as follows:

```
1 # Combining and Merging Datasets
2 print("Combining")
3 import pandas as pd
4 import numpy as np
5
6 # Concatenating datasets vertically
7 df1 = pd.DataFrame({'A': [1, 2], 'B': [3, 4]})
8 df2 = pd.DataFrame({'A': [5, 6], 'B': [7, 8]})
9 result1 = pd.concat([df1, df2])
10 print(result1)
11 print("-----")
12 # Concatenating datasets horizontally
13
14 df3 = pd.DataFrame({'A': [1, 2], 'B': [3, 4]})
15 df4 = pd.DataFrame({'C': [5, 6], 'D': [7, 8]})
16 result2 = pd.concat([df3, df4], axis=1)
17 print(result2)
18
19 print("=====")
20
21 # Merging datasets based on common columns
22 print("Merging")
```

The output of the script is shown in the terminal window at the bottom. It displays the results of the concatenation and merging operations:

```
[Running] python -u "e:\Bytewise Fellowship\Task_16\code_files\Combining_and_Merging_Datasets.py"
Combining
  A  B
0  1  3
1  2  4
0  5  7
1  6  8
-----
  A  B  C  D
0  1  3  5  7
1  2  4  6  8
=====
Merging
  key  value_x  value_y
0    B         2         5
1    D         4         6
=====
Reshaping
  0  1  2
0  1  2  3
1  4  5  6
[[1 2 3]
 [4 5 6]]
-----
[[1 3 5]]
```

```
File Edit Selection View Go Run Terminal Help Combining_and_Merging_Datasets.py - Visual Studio Code

Combining_and_Merging_Datasets.py x
E > Bytewise Fellowship > Task_16 > code_files > Combining_and_Merging_Datasets.py > ...

24 df6 = pd.DataFrame({'key': ['B', 'D', 'E', 'F'], 'value': [5, 6, 7, 8]})
25 result3 = pd.merge(df5, df6, on='key')
26 print(result3)
27 print("=====")
28
29 # Reshaping Data
30 print("Reshaping")
31 # Reshape with pandas
32 import numpy as np
33 data = np.array([1, 2, 3, 4, 5, 6])
34 df7 = pd.DataFrame(data.reshape(2, 3))
35 print(df7)
36
37 # print("-----")
38 # Reshaping Data with Numpy
39 data = np.array([1, 2, 3, 4, 5, 6])
40 reshaped = np.reshape(data, (2, 3))
41 print(reshaped)
42 print("-----")
43 arr = np.array([[1, 2], [3, 4], [5, 6]])
44 transposed = np.transpose(arr)
45 print(transposed)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1 2 4
0 5 7
1 6 8
-----
| A B C D
0 1 3 5 7
1 2 4 6 8
=====
Merging
| key value_x value_y
0 B 2 5
1 D 4 6
=====
Reshaping
| 0 1 2
0 1 2 3
1 4 5 6
[[1 2 3]
 [4 5 6]]
-----
[[1 3 5]
 [2 4 6]]

[Done] exited with code=0 in 0.937 seconds
```