Day 7 of Python Assignment Answers -

19. Write a python program to remove consonants in a string?

```python
def remove_consonants(string):
    """
    This function takes a string as input and returns a new
    string that only contains vowels.
    """
    vowels = "AEIOUaeiou"
    new_string = ""
    for char in string:
        if char in vowels:
            new_string += char
    return new_string

# Get user input for the string to process
input_string = input("Enter a string: ")

# Call the remove_consonants function with the user input as input
output_string = remove_consonants(input_string)

# Print the output string
print("Output string with vowels only:", output_string)
```

Pradeepchandra Reddy S C

soopertramp07

In this program, we define a function called remove_consonants that takes a string as input and returns a new string that only contains vowels.

Inside the function, we first define a string called vowels that contains all the vowels in uppercase and lowercase. We then initialize an empty string called new_string that we'll use to store the new string with only vowels.

Next, we use a for loop to loop through each character in the input string. For each character, we check whether it's a vowel or not by using the in operator to see if it's in the vowels string. If the character is a vowel, we add it to the new_string by using the += operator to concatenate it to the existing string.

Finally, we return the new_string with only vowels.

Pradeepchandra Reddy S C

soopertramp07

20. Write a python program to remove the alpha characters in ths string?

```python
def remove_alpha(string):
    """
    This function takes a string as input and returns a new string
    that only contains non-alphabetic characters.
    """
    new_string = ""
    for char in string:
        if not char.isalpha():  # Check if the character is not an alphabetic character
            new_string += char
    return new_string

# Get user input for the string to process
input_string = input("Enter a string: ")

# Call the remove_alpha function with the user input as input
output_string = remove_alpha(input_string)

# Print the output string
print("Output string with non-alphabetic characters only:", output_string)
```

Pradeepchandra Reddy S C

soopertramp07

In this program, we define a function called remove_alpha that takes a string as input and returns a new string that only contains non-alphabetic characters.

Inside the function, we initialize an empty string called new_string that we'll use to store the new string with only non-alphabetic characters.

Next, we use a for loop to loop through each character in the input string. For each character, we check whether it's an alphabetic character or not by using the isalpha() method of the string class. If the character is not an alphabetic character, we add it to the new_string by using the += operator to concatenate it to the existing string.

Finally, we return the new_string with only non-alphabetic characters.

Pradeepchandra Reddy S C soopertramp07

21. Write a python prpgram to check leap year ?

```python
def is_leap_year(year):
    """
    This function takes a year as input and returns True if it's a leap year,
    False otherwise.
    """
    if (year % 4 == 0) and (year % 100 != 0 or year % 400 == 0):
        # If the year is divisible by 4 and not divisible by 100, or
        # it's divisible by 400, it's a leap year
        return True
    else:
        return False

# Get user input for the year to check
input_year = int(input("Enter a year: "))

# Call the is_leap_year function with the user input as input
if is_leap_year(input_year):
    print(input_year, "is a leap year")
else:
    print(input_year, "is not a leap year")
```

Pradeepchandra Reddy S C soopertramp07

In this program, we define a function called is_leap_year that takes a year as input and returns True if it's a leap year, and False otherwise.

Inside the function, we use an if statement to check whether the year is a leap year or not. According to the Gregorian calendar, a leap year is defined as follows:

- If a year is divisible by 4, it's a leap year.
- If a year is divisible by 100, it's not a leap year, unless it's also divisible by 400.

If the year satisfies either of these conditions, we return True. Otherwise, we return False.

Pradeepchandra Reddy S C

soopertramp07