Date :

PRACTICAL-5

Objective – Write a program to implement Generalized Caesar Cipher

Code-

```
#include<stdio.h>
#include<stdlib.h>

void caeserCipher(char message[],int key){
   char ch;
   int i;
   for(i = 0; message[i] != '\0'; ++i){
                ch = message[i];
                if(ch >= 'a' && ch <= 'z'){
                        ch = (ch+key-97)%26 +97;
                        message[i] = ch;
                }
                else if(ch >= 'A' && ch <= 'Z'){
                        ch = (ch+key-65)%26 +65;
                        message[i] = ch;
                }
        }
}
```

```
int main()
{
        char message[100], ch;
        int i, key,option=0;

   while (option!=3)
   {
      printf("\n1.Encrypt\n2.Decrypt\n3.Exit\nEnter option to perform operation:");
      scanf("%d",&option);
      switch (option)
         {
      case 1:
         printf("\nEnter a message to encrypt: ");
               scanf("%s",&message);
               printf("Enter key: ");
               scanf("%d", &key);
               caeserCipher(message,key);
               printf("Encrypted message: %s\n", message);
         break;
      case 2:
         printf("\nEnter a message to decrypt: ");
               scanf("%s",&message);
               printf("Enter key: ");
               scanf("%d", &key);
               caeserCipher(message,abs(26-key));
               printf("Encrypted message: %s\n", message);
         break;
```

```
        case 3:
            return 0;
        default:
            printf("\nEnter option to perform operation\n1.Encrypt\n2.Decrypt\n3.Exit\n");
            break;
        }
    }
        return 0;
}
```

Output-

```
(base) [rli@rli Lab5]$ gcc File5.c -o File5
(base) [rli@rli Lab5]$ ./File5

1.Encrypt
2.Decrypt
3.Exit
Enter option to perform operation:1

Enter a message to encrypt: Hello
Enter key: 25
Encrypted message: Gdkkn

1.Encrypt
2.Decrypt
3.Exit
Enter option to perform operation:2

Enter a message to decrypt: Gdkkn
Enter key: 25
Encrypted message: Hello

1.Encrypt
2.Decrypt
3.Exit
Enter option to perform operation:3
(base) [rli@rli Lab5]$
```