***SAVEETHA SCHOOL OF ENGINEERING***

***SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCE***

**EXP NO 1: Write a program to encrypt and decrypt a message using Caesar cipher along with the key.**

**AIM**

To Write a C program to encrypt and decrypt a message using Caesar cipher along with the key.

**PROCEDURE**

* Traverse the given text one character at a time .
* For each character, transform the given character as per the rule,depending on whether we’re encrypting or decrypting the text.
* Return the new string generated.

**PROGRAM**

#include <stdio.h>

#include <stdlib.h>

#define MAX\_LENGTH 100

void encrypt(char \*message, int key) {

char ch;

while (\*message) {

ch = \*message;

if (ch >= 'a' && ch <= 'z') {

ch = 'a' + (ch - 'a' + key) % 26;

} else if (ch >= 'A' && ch <= 'Z') {

ch = 'A' + (ch - 'A' + key) % 26;

}

\*message = ch;

message++;

}

}

void decrypt(char \*message, int key) {

encrypt(message, 26 - key);

}

int main() {

char message[MAX\_LENGTH];

int key;

printf("Enter a message: ");

fgets(message, sizeof(message), stdin);

printf("Enter key: ");

scanf("%d", &key);

encrypt(message, key);

printf("Encrypted message: %s\n", message);

decrypt(message, key);

printf("Decrypted message: %s\n", message);

return 0;

}

**OUTPUT**

