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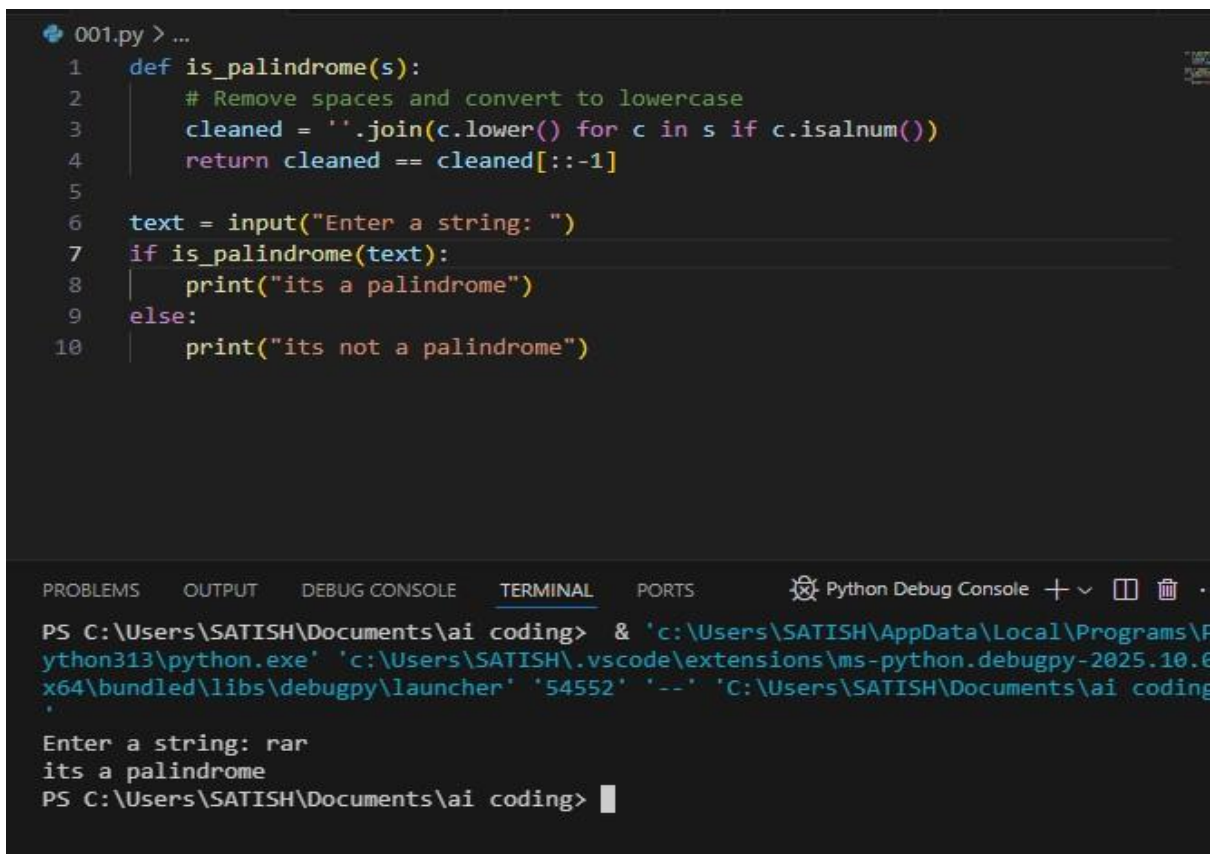
BATCH : 14

HALL.NO: 2403A52377

01.PROMPT :

i need python code ,which checks the the given string is pandrome or not , if yes print "its a palindrome " if no print "its not a palindrome" and ignore the spaces and case

CODE AND OUTPUT :



```
001.py > ...
1  def is_palindrome(s):
2      # Remove spaces and convert to lowercase
3      cleaned = ''.join(c.lower() for c in s if c.isalnum())
4      return cleaned == cleaned[::-1]
5
6  text = input("Enter a string: ")
7  if is_palindrome(text):
8      print("its a palindrome")
9  else:
10     print("its not a palindrome")

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  Python Debug Console  + - [] [X]
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2025.10.6\python\debugpy_launcher' '54552' '--' 'C:\Users\SATISH\Documents\ai coding'
Enter a string: rar
its a palindrome
PS C:\Users\SATISH\Documents\ai coding> 
```

CODE EXPLANATION :

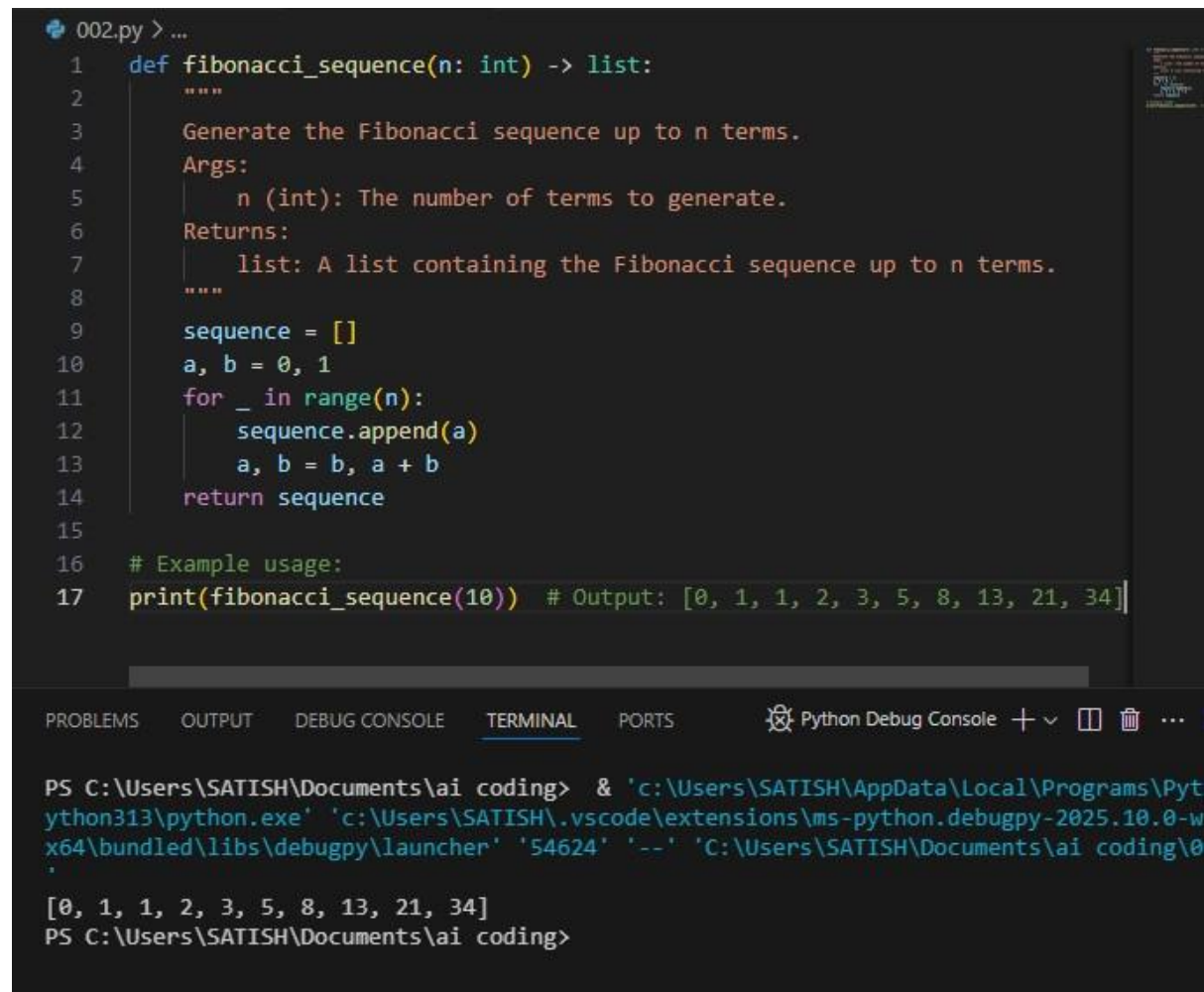
This Python code checks if a given string is a palindrome (reads the same forward and backward):

- `cleaned = ''.join(c.lower() for c in s if c.isalnum())`
 - Removes spaces/punctuation and converts letters to lowercase.
- `cleaned == cleaned[::-1]`
 - Compares the cleaned string with its reverse.
- If equal, it prints "its a palindrome", otherwise "its not a palindrome".

02.PROMPT :

generate a python code , function that returns the fibonacci sequence up tp n terms with only a function header and docsring

CODE AND OUTPUT:



```
002.py > ...
1  def fibonacci_sequence(n: int) -> list:
2      """
3      Generate the Fibonacci sequence up to n terms.
4      Args:
5      |   n (int): The number of terms to generate.
6      Returns:
7      |   list: A list containing the Fibonacci sequence up to n terms.
8      """
9      sequence = []
10     a, b = 0, 1
11     for _ in range(n):
12         sequence.append(a)
13         a, b = b, a + b
14     return sequence
15
16 # Example usage:
17 print(fibonacci_sequence(10)) # Output: [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS Python Debug Console + - [] ...

```
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2025.10.0-windows-x64\bundled\libs\debugpy\launcher' '54624' '--' 'C:\Users\SATISH\Documents\ai coding\002.py'
[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
PS C:\Users\SATISH\Documents\ai coding>
```

Code Explanation:

This function generates the Fibonacci sequence up to n terms:

- Starts with $a = 0, b = 1$ (first two Fibonacci numbers).
- In a loop, appends a to the list, then updates a, b to the next pair ($b, a + b$).
- Returns the list of n Fibonacci numbers.

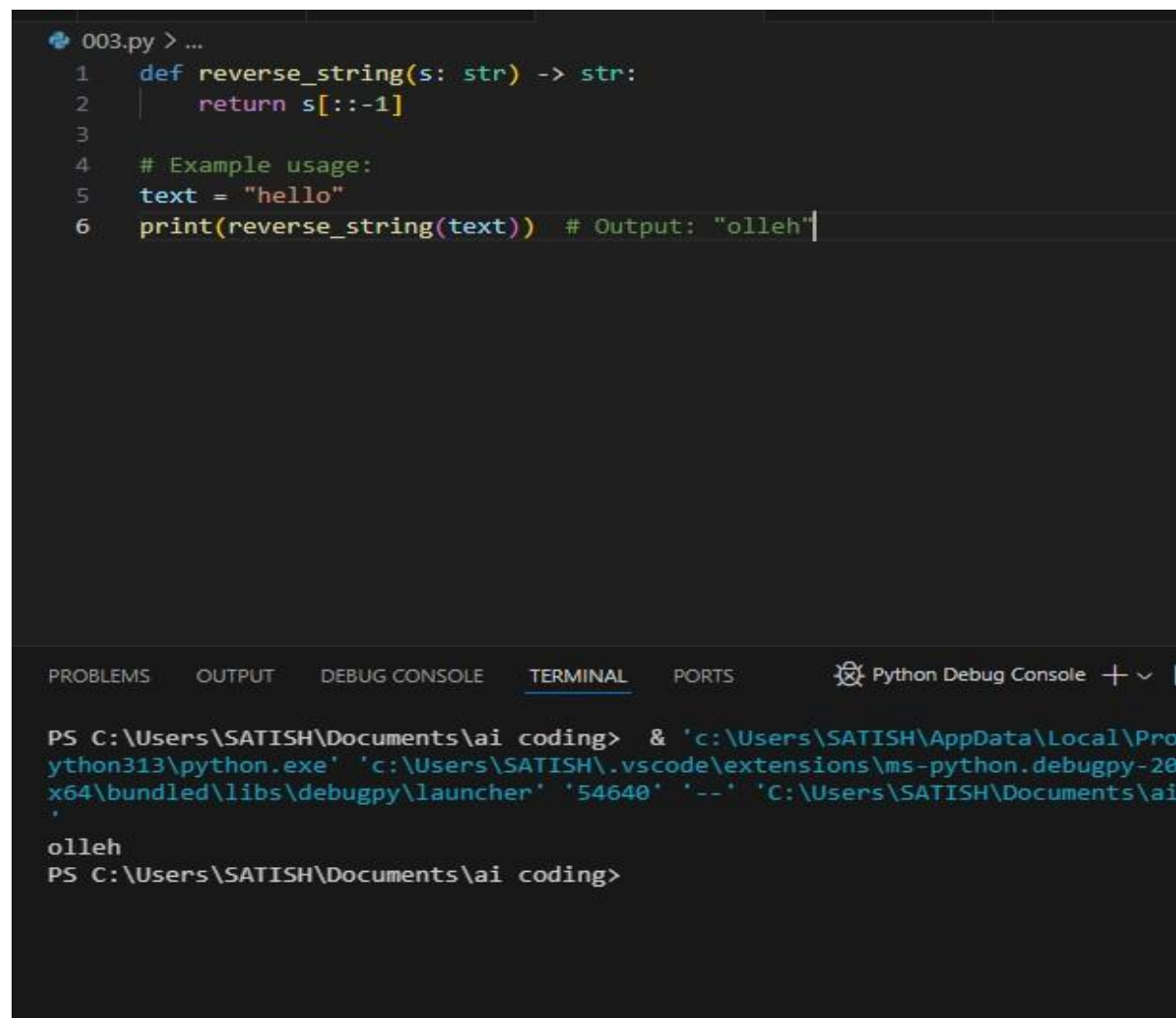
Example:

`fibonacci_sequence(10)` \rightarrow `[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]`

03. PROMPT :

Give me a python code to reverse a string

CODE AND OUTPUT :



```
003.py > ...
1  def reverse_string(s: str) -> str:
2      return s[::-1]
3
4  # Example usage:
5  text = "hello"
6  print(reverse_string(text)) # Output: "olleh"
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + v

```
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2023.12.0\python\debugpy_launcher' '54640' '--' 'C:\Users\SATISH\Documents\ai coding\003.py'
olleh
PS C:\Users\SATISH\Documents\ai coding>
```

Code Explanation:

This function returns the reverse of a given string:

- `s[::-1]` uses slicing to reverse the string.
- Example: "hello" becomes "olleh".

04.PROMPT :

i need a python code which works like basic calculator (add , subtract, divide, multiply) and gives output

CODE AND OUTPUT:

```
004.py > ...
1  def calculator(a, b, operation):
24      return "Invalid operation"
25
26  # Example usage:
27  num1 = float(input("Enter first number: "))
28  num2 = float(input("Enter second number: "))
29  op = input("Enter operation (add, subtract, multiply, divide): ").strip()
30
31  result = calculator(num1, num2, op)
32  print("Result:", result)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + v

```
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2023.12.0\bin\debugpy_launcher.exe' '54663' '--' 'C:\Users\SATISH\Documents\ai coding\004.py'
Enter first number: 10
Enter second number: 10
Enter operation (add, subtract, multiply, divide): add
Result: 20.0
PS C:\Users\SATISH\Documents\ai coding>
```

Code Explanation:

This function performs basic arithmetic operations:

- Takes two numbers (a, b) and an operation (add, subtract, multiply, divide).
- Uses if-elif to choose the correct operation.
- Checks for division by zero.
- Returns the result or an error message for invalid input.

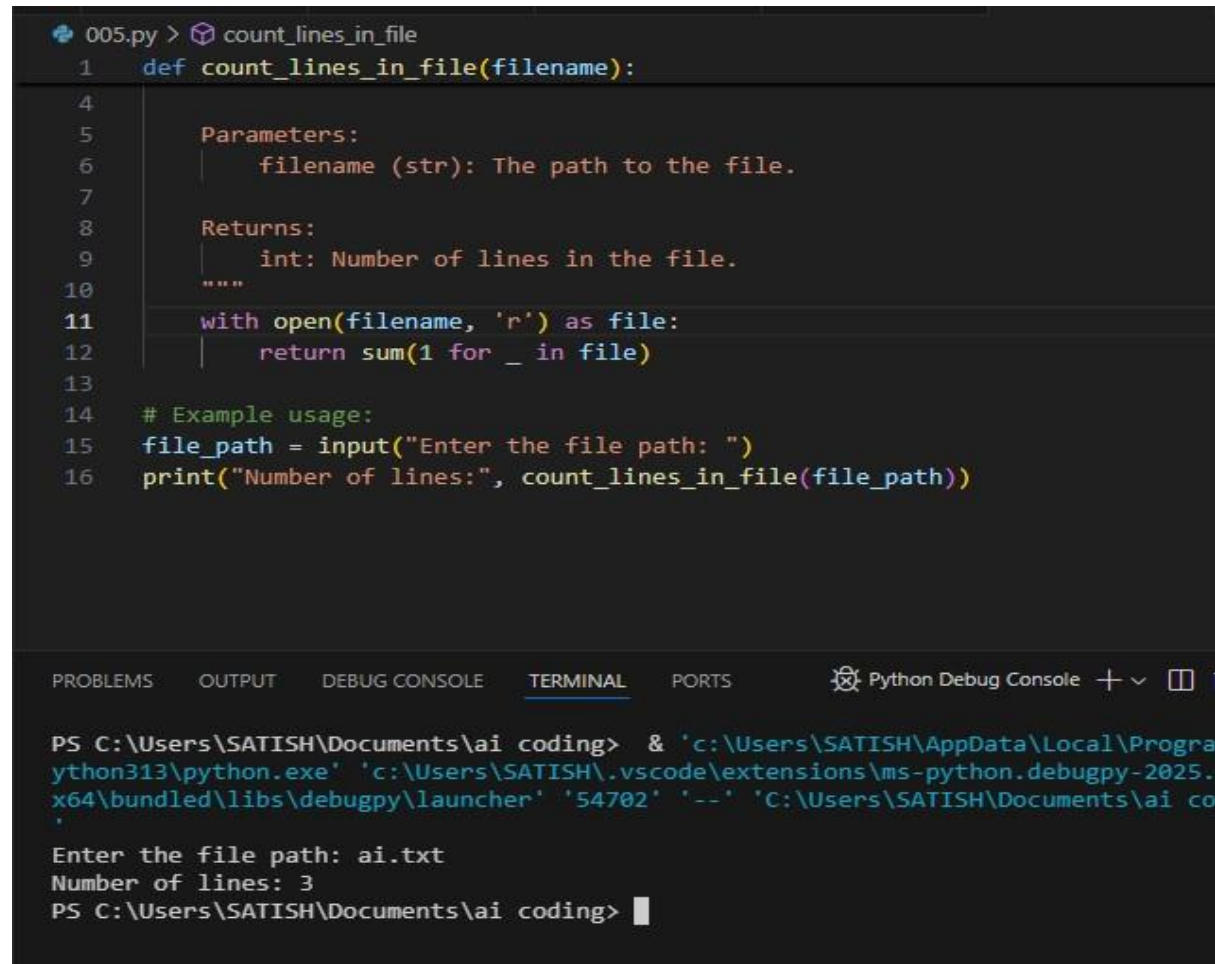
Example:

If input is a = 5, b = 2, operation = 'add', output will be 7.

05.PROMPT :

i need a python code which reads a file and gives output number of lines

CODE AND OUTPUT:



The screenshot shows a VS Code editor with a Python file named `005.py`. The code defines a function `count_lines_in_file` that takes a filename as input and returns the number of lines in the file. The function uses a generator expression to count the lines. Below the function, there is an example usage that prompts the user for a file path and prints the number of lines. The terminal output shows the command being executed, the input file path `ai.txt`, and the output `Number of lines: 3`.

```
005.py > count_lines_in_file
1 def count_lines_in_file(filename):
4
5     Parameters:
6         filename (str): The path to the file.
7
8     Returns:
9         int: Number of lines in the file.
10    """
11    with open(filename, 'r') as file:
12        return sum(1 for _ in file)
13
14    # Example usage:
15    file_path = input("Enter the file path: ")
16    print("Number of lines:", count_lines_in_file(file_path))
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + v

```
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2025.x64\bundled\libs\debugpy\launcher' '54702' '--' 'C:\Users\SATISH\Documents\ai coding\ai.txt'
Enter the file path: ai.txt
Number of lines: 3
PS C:\Users\SATISH\Documents\ai coding>
```

Code Explanation:

This function counts the number of lines in a file:

- Opens the file in read mode.
- Uses a generator expression to count lines with `sum(1 for _ in file)`.
- Returns the total line count.

Example:

If a file has 10 lines, it will return 10.

