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HX-10

3:Write a program in C/C++/Java to read a large file containing English text only and show the frequencies of its characters. Now encrypt this plaintext with a generalized Caesar cipher with key value 7 and show the frequencies of characters in the ciphertext. [3L] (21/07/2015)

```
#include <stdio.h>
int main(void){

    int i=0,j=0;
    int c;
    int store[26] = {0};
    int count[26] = {0};
    // char *temp,*arr;
    int temp,arr;
    FILE *fp;
    fp = fopen("input.txt","r");
    while((c = fgetc(fp)) != EOF){

        // printf("%c-", c);
        temp  = c - 'a';
        ++store[temp];
        arr = (temp + 7)%26;
        ++count[arr];
        // printf("%c ", arr + 'a');

    }

    for(i=0;i<26;i++){

        printf(" %c : ",(i + 'a'));
        for(j=0;j<store[i];j++){

            printf("+");
```

```
        }
        printf("\n");
    }
    printf("Frequency in cypher text : \n");
    for(i=0;i<26;i++){


        printf("%c : ",(i + 'a'));
        for(j=0;j<count[i];j++){


            printf("*");
        }
        printf("\n");
    }


    fclose(fp);
    return 0;
}
```

OUTPUT:

koushik@koushik-SVE15115ENW:~/class/Internet-Security-System/day3$ ./ceaser

a : +

b :

c :

d : ++++

e : ++

f : ++++++

g : +++++++

h : +++++++

i : ++++

j : ++++++

k : +++++

l : ++++

m :

n :

o : +++

p : +++

q : +

r : +++++

s : +++

t : +++++

u : ++++

v :

w : ++++

x :

y : ++++

z :

Frequency in cypher text :

a : *****

b : ****

c :

d : ***

e :

f : ****

g :

h : *

i :

j :

k : ****

l : **

m : ******

n : *******

o : *******

p : ****

q : ******

r : *****

s : ****

t :

u :

v : ***

w : ***

x : *

y : *****

z : ***

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