using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Caesar\_encryption

{

class Program

{

public static string Caesar(char [] alphabet, int shift, string input)

{

char[] inputChar = input.ToCharArray();

string res = "";

bool isInAlphabet = false;

for (int i = 0; i < input.Length; i++)

{

isInAlphabet = false;

for (int j = 0; j < alphabet.Length; j++)

{

if (inputChar[i] == alphabet[j])

{

res += alphabet[(j + shift) % alphabet.Length];

isInAlphabet = true;

}

}

if (isInAlphabet == false)

{

res += inputChar[i];

}

}

Console.WriteLine(res);

return res;

}

public static void CaesarDecryption(char[] alphabet, int shift, string encrypted)

{

if (shift >= alphabet.Length)

{

shift = shift - alphabet.Length;

}

string res = "";

bool isInAlphabet = false;

for (int i = 0; i < encrypted.Length; i++)

{

isInAlphabet = false;

for (int j = 0; j < alphabet.Length; j++)

{

if (encrypted[i] == alphabet[j])

{

if (j - shift < 0)

{

res += alphabet[(j - shift + alphabet.Length)];

isInAlphabet = true;

}

else

{

res += alphabet[(j - shift)];

isInAlphabet = true;

}

}

}

if (isInAlphabet == false)

{

res += encrypted[i];

}

}

Console.WriteLine(res);

}

static void Main(string[] args)

{

char[] alphabetEn = { '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'};

char[] alphabetRu = { 'а', 'б', 'в', 'г', 'д', 'е', 'ё', 'ж', 'з',

'и', 'й', 'к', 'л', 'м', 'н', 'о', 'п', 'р', 'с','т',

'у', 'ф', 'х', 'ц', 'ч', 'ш', 'щ', 'ъ', 'ы', 'ь',

'э', 'ю', 'я'};

Console.Write("Enter your text: ");

string input = Console.ReadLine();

input = input.ToLower();

Console.Write("Enter the shift: ");

int shift = int.Parse(Console.ReadLine());

Console.WriteLine("Choose the language (English - 1, Russian - 2)");

int lang = int.Parse(Console.ReadLine());

string encrypted = "";

if (lang == 1)

{

encrypted = Caesar(alphabetEn, shift, input);

Console.Write("Decrypted: ");

CaesarDecryption(alphabetEn, shift, encrypted);

}

if (lang == 2)

{

encrypted = Caesar(alphabetRu, shift, input);

Console.Write("Decrypted: ");

CaesarDecryption(alphabetRu, shift, encrypted);

}

}

}

}