

**Ques4.** Implement monoalphabetic and polyalphabetic cipher substitution operation..

Ans ---Monoalphabetic cipher substitution

```
# CSC/20/50 Bharat_Sharma Univ_Roll_No:20059570040
```

```
from itertools import permutations
```

```
def Monoalphabetic(Plaintext):
```

```
    permutation_List=permutations(Plaintext)
```

```
    for temp in list(permutation_List):
```

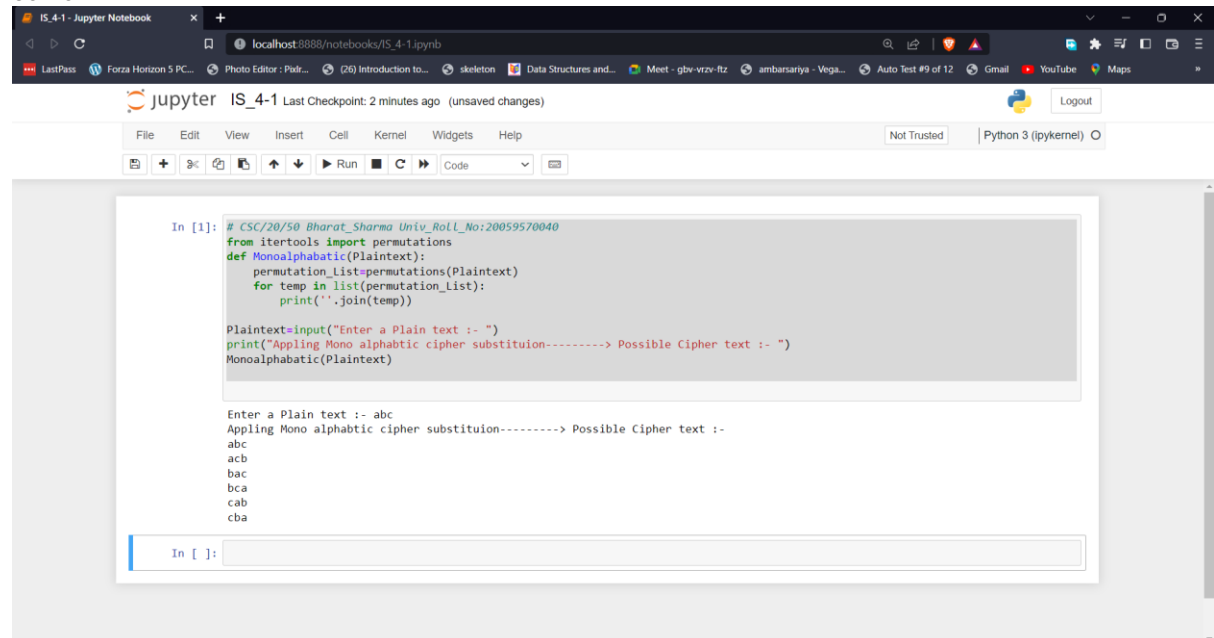
```
        print(''.join(temp))
```

```
Plaintext=input("Enter a Plain text :- ")
```

```
print("Appling Mono alphabtic cipher substitiuon-----> Possible Cipher text :- ")
```

```
Monoalphabetic(Plaintext)
```

OUTPUT:-



```
In [1]: # CSC/20/50 Bharat_Sharma Univ_Roll_No:20059570040
from itertools import permutations
def Monoalphabetic(Plaintext):
    permutation_List=permutations(Plaintext)
    for temp in list(permutation_List):
        print(''.join(temp))

Plaintext=input("Enter a Plain text :- ")
print("Appling Mono alphabtic cipher substitiuon-----> Possible Cipher text :- ")
Monoalphabetic(Plaintext)
```

Enter a Plain text :- abc  
Appling Mono alphabtic cipher substitiuon-----> Possible Cipher text :-  
abc  
acb  
bac  
bca  
cab  
cba

## Ans ---Polyalphabetic cipher substitution

# CSC/20/50 Bharat\_Sharma Univ\_Roll\_No:20059570040

from itertools import permutations

def polyalphabetic(Plaintext,key):

    result = []

    for i in range(len(Plaintext)):

        x = (ord(Plaintext[i]) + ord(key[i % len(key)])) % 26

        x += ord('A')

        result.append(chr(x))

print("".join(result))

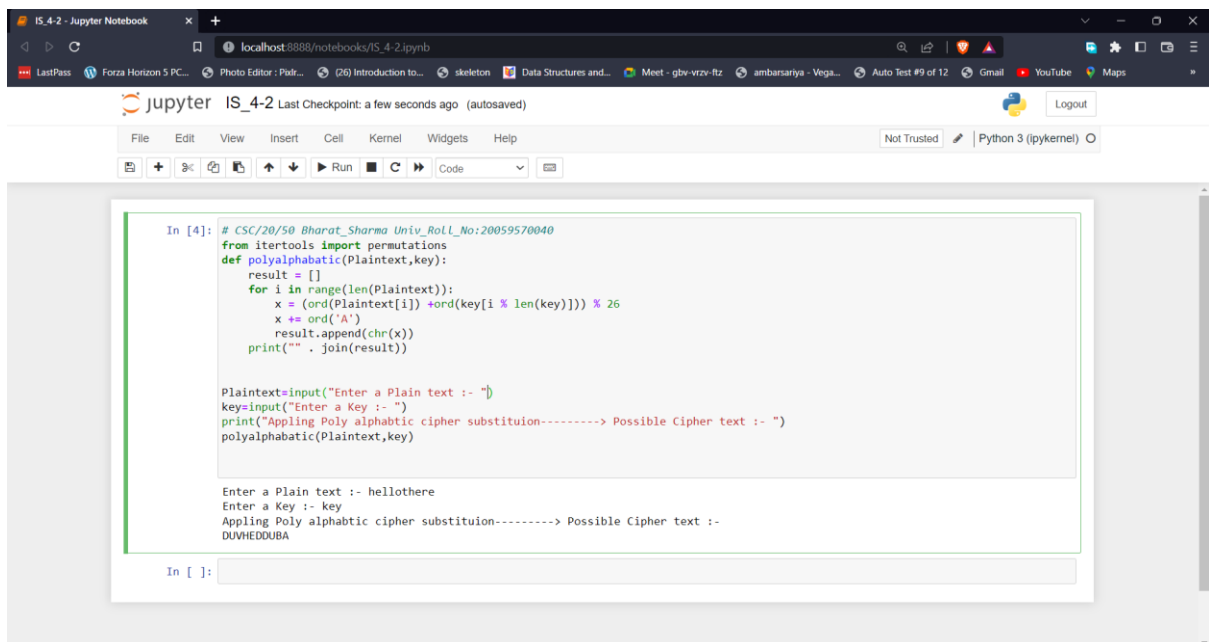
Plaintext=input("Enter a Plain text :- ")

key=input("Enter a Key :- ")

print("Appling Poly alphabtic cipher substituion-----> Possible Cipher text :- ")

polyalphabetic(Plaintext,key)

OUTPUT:-



```
In [4]: # CSC/20/50 Bharat_Sharma Univ_Roll_No:20059570040
from itertools import permutations
def polyalphabetic(Plaintext,key):
    result = []
    for i in range(len(Plaintext)):
        x = (ord(Plaintext[i]) + ord(key[i % len(key)])) % 26
        x += ord('A')
        result.append(chr(x))
    print("".join(result))

Plaintext=input("Enter a Plain text :- ")
key=input("Enter a Key :- ")
print("Appling Poly alphabtic cipher substituion-----> Possible Cipher text :- ")
polyalphabetic(Plaintext,key)

Enter a Plain text :- hellothere
Enter a Key :- key
Appling Poly alphabtic cipher substituion-----> Possible Cipher text :-
DUVHEDDUBA

In [ ]:
```