Evaluation Sheet

Class: T.E Computer Engineering   **Sem:** VI

Subject: Cryptography and System Security

Experiment No: 1

Date: 04/01/2023

Title of Experiment: Design and Implementation of Caesar Cipher.

Sr. No.	Evaluation Criteria	Max Marks	Marks Obtained
1	Practical Performance	12	
2	Oral	2	
3	Timely Submission	1	
	Total	15	

Signature of Subject Teacher
[Vijesh M.Nair]

Program Code –

```python
def encrypt(plaintext, key):
    ciphertext = ""
    for char in plaintext:
        if char.isalpha():
            key_amount = ord(char) + key
            if char.isupper():
                if key_amount > ord("Z"):
                    key_amount -= 26
                elif key_amount < ord("A"):
                    key_amount += 26
                ciphertext += chr(key_amount)
            elif char.islower():
                if key_amount > ord("z"):
                    key_amount -= 26
                elif key_amount < ord("a"):
                    key_amount += 26
                ciphertext += chr(key_amount)
        else:
            ciphertext += char
    return ciphertext


def decrypt(ciphertext, key):
    plaintext = ""
    for char in ciphertext:
        if char.isalpha():
            key_amount = ord(char) - key
            if char.isupper():
                if key_amount > ord("Z"):
                    key_amount -= 26
                elif key_amount < ord("A"):
```

```python
                key_amount += 26
            plaintext += chr(key_amount)
        elif char.islower():
            if key_amount > ord("z"):
                key_amount -= 26
            elif key_amount < ord("a"):
                key_amount += 26
            plaintext += chr(key_amount)
        else:
            plaintext += char
    return plaintext


plaintext = input("Enter Plain Text: ")
key = int(input("Enter key for encryption: "))
ciphertext = encrypt(plaintext, key)
print("Ciphertext: ", ciphertext)
decrypted_plaintext = decrypt(ciphertext, key)
print("Decrypted plaintext: ", decrypted_plaintext)
```

Output –

```
PS N:\Academics\Study Material\Degree (B.E.
Python311/python.exe" "n:/Academics/Study M
xpt1/CaeserCipher.py"
Enter Plain Text: niraj
Enter key for encryption: 3
Ciphertext:  qludm
Decrypted plaintext:  niraj
PS N:\Academics\Study Material\Degree (B.E.
```