# LAB- 1 SYSTEM SECURITY

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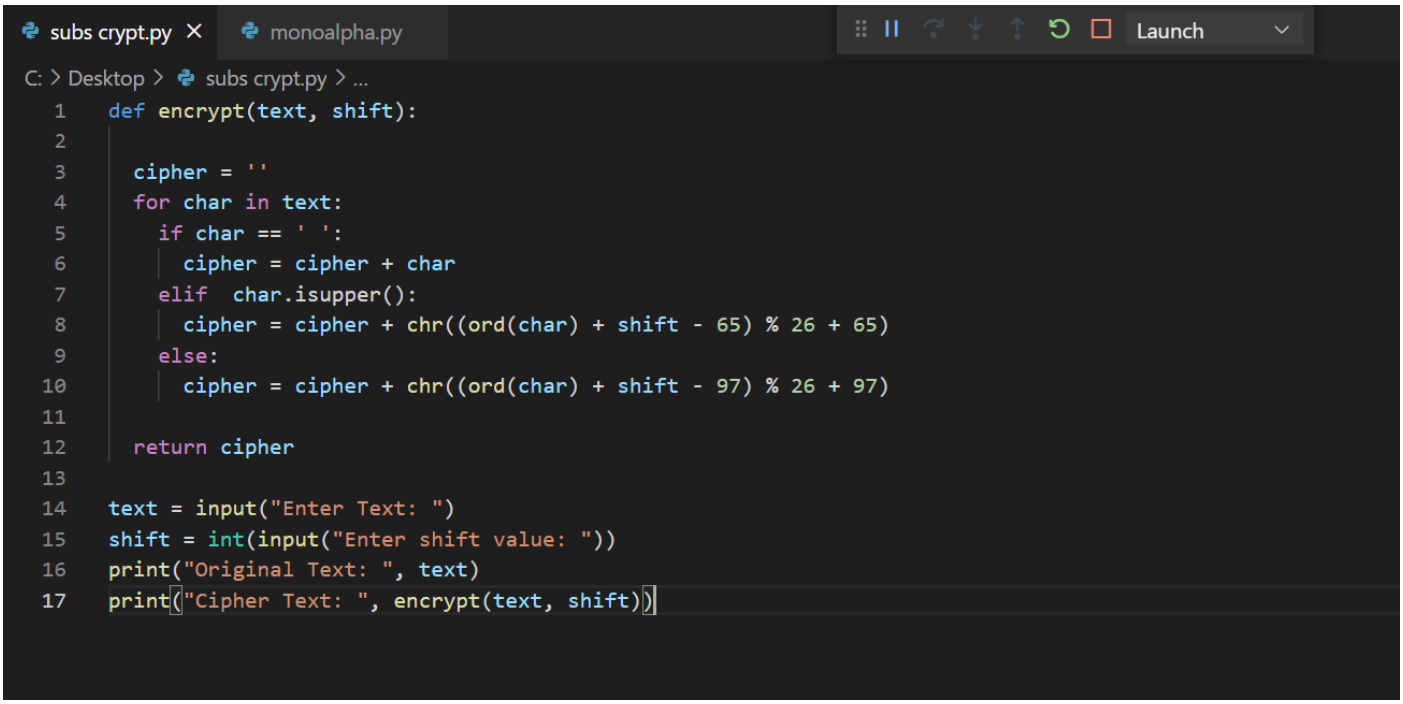
SEM: 5th (3rd Year)

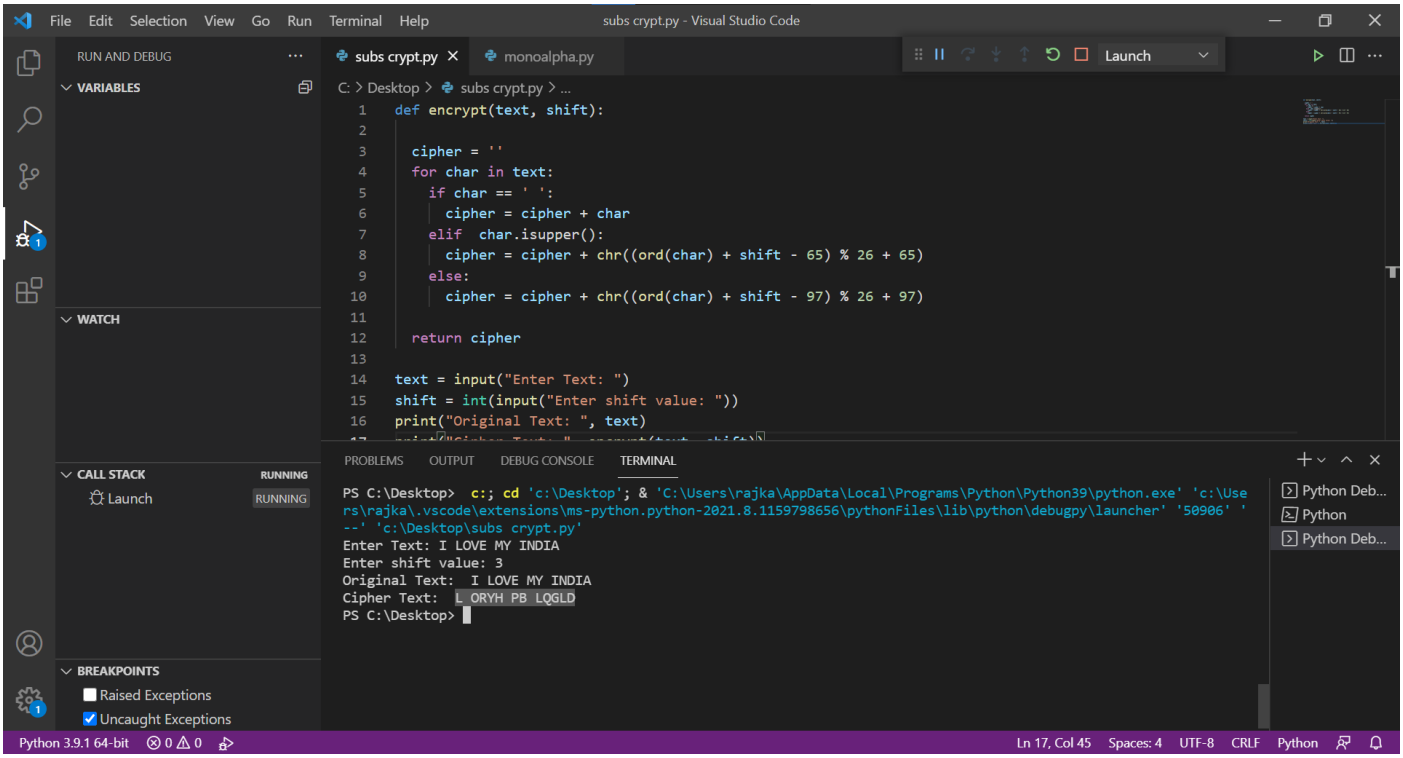
1) Write C/C++/Python/JAVA program to implement Caesar cipher substitution technique.

**CODE:**



```
def encrypt(text, shift):

  cipher = ''
  for char in text:
    if char == ' ':
      cipher = cipher + char
    elif  char.isupper():
      cipher = cipher + chr((ord(char) + shift - 65) % 26 + 65)
    else:
      cipher = cipher + chr((ord(char) + shift - 97) % 26 + 97)

  return cipher

text = input("Enter Text: ")
shift = int(input("Enter shift value: "))
print("Original Text: ", text)
print("Cipher Text: ", encrypt(text, shift))
```

**OUTPUT:**



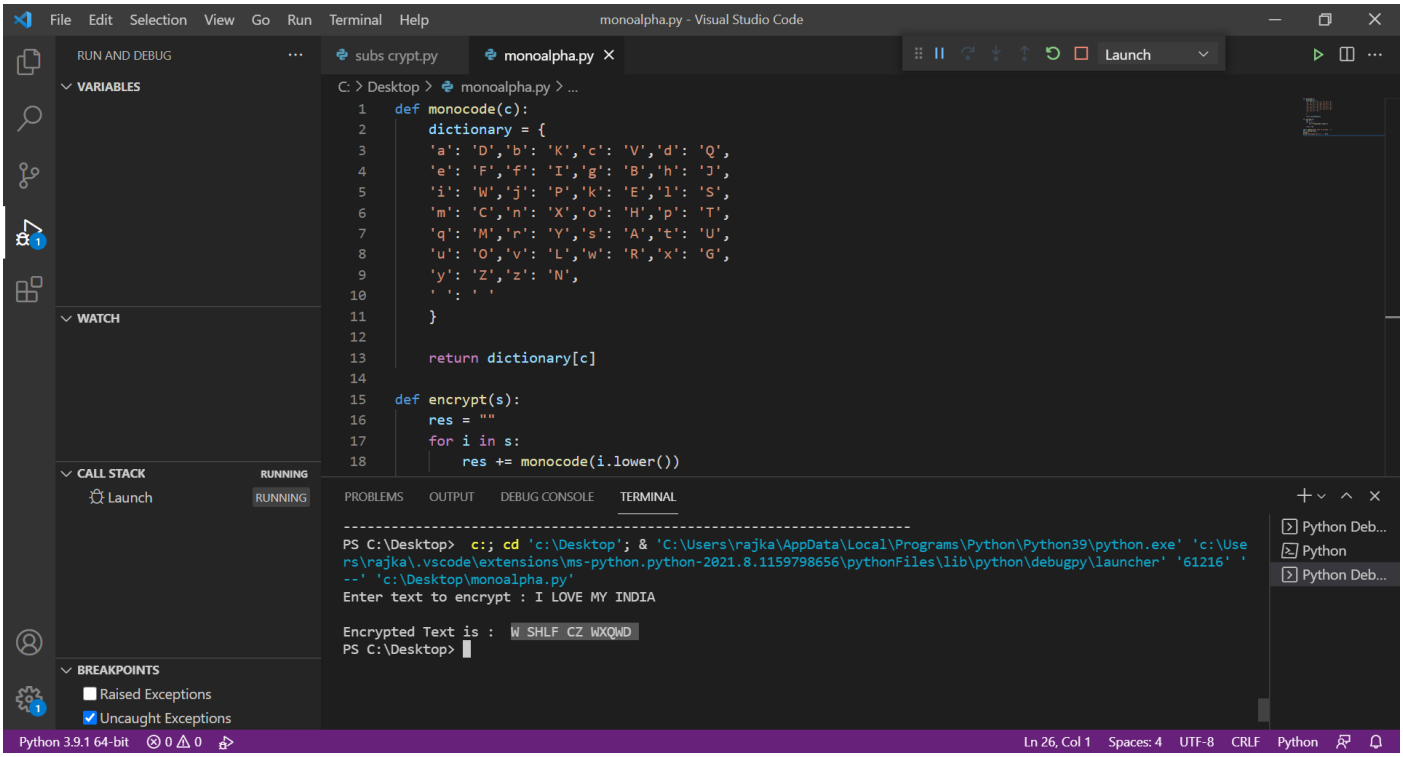
```
PS C:\Desktop>  c:; cd 'c:\Desktop'; & 'C:\Users\rajka\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Users\rajka\.vscode\extensions\ms-python.python-2021.8.1159798656\pythonFiles\lib\python\debugpy\launcher' '50906' '--' 'c:\Desktop\subs crypt.py'
Enter Text: I LOVE MY INDIA
Enter shift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

```python
def monocode(c):
    dictionary = {
    'a': 'D','b': 'K','c': 'V','d': 'Q',
    'e': 'F','f': 'I','g': 'B','h': 'J',
    'i': 'W','j': 'P','k': 'E','l': 'S',
    'm': 'C','n': 'X','o': 'H','p': 'T',
    'q': 'M','r': 'Y','s': 'A','t': 'U',
    'u': 'O','v': 'L','w': 'R','x': 'G',
    'y': 'Z','z': 'N',
    ' ': ' '
    }

    return dictionary[c]

def encrypt(s):
    res = ""
    for i in s:
        res += monocode(i.lower())

    return res

inp = input("Enter text to encrypt : ")
ans = encrypt(inp)
print()
print("Encrypted Text is : ", ans)
```

## OUTPUT:

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