Python Program (Ass-1)

1) Count the vowel in given string

Input: A String to count all vowels

Program :->

```
class Vowelchar():
    def vowel(self):
        vowels = ('a', 'A', 'e', 'E', 'i', 'I', 'o', 'O', 'u', 'U')
        string = input("Enter the string:")
        output = {}
        for char in vowels:
          x = string.count(char)
          output[char] = x
        print(output)

Vowelchar().vowel()
```

Output: => Enter the string:A String to count all vowels

{'a': 1, 'A': 1, 'e': 1, 'E': 0, 'i': 1, 'I': 0, 'o': 3, 'O': 0, 'u': 1, 'U': 0}

2)Compare both side halves string..

Program:->

```
class HalvesStr():
    def check(self):
        string = input("Enter String :").lower()
        middle = len(string)//2
        leftSide = string[0:middle]

        if(len(string) % 2 == 0):
            rightSide = string[middle:]
        else:
            rightSide = string[middle+1:]
        for char in leftSide:
            if(char not in rightSide):
                print("NO")
                exit()
        print("YES")
HalvesStr().check()
```

Output: 1) Enter String :xyzayzax

YES

2) Enter String :xyZayzax

YES

3) Enter String :xyzzxxyz

No

4) Enter String :xyzaayzax

YES

3) Password check:

Program=>

```
def check(passwd):
    val = True

    if len(passwd) < 9:
        print('length should be at least 9')
        val = False

    if not any(char.isdigit() for char in passwd):
        print('Password should have at least one numeral')
        val = False

    if not any(char.isupper() for char in passwd):
        print('Password should have at least one uppercase
letter')
        val = False

    if not any(char.islower() for char in passwd):
```

```
        print('Password should have at least one lowercase
letter')
        val = False


    Specialchar =['', '%', '#', '$']
    if not any(char in Specialchar for char in passwd):
        print('Password should have at least one of the
symbols _ Or % Or * Or $')
        val = False
    if val:
        return val


print("Enter password ...")
passwd = input()
if (check(passwd)):
        print("Password Accepted")
else:
        print("Invalid Password !!")
```

Outputs: 1) Enter password ...

demoPassword6$

Password Accepted

2) Enter password ...

demoPassword6&

Password should have at least one of the symbols _ Or % Or * Or $

Invalid Password !!

3) Enter password ...

demopassword6$

Password should have at least one uppercase letter

Invalid Password !!

4) Enter password ...

deMopassword$

Password should have at least one numeral

Invalid Password !!

4)Caesar cipher encryption:

```
def Encryption(s,k):
    encstr=""
    for i in s:
        if(ord(i))>=65 and (ord(i)<=90):
            temp=(ord(i)+k)
            if temp>90:
                temp=temp%90+64
            encstr=encstr+chr(temp)
        elif(ord(i))>=97 and (ord(i)<=122):
            temp=(ord(i)+k)
            if temp>122:
                temp=temp%122+96
            encstr=encstr+chr(temp)
        else:
            encstr=encstr+chr(ord(i)+k)
    return encstr
def Decryption(k):
    p=Encryption(s,k)
```

```
    decstr=""
    for i in p:
        if((ord(i))>=65) and (ord(i))<=90:
            decstr=decstr+chr((ord(i) - k-65) % 26 + 65)
        elif((ord(i))>=97) and (ord(i))<=122:
            decstr=decstr+chr((ord(i) - k - 97) % 26 + 97)
        else:
            decstr=decstr+chr(ord(i)-k)
    return decstr
print("Enter the string to Encrypt and decrypt : ")
s=input()
k=9
k=k%26
print("Encrypted String : ",Encryption(s,k))
print("Decrypted String : ",Decryption(k))
```

Outputs: =>Enter the string to Encrypt and decrypt :

This is DUMMY String

Encrypted String : Cqrb)rb)MDVVH)Bcarwp

Decrypted String : This is DUMMY String