**PRACTICAL 1**

**Program 1**: Write a python program to Illustrate Different Set Operations?

**Code**:

str1 = input("enter string: ")

l1 = list(str1)

l2 = []

for i in range(len(l1)):

if (l1[i] == 'a' or l1[i] == 'A'):

l2.append(1)

elif(l1[i] == 'b' or l1[i] == 'B'):

l2.append(2)

elif(l1[i] == 'c' or l1[i] == 'C'):

l2.append(3)

elif(l1[i] == 'd' or l1[i] == 'D'):

l2.append(4)

elif(l1[i] == 'e' or l1[i] == 'E'):

l2.append(5)

elif(l1[i] == 'f' or l1[i] == 'F'):

l2.append(6)

elif(l1[i] == 'g' or l1[i] == 'G'):

l2.append(7)

elif(l1[i] == 'h' or l1[i] == 'H'):

l2.append(8)

elif(l1[i] == 'i' or l1[i] == 'I'):

l2.append(9)

elif(l1[i] == 'j' or l1[i] == 'J'):

l2.append(10)

elif(l1[i] == 'k' or l1[i] == 'K'):

l2.append(11)

elif(l1[i] == 'l' or l1[i] == 'L'):

l2.append(12)

elif(l1[i] == 'm' or l1[i] == 'M'):

l2.append(13)

elif(l1[i] == 'n' or l1[i] == 'N'):

l2.append(14)

elif(l1[i] == 'o' or l1[i] == 'O'):

l2.append(15)

elif(l1[i] == 'p' or l1[i] == 'P'):

l2.append(16)

elif(l1[i] == 'q' or l1[i] == 'Q'):

l2.append(17)

elif(l1[i] == 'r' or l1[i] == 'R'):

l2.append(18)

elif(l1[i] == 's' or l1[i] == 'S'):

l2.append(19)

elif(l1[i] == 't' or l1[i] == 'T'):

l2.append(20)

elif(l1[i] == 'u' or l1[i] == 'U'):

l2.append(21)

elif(l1[i] == 'v' or l1[i] == 'V'):

l2.append(22)

elif(l1[i] == 'w' or l1[i] == 'W'):

l2.append(23)

elif(l1[i] == 'x' or l1[i] == 'X'):

l2.append(24)

elif(l1[i] == 'y' or l1[i] == 'Y'):

l2.append(25)

elif(l1[i] == 'z' or l1[i] == 'Z'):

l2.append(26)

# print("l2")

# print(l2)

l3 = []

for i in range(len(l2)):

l3.append(((l2[i] + 1)) % 27)

l5 = []

for i in range(len(l3)):

l5.append(((l3[i] - 1)) % 27)

# print(l5)

# print("l3")

# print(l3)

l4 = []

for i in range(len(l5)):

if (l5[i] == 1):

l4.append('a')

elif(l5[i] == 2 ):

l4.append('b')

elif(l5[i] == 3 ):

l4.append('c')

elif(l5[i] == 4 ):

l4.append('d')

elif(l5[i] == 5 ):

l4.append('e')

elif(l5[i] == 6 ):

l4.append('f')

elif(l5[i] == 7 ):

l4.append('g')

elif(l5[i] == 8 ):

l4.append('h')

elif(l5[i] == 9 ):

l4.append('i')

elif(l5[i] == 10 ):

l4.append('j')

elif(l5[i] == 11 ):

l4.append('k')

elif(l5[i] == 12 ):

l4.append('l')

elif(l5[i] == 13 ):

l4.append('m')

elif(l5[i] == 14 ):

l4.append('n')

elif(l5[i] == 15 ):

l4.append('o')

elif(l5[i] == 16 ):

l4.append('p')

elif(l5[i] == 17 ):

l4.append('q')

elif(l5[i] == 18 ):

l4.append('r')

elif(l5[i] == 19 ):

l4.append('s')

elif(l5[i] == 20 ):

l4.append('t')

elif(l5[i] == 21 ):

l4.append('u')

elif(l5[i] == 22 ):

l4.append('v')

elif(l5[i] == 23 ):

l4.append('w')

elif(l5[i] == 24 ):

l4.append('x')

elif(l5[i] == 25):

l4.append('y')

elif(l5[i] == 26 ):

l4.append('z')

# print("l4")

# print(l4)

str2 = ""

a2 = 0

for i in l4:

str2 += i

a2 += 1

if a2 < len(l4) :

str2 +=""

else:

a = 1

print("decoded message: ",str2)

output