Assignment 2 Writeup

Problem Statement:
Write a program for the encryption and decryption of **Caesar cipher** and monoalphabetic cipher. identify the plaintext and calculate the time required for the same.

What I have done...
1. Two C programs Caeser.c and Monoalphabetic.c.
2. Each has two function encryption and decryption.
3. Caeser takes two input
    1. text(string)
    2. key(integer)
4. Monoalphabetic takes one input
    1. text(string)
    2. hardcoded security key
5. Encrytion takes text as plaintext.
6. Decryption takes text as ciphertext.
7. All special character and numbers remain same. Lower exchange with lower ones while Upper exchange with upper. Ignore spaces.
8. Prints time required for encryption.
9. Prints time required for decryption.

Output screenshot & How to run:

```
File  Edit  View  Search  Terminal  Help
(base) hp@shweta:~$ cd Subject/CNS/
(base) hp@shweta:~/Subject/CNS$ gcc caeser_cipher.c
(base) hp@shweta:~/Subject/CNS$ ./a.out
Enter text: gfjlfgfkjgfdgj432%^$%64jbfsd
Enter key: 6

plaintext: gfjlfgfkjgfdgj432%^$%64jbfsd
ciphertext: mlprlmlqpmljmp432%^$%64phlyj

Time required: 6 usec

ciphertext: gfjlfgfkjgfdgj432%^$%64jbfsd
plaintext: azdfzazedazxad432%^$%64dvzmx

Time required: 5 usec
(base) hp@shweta:~/Subject/CNS$ gcc monoalphabetic.c
(base) hp@shweta:~/Subject/CNS$ ./a.out
Enter text: djfghdfghdjfhgfdgh8435kjncxgjdks

plaintext: djfghdfghdjfhgfdgh8435kjncxgjdks
ciphertext: fohmlfhmlfohlmhfml8435korcxmofke

Time required: 5 usec

ciphertext: djfghdfghdjfhgfdgh8435kjncxgjdks
plaintext: ovdmfodmfovdfmdomf8435kvlcxmvokb

Time required: 10 usec
(base) hp@shweta:~/Subject/CNS$ 
```