Day 5 of Python Assignment Answers -

13. Write a python program to reverse a string?

```
string = input("Enter a string: ")
reversed_string = string[::-1]
print("Reversed string:", reversed_string)
```

1. The user is prompted to enter a string using the input() function, and the value is stored in the variable string.
2. The slicing notation [::-1] is used to create a reversed copy of the string. The [::-1] notation specifies that we want to slice the string starting from the end (-1) and move backward by one character at a time (-1 step size).
3. The reversed string is stored in the variable reversed_string.
4. The program prints the reversed string using the print() function.

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14. Write a python program to count the vowels in a string?

```python
# ask the user to input a string
string = input("Enter a string: ")

# define a list of vowels
vowels = ['a', 'e', 'i', 'o', 'u']

# initialize a variable to count the number of vowels
count = 0

# loop through each character in the string
for char in string:
    # if the character is a vowel, increment the count
    if char.lower() in vowels and char.isalpha():
        count += 1

# print the count of vowels in the string
print("The number of vowels in the string is:", count)
```

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1. The user is prompted to enter a string using the input() function, and the value is stored in the variable string.
2. A list of vowels (['a', 'e', 'i', 'o', 'u']) is defined and stored in the variable vowels.
3. A counter variable count is initialized to 0.
4. A for loop is used to iterate over each character in the input string.
5. For each character in the string, the program checks if it is in the vowels list (after converting the character to lowercase) and if it is an alphabet character using the isalpha() method.
6. If the character is a vowel, the count variable is incremented by 1.
7. After the loop finishes iterating over all the characters in the string, the program prints the final value of the count variable, which represents the number of vowels in the string.

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15. Write a python program to count the consonants in a string?

```python
# ask the user to input a string
string = input("Enter a string: ")

# define a list of vowels
vowels = ['a', 'e', 'i', 'o', 'u']

# initialize a variable to count the number of consonants
count = 0

# loop through each character in the string
for char in string:
    # if the character is not a vowel and is an alphabet, increment the count
    if char.lower() not in vowels and char.isalpha():
        count += 1

# print the count of consonants in the string
print("The number of consonants in the string is:", count)
```

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1. The user is prompted to enter a string using the input() function, and the value is stored in the variable string.
2. A list of vowels (['a', 'e', 'i', 'o', 'u']) is defined and stored in the variable vowels.
3. A counter variable count is initialized to 0.
4. A for loop is used to iterate over each character in the input string.
5. For each character in the string, the program checks if it is not in the vowels list (after converting the character to lowercase) and if it is an alphabet character using the isalpha() method.
6. If the character is a consonant, the count variable is incremented by 1.
7. After the loop finishes iterating over all the characters in the string, the program prints the final value of the count variable, which represents the number of consonants in the string.

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isalpha() is a built-in Python method that returns True if all the characters in a string are alphabetic characters (i.e., letters from the alphabet), and False otherwise.

Here's an example of how to use isalpha():

```
string = "Hello, World!"
print(string.isalpha())

string = "HelloWorld"
print(string.isalpha())
```