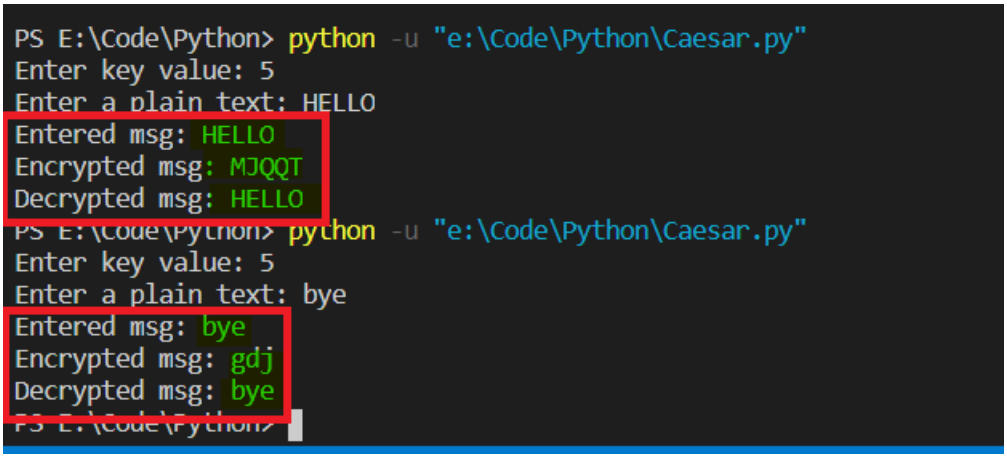
LAB-8

IMPLEMENTATION OF CAESAR CIPHER:

Code:

```
dict1 = dict(zip("ABCDEFGHIJKLMNOPQRSTUVWXYZ",range(26)))
upper = dict(zip(range(26),"ABCDEFGHIJKLMNOPQRSTUVWXYZ"))
dict2 = dict(zip("abcdefghijklmnopqrstuvwxyz",range(26)))
lower = dict(zip(range(26),"abcdefghijklmnopqrstuvwzyz"))

key = int(input('Enter key value: '))
plaintext = input('Enter a plain text: ')


# encipher
encrypted_msg = ""
for c in plaintext:
    #Check if it's an uppercase or not
    if c.isupper():
        #Shifting the character by key position
         encrypted_msg += upper[(dict1[c]+key)%26]
    #Check if it's an lowercase or not
    elif c.islower():
        #Shifting the character by key position
         encrypted_msg += lower[ (dict2[c]+key)%26]
    else: encrypted_msg += c

# decipher
decrypted_msg = ""
for c in encrypted_msg:
    #Check if it's an uppercase or not
    if c.isupper():
        #Shifting the character to its original position
        decrypted_msg += upper[ (dict1[c] - key)%26 ]
    #Check if it's an lowercase or not
    elif c.islower():
        #Shifting the character to its original position
        decrypted_msg += lower[ (dict2[c] - key)%26 ]
    else: decrypted_msg += c

print("Entered msg:",plaintext)
print("Encrypted msg:",encrypted_msg)
print("Decrypted msg:",decrypted_msg)
```

RESULT:


PS E:\Code\Python> python -u "e:\Code\Python\Caesar.py"
Enter key value: 5
Enter a plain text: HELLO
Entered msg: HELLO
Encrypted msg: MJQQT
Decrypted msg: HELLO
PS E:\Code\Python> python -u "e:\Code\Python\Caesar.py"
Enter key value: 5
Enter a plain text: bye
Entered msg: bye
Encrypted msg: gdj
Decrypted msg: bye