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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 :

The screenshot shows a code editor window with a dark theme. The code file is named '001.py'. The code defines a function 'is_palindrome' that removes spaces and punctuation from a string, converts it to lowercase, and then compares it with its reverse. It then prompts the user for input and prints whether it's a palindrome or not.

```
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")
```

Below the code editor is a terminal window showing the execution of the script. The command 'python 001.py' is run, followed by the user input 'Enter a string: rar'. The output shows that 'rar' is printed as 'its a palindrome'.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + ~ ⌂ ⌂ ⌂

```
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2025.10.6\x64\bundled\libs\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 "it's a palindrome", otherwise "it's 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:

The screenshot shows the VS Code interface with the Python extension installed. The code editor has a file named 002.py open, containing a function definition for generating a Fibonacci sequence. The terminal below shows the code being run and the resulting 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\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2025.10.0-win64\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) → [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]`

03. PROMPT :

Give me a python code to reverse a string

CODE AND OUTPUT :

The screenshot shows a VS Code interface with a terminal window open. The terminal tab is selected at the top. The code in the editor is:

```
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"
```

The terminal output below shows the command run and the resulting reversed string:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + ▾
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-20x64\bundled\libs\debugpy\launcher' '54640' '--' 'C:\Users\SATISH\Documents\ai'
'
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:

The screenshot shows the VS Code interface with the Python Debug Console tab selected. The code in 004.py defines a calculator function that takes two numbers and an operation (add, subtract, multiply, divide) and returns the result or an error message. The terminal shows the execution of the script and its output for addition.

```
004.py > ...
1 def calculator(a, b, operation):
2     |     return "Invalid operation"
3
4     # Example usage:
5     num1 = float(input("Enter first number: "))
6     num2 = float(input("Enter second number: "))
7     op = input("Enter operation (add, subtract, multiply, divide): ").strip()
8
9     result = calculator(num1, num2, op)
10    print("Result:", result)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + ▾

PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2.x64\bundled\libs\debugpy\launcher' '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 the VS Code interface with the Python extension installed. The code editor has a file named '005.py' open, containing a function to count lines in a file. The terminal below shows the execution of the script and its output.

```
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 + ▾ [ ]
```

```
PS C:\Users\SATISH\Documents\ai coding> & 'c:\Users\SATISH\AppData\Local\Programs\Python313\python.exe' 'c:\Users\SATISH\.vscode\extensions\ms-python.debugpy-2025.x64\bundled\libs\debugpy\launcher' '54702' '--' 'C:\Users\SATISH\Documents\ai co'
'
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.

