



COMSATS University Islamabad

Attack Campus

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Course	Information security-lab
Assignment	01

PYTHON CODE:

```
# Caesar Cipher Program

# Encryption Function
def caesar_encrypt(text, shift): 1 usage
    result = ""

    for ch in text:
        if ch.isalpha(): # check if letter
            if ch.isupper():
                base = ord('A')
            else:
                base = ord('a')

            new_char = chr((ord(ch) - base + shift) % 26 + base)
            result += new_char
        else:
            result += ch # space or special character same

    return result
```

```
# Decryption Function
def caesar_decrypt(text, shift):| 1 usage
    result = ""

    for ch in text:
        if ch.isalpha():
            if ch.isupper():
                base = ord('A')
            else:
                base = ord('a')

            new_char = chr((ord(ch) - base - shift) % 26 + base)
            result += new_char
        else:
            result += ch

    return result
```

```
# Main Program
print(" Caesar Cipher Program ")

message = input("Enter your message: ")
shift = int(input("Enter shift value: "))

encrypted = caesar_encrypt(message, shift)
print("Encrypted Message:", encrypted)

decrypted = caesar_decrypt(encrypted, shift)
print("Decrypted Message:", decrypted)
```

OUTPUT:

```
C:\Users\COMSAT\AppData\Local\Microsoft\Windows\Terminal  
Caesar Cipher Program  
Enter your message: Attack at Dawn  
Enter shift value: 3  
Encrypted Message: Dwwdfn dw Gdzq  
Decrypted Message: Attack at Dawn  
  
Process finished with exit code 0
```