# Ex. No.: 1 Date: CAESAR CIPHER

### **Problem Statement:**

Julius Caesar protected his confidential information by encrypting it using a cipher. Caesar's cipher shifts each letter by a number of letters. If the shift takes you past the end of the alphabet, just rotate back to the front of the alphabet. In the case of a rotation by 3, w, x, y, and z would map to z, a, b and c.

Original alphabet: abcdefghijklmnopqrstuvwxyz Alphabet rotated +3: defghijklmnopqrstuvwxyzabc

### Aim:

To implement encryption and decryption in Caesar Cipher technique.

## **Algorithm:**

- Declare two arrays to store plaintext and ciphertext
- · Prompt the user to enter plaintext
- Loop till the end-of line marker comes
- get one plaintext character & put the same in plaintext[] array and increment i
- apply caesar 3 key shift cipher on the character and store in ciphertext[] array and increment x.
- Print the ciphertext

## **Program Code:**

```
#include <stdio.h>
int main()
{
    char plaintext[100]={0}, ciphertext[100]={0};
    int c;
    printf("Plaintext:");
    while((c=getchar())!= '\n')
    {
        static int x=0, i=0;
        plaintext[i++]=(char)c;
        ciphertext[x++]=(char)(c+3);
    }
    printf("Cipher text:");
    printf("%s\n",ciphertext)
    ; return 0;
```

}

## **Output:**

Enter the msg : 1234567890

Enter the Key : 3

Encrypted message: 4567890123

Enter the msg : recclge

Enter the Key :2

Encrypted message: ocfjwokvjcm

Decrypted message: recclge

**Result:**