

DEAD_LINE : FEBRUARY 28, 2026

INFORMATION SECURITY LAB ASSIGNMENT NO 1

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Ceaser Chiper:

It's a method to code and decode the text in this method we choose a random no and add it to index of the word we want to change as shift which replaces the original word with the word on the new index e.g **B=index(2)** **random no =3** **new letter = random no + index no of B which is E**

We write a python code on same concept which encrypts and decrypts the text

Code is:

```
# Caesar Cipher Implementation
# Course: Information Security
# Lab Assignment 1

def caesar_encrypt(text, shift):#Function defination
    encrypted_text = ""#initializing with empty string for avoiding garbage vlaue

    for char in text:#char is a variable here that takes one character from the
string that is stored in the parameter "text"

        # Check if character is uppercase
        if char.isupper():
            encrypted_text += chr((ord(char) - ord('A') + shift) % 26 +
ord('A'))#ord change character in "char" into ASCII CODE and than chr will change
back the the ASCII CODE into character

        # Check if character is Lowercase
        elif char.islower():
            encrypted_text += chr((ord(char) - ord('a') + shift) % 26 + ord('a'))

        # Keep spaces and special characters unchanged
        else:
            encrypted_text += char

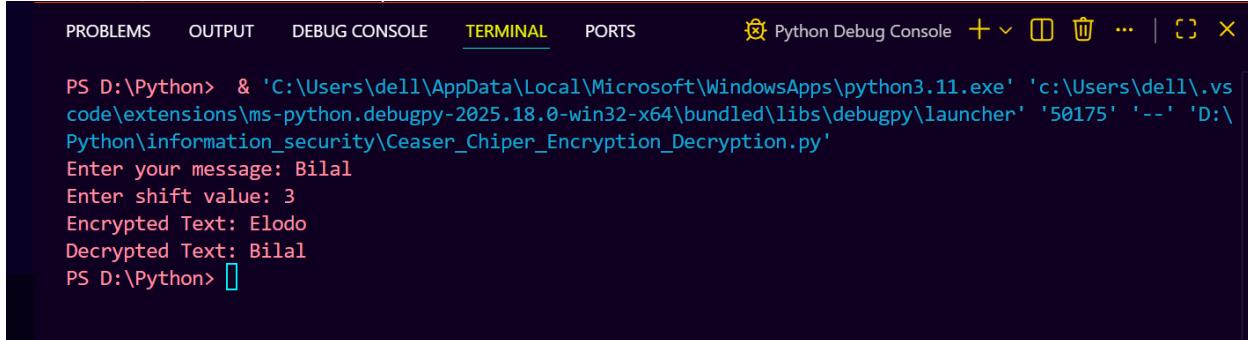
    return encrypted_text

def caesar_decrypt(ciphertext, shift):
    # Decryption is encryption with negative shift
    return caesar_encrypt(ciphertext, -shift)

# Main Program
if __name__ == "__main__":
    message = input("Enter your message: ")
    shift_value = int(input("Enter shift value: "))
```

```
encrypted = caesar_encrypt(message, shift_value)#passing arguments to parameters
    print("Encrypted Text:", encrypted)
    decrypted = caesar_decrypt(encrypted, shift_value)#passing arguments to parameters
        print("Decrypted Text:", decrypted)
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python Debug Console + ▾ ⌂ ⌄ ⌅ ⌆ | [] ×

PS D:\Python> & 'C:\Users\dell\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\dell\.vs code\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '50175' '--' 'D:\Python\information_security\Caesar_Cipher_Encryption_Decryption.py'
Enter your message: Bilal
Enter shift value: 3
Encrypted Text: Elodo
Decrypted Text: Bilal
PS D:\Python>
```

Output Explanation:

Encrypting:Bilal

I entered Bilal it replaces every letter with the letter that are 3 places next to the every letter of Bilal

- B+3=E
- i+3=l
- l+3=o
- a+3=d

Decrypting:Elodo

Program follows the same procedure of encryption but this time with -3 so every letter moves 3 places back

THE END