1. String & Pattern Problems

1. Reverse a given string without using built-in reverse functions.
2. Check if a string is a palindrome.
3. Count the number of vowels and consonants in a string.
4. Remove all spaces from a given string.
5. Count the frequency of each character in a string.

1.Reverse a given string without using built-in reverse functions.

rev.py - C:/Users/srive/OneDrive/Documents/string&patterns/rev.py (3.13.2)

File Edit Format Run Options Window Help

```
def reverse_string(s):
    reversed_str = ""
    for char in s:
        reversed_str = char + reversed_str
    return reversed_str

print(reverse_string("Sriveni"))
```

Output:

```
>>>
========== RE
inevirS
>>>
```

2.Check if a string is a palindrome.

```
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def is_palindrome(s):
    s = s.lower()
    return s == s[::-1]

print(is_palindrome("WOW"))
```

Output:

```
>>>
==========
True
>>>
```

3.Count the number of vowels and consonants in a string.

```
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def count_vowels_consonants(s):
    vowels = "aeiouAEIOU"
    v_count = c_count = 0

    for char in s:
        if char.isalpha():
            if char in vowels:
                v_count += 1
            else:
                c_count += 1

    return v_count, c_count

# Example usage
string = "Python Programming"
vowels, consonants = count_vowels_consonants(string)
print("Vowels:", vowels)
print("Consonants:", consonants)
```

Output:

```
>>
==================================================
Vowels: 4
Consonants: 13
>>
```

4.Remove all spaces from a given string.

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```
def remove_spaces(s):
    result = ""
    for char in s:
        if char != " ":
            result += char
    return result

print(remove_spaces("I am a Student"))
```

Output:

```
>>>
============================================================
IamaStudent
>>>
```

5.Count the frequency of each character in a string.

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```
def char_frequency(s):
    freq = {}

    for ch in s:
        if ch in freq:
            freq[ch] += 1
        else:
            freq[ch] = 1

    return freq

string = "Srinivasa Rao"
result = char_frequency(string)
print(result)
```

Output:

```
>>>
========== RESTART: C:/Users/srive/OneDri
{'S': 1, 'r': 1, 'i': 2, 'n': 1, 'v': 1, 'a': 3, 's': 1, ' ': 1, 'R': 1, 'o': 1}
>>>
>>>
```