Assignment-04-(d)

December 14, 2024

1 Assignment#4: Strings

1.1 Question(1):

Write a program that accepts a string from user. Your program should count and display number of vowels in that string.

[28]:
```
st = input("Enter the string:")

ct = 0

v='aeiouAEIOU'

for n in st:
    if n in v:
        ct+=1

print("The vowles is:",ct)
```

```
Enter the string: Abbas

The vowles is: 2
```

1.2 Question(2):

Write a program that reads a string from keyboard and display: * The number of uppercase letters in the string * The number of lowercase letters in the string * The number of digits in the string * The number of whitespace characters in the string

[29]:
```
st = input("Enter the string:")

count_uppar = 0
count_lower = 0
count_dig = 0
count_sp = 0

uppar = "ABCDEFGHIJKLMNOPQRSTUVWXYZ"
lower = "abcdefghijklmnopqrstuvwxyz"
dig = "123456789"
```

```
sp = " "

for n in st:
    if n in uppar:
        count_uppar+=1
    elif n in lower:
        count_lower+=1
    elif n in dig:
        count_dig+=1
    elif n in sp:
        count_sp+=1

print(f"""
                THE STRING DETAIL IS
                Uppar Letters : {count_uppar}
                Lower Letters : {count_lower}
                Count Digit : {count_dig}
                Count Space : {count_sp}

""")
```

```
Enter the string: I am Muhammad Abbas from Mansehra.

                THE STRING DETAIL IS
                Uppar Letters : 4
                Lower Letters : 24
                Count Digit : 0
                Count Space : 5
```

1.3 Question(3):

Write a Python program that accepts a string from user. Your program should create and display a new string where the first and last characters have been exchanged. For example if the user enters the string 'HELLO' then new string would be 'OELLH

[30]:
```
st = input("Enter the string:")

st[-1]+st[1:-1]+st[0]
```

```
Enter the string: HELLO
```

[30]:
```
'OELLH'
```

1.4 Question(4):

Write a Python program that accepts a string from user. Your program should create a new string in reverse of first string and display it. For example if the user enters the string 'EXAM' then new string would be 'MAXE

[29]:
```
st = input("Enter the string:")
print("Reverse Of String:")
st[::-1]
```

```
Enter the string: EXAM
```

```
Reverse Of String:
```

[29]:
```
'MAXE'
```

1.5 Question(5):

Write a Python program that accepts a string from user. Your program should create a new string by shifting one position to left. For example if the user enters the string 'examination 2021' then new string would be 'xamination 2021e

[25]:
```
st = input("Enter the string:")

st[1::]+st[0]
```

```
Enter the string: examination 2021
```

[25]:
```
'xamination 2021e'
```

1.6 Question(6):

Write a program that asks the user to input his name and print its initials. Assuming that the user always types first name, middle name and last name and does not include any unnecessary spaces. For example, if the user enters Ajay Kumar Garg the program should display A. K. G. Note:Don't use split() method

[7]:
```
full_name = input("Enter your full name (first middle last): ")

initials = ""
word_start = True

for char in full_name:
    if word_start:
        initials += char.upper() + ". "
        word_start = False
    if char == ' ':
        word_start = True

print("Initials:", initials)
```

```
Enter your full name (first middle last):  Muhammad Abbas

Initials: M. A.
```

1.7 Question(7):

A palindrome is a string that reads the same backward as forward. For example, the words dad,madam and radar are all palindromes. Write a programs that determines whether the string is a palindrome. Note: do not use reverse() method

[11]:
```
st = input("Enter the string:")

if st[::-1] == st[::1]:
    print("The string is palindrome!")
else:
    print("The string is not a plindrome!!!")
```

```
Enter the string: madam

The string is palindrome!
```

1.8 Question(8):

Write a program that display following output: SHIFT HIFTS IFTSH FTSHI TSHIF SHIFT

[23]:
```
st = "SHIFT"

print(st[::1])
print(st[1::]+st[0])
print(st[2::]+st[0:2])
print(st[3::]+st[0:3])
print(st[4::]+st[0:4])
print(st[5::]+st[0:5])
```

```
SHIFT
HIFTS
IFTSH
FTSHI
TSHIF
SHIFT
```

1.9 Question(9):

Write a program in python that accepts a string to setup a passwords. Your entered password must meet the following requirements: The password must be at least eight characters long. It must contain at least one uppercase letter. It must contain at least one lowercase letter. It must contain at least one numeric digit. Your program should should perform this validation.

[14]:
```
pas = input("Enter the password:")

up = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
```

```
lo = "abcdefghijklmnopqrstuvwxyz"
dig = "1234567890"

if len(pas) >= 8:
    if any(char in up for char in pas):
        if any(char in lo for char in pas):
            if any(char in dig for char in pas):
                print("YOUR PASSWORD HAS BEEN SAVED")
            else:
                print("Password should contains digit!")
        else:
            print("Password should contains atleast one lower case letter!")
    else:
        print("Password should contains atleast one uppar case letter!")
else:
    print("Password should contains 8 characters!")
```

```
Enter the password: Password123

YOUR PASSWORD HAS BEEN SAVED
```

[ ]: