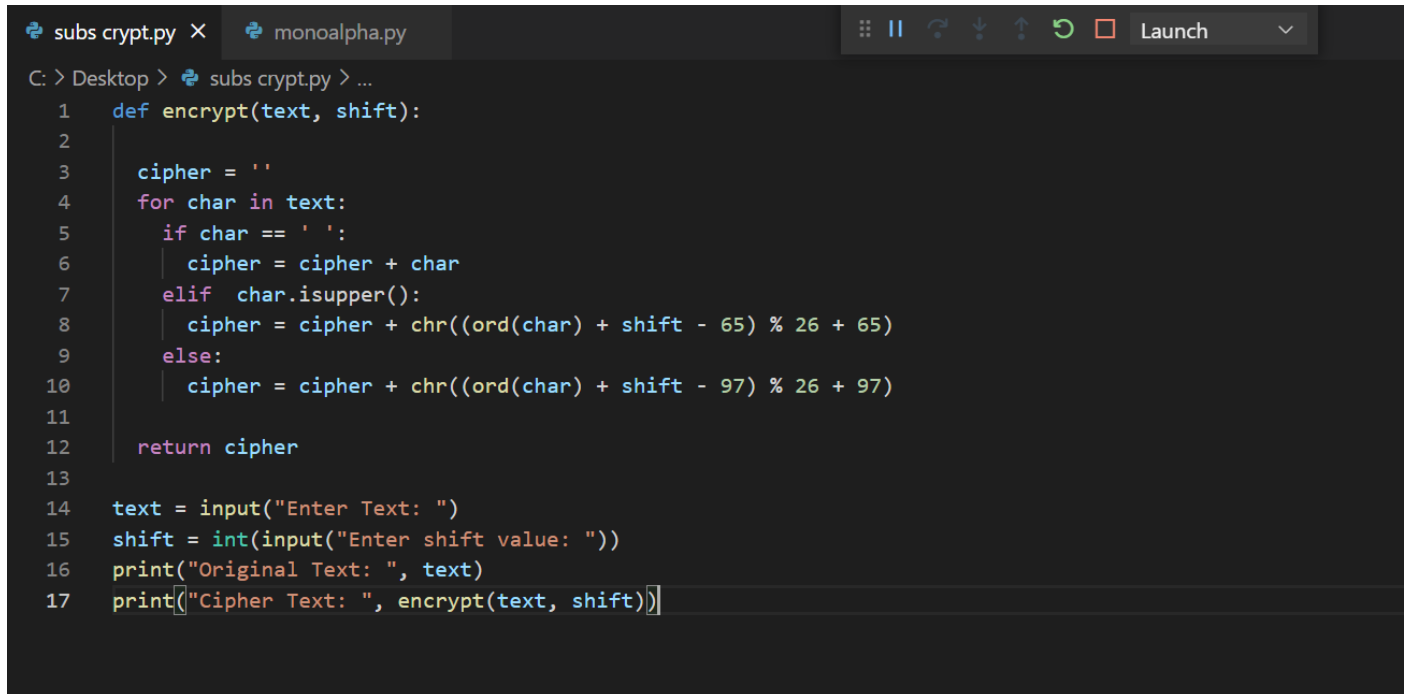


LAB- 1 SYSTEM SECURITY

Name: Raj Kansal
PRN: 20190802013
SEM: 5th (3rd Year)

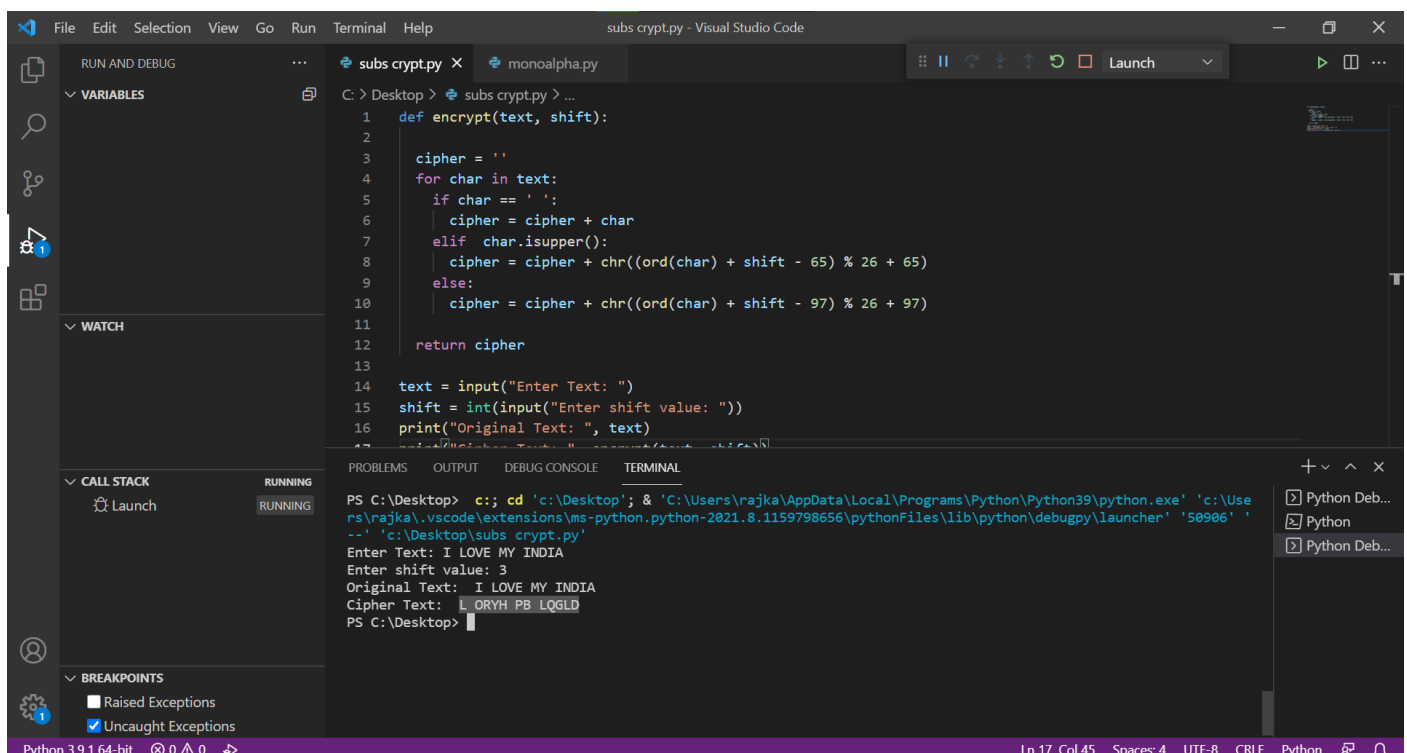
1) Write C/C++/Python/JAVA program to implement Caesar cipher substitution technique.

CODE:



```
subs crypt.py x monoalpha.py
C: > Desktop > subs crypt.py > ...
1  def encrypt(text, shift):
2
3      cipher = ''
4      for char in text:
5          if char == ' ':
6              cipher = cipher + char
7          elif char.isupper():
8              cipher = cipher + chr((ord(char) + shift - 65) % 26 + 65)
9          else:
10             cipher = cipher + chr((ord(char) + shift - 97) % 26 + 97)
11
12     return cipher
13
14     text = input("Enter Text: ")
15     shift = int(input("Enter shift value: "))
16     print("Original Text: ", text)
17     print("Cipher Text: ", encrypt(text, shift))
```

OUTPUT:



```
File Edit Selection View Go Run Terminal Help
subs crypt.py - Visual Studio Code
1  def encrypt(text, shift):
2
3      cipher = ''
4      for char in text:
5          if char == ' ':
6              cipher = cipher + char
7          elif char.isupper():
8              cipher = cipher + chr((ord(char) + shift - 65) % 26 + 65)
9          else:
10             cipher = cipher + chr((ord(char) + shift - 97) % 26 + 97)
11
12     return cipher
13
14     text = input("Enter Text: ")
15     shift = int(input("Enter shift value: "))
16     print("Original Text: ", text)
17     print("Cipher Text: ", encrypt(text, shift))

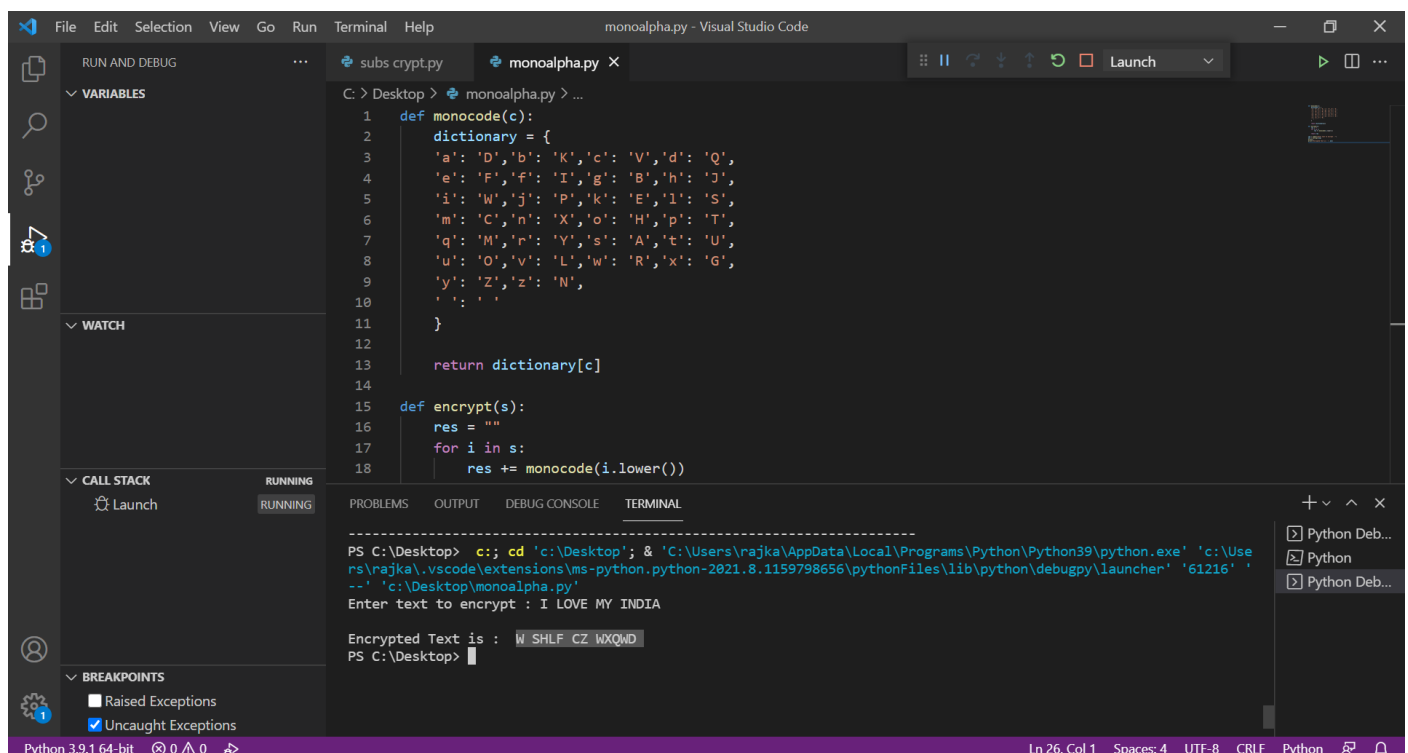
PS C:\Desktop> c:; cd 'c:\Desktop'; & 'C:\Users\rajka\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Use
rs\rajka\.vscode\extensions\ms-python.python-2021.8.1159798656\pythonFiles\lib\python\debugpy\launcher' '50906'
-- 'c:\Desktop\subs crypt.py'
Enter Text: I LOVE MY INDIA
Enter shift value: 3
Original Text:  I LOVE MY INDIA
Cipher Text:  L QRYH PB LQGLD
PS C:\Desktop>
```

2) Write a C/C++/Python/JAVA program to implement monoalphabetic cipher substitution technique. Consider following cipher for encryption.

CODE:

```
C: > Desktop > monoalpha.py > ...
1  def monocode(c):
2      dictionary = {
3          'a': 'D','b': 'K','c': 'V','d': 'Q',
4          'e': 'F','f': 'I','g': 'B','h': 'J',
5          'i': 'W','j': 'P','k': 'E','l': 'S',
6          'm': 'C','n': 'X','o': 'H','p': 'T',
7          'q': 'M','r': 'Y','s': 'A','t': 'U',
8          'u': 'O','v': 'L','w': 'R','x': 'G',
9          'y': 'Z','z': 'N',
10         ' ': ' '
11     }
12
13     return dictionary[c]
14
15 def encrypt(s):
16     res = ""
17     for i in s:
18         res += monocode(i.lower())
19
20     return res
21
22 inp = input("Enter text to encrypt : ")
23 ans = encrypt(inp)
24 print()
25 print("Encrypted Text is : ", ans)
26
```

OUTPUT:



Name: Raj Kansal
PRN: 20190802013
SEM: 5th (3rd Year)