SPL General Assignment – 1

Batch 72 – A

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Code Link :
https://drive.google.com/drive/folders/1M5LrxxECqcCbYdTdpztARXdBAGsvHx8_?usp=sharing

encrypt.c

```
int encrypt(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;

            if (ch > 'z')
            {
                ch = ch - 'z' + 'a' - 1;
            }

            message[i] = ch;
        }
        else if (ch >= 'A' && ch <= 'Z')
        {
            ch = ch + key;

            if (ch > 'Z')
            {
                ch = ch - 'Z' + 'A' - 1;
            }

            message[i] = ch;
        }
    }

    return 0;
}
```

decrypt.c

```
int decrypt(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;

            if (ch < 'a')
            {
                ch = ch + 'z' - 'a' + 1;
            }

            message[i] = ch;
        }
        else if (ch >= 'A' && ch <= 'Z')
        {
            ch = ch - key;

            if (ch < 'A')
            {
                ch = ch + 'Z' - 'A' + 1;
            }

            message[i] = ch;
        }
    }

    return 0;
}
```

encryption.c

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

#include "encrypt.c"
#include "decrypt.c"

int encrypt(char message[], int key);
int decrypt(char message[], int key);

int main()
{
    char sentence[1000];
    FILE *input, *output, *decrypt_output;
    int key = 4;

    // Reading text from "input.txt"
    if ((input = fopen("input.txt", "r")) == NULL)
    {
        printf("Error! opening file");
        exit(1);
    }
    fscanf(input, "%[^\n]", sentence);
    fclose(input);

    // Encrypt input.text files words/sentences via calling encrypt
function.
    encrypt(sentence, key);

    // Writing encrypted message into "enc_msg.txt"
    output = fopen("enc_msg.txt", "w");
    if (output == NULL)
    {
        printf("Error!");
        exit(1);
    }

    fprintf(output, "%s", sentence);
    fclose(output);

    // Decrypt enc_msg.text files words/sentences via calling decrypt
function.
    decrypt(sentence, key);

    // writing decrypted output into "dec_msg.txt"
    decrypt_output = fopen("dec_msg.txt", "w");
    if (decrypt_output == NULL)
    {
        printf("Error!");
        exit(1);
    }
```

```
    fprintf(decrypt_output, "%s", sentence);
    fclose(decrypt_output);
}
```

input.txt

```
this is a secret message
```

enc_msg.txt

```
xlmw mw e wigvix qiwweki
```

dec_msg.txt

```
this is a secret message
```