➢ One Time Pad Cipher

Code:

```
def encryption():
    text=input("Enter plain text: ")
    key=input('Enter the key: ')
    l1=['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q', 'r', 's', 't', 'u', 'v', 'w', 'x', 'y', 'z']
    cipher=''
    if len(key)==len(text):
        for i in range(len(text)):
            cipher+=l1[(l1.index(text[i])+l1.index(key[i]))%26]
        print(f'Cipher Text: {cipher}')
    else:
        print('length of key and plain text doesnt match')



def decryption():
    text=input("Enter cipher text: ")
    key=input('Enter the key: ')
    l1=['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q', 'r', 's', 't', 'u', 'v', 'w', 'x', 'y', 'z']
    cipher=''
    if len(key)==len(text):
        for i in range(len(text)):
            cipher+=l1[(l1.index(text[i])-l1.index(key[i]))%26]
        print(f'Plain Text: {cipher}')
    else:
        print('length of key and cipher text doesnt match')
```

OUTPUT:

```
vernamCipher.py', wdir='C:/User

In [2]: encryption()

Enter plain text: thisistejas

Enter the key: tejasisthis
Cipher Text: nlrsbbmxqil

In [3]: decryption()

Enter cipher text: nlrsbbmxqil

Enter the key: tejasisthis
Plain Text: thisistejas
```

```
In [6]: encryption()

Enter plain text: hihello

Enter the key: hellohi
Cipher Text: omspasw

In [7]: decryption()

Enter cipher text: omspasw

Enter the key: hellohi
Plain Text: hihello

In [8]:
```

```
In [4]: encryption()

Enter plain text: thisistejas

Enter the key: abcd
length of key and plain text doesnt match

In [5]: decryption()

Enter cipher text: tejas

Enter the key: tej
length of key and cipher text doesnt match
```