#include <iostream>

#include <string>

#include<bits/stdc++.h>

using namespace std;

int choice;

string str;

string keyword;

string cipher\_text;

string originalText(string cipher\_text, string key)

{

string orig\_text;

for (int i = 0 ; i < str.size(); i++)

{

// converting in range 0-25

int x = (str[i] - key[i] + 26) %26;

// convert into alphabets(ASCII)

x += 'A';

orig\_text.push\_back(x);

}

return orig\_text;

}

string generateKey(string str, string key)

{

int x = str.size();

for (int i = 0; ; i++)

{

if (x == i)

i = 0;

if (key.size() == str.size())

break;

key.push\_back(key[i]);

}

return key;

}

string cipherText(string str, string key)

{

for (int i = 0; i < str.size(); i++)

{

// converting in range 0-25

int x = (str[i] + key[i]) %26;

// converting into alphabet

x += 'A';

cipher\_text.push\_back(x);

}

return cipher\_text;

}

int main() {

cout<<"(Just some notes, so far cant have KEYWORD be smaller than the message and no spaces,symbols or lowercases)"<<endl<<endl;

cout<<"Welcome to Cap Locks Encrypter press 1 to encrypt and 2 to decrypt"<<endl;

cin>>choice;

switch (choice){

case 1:

cout<<"You have chosen Encryption please enter the message you would like encrypted:"<<endl;

cin>>str;

cin.ignore();

cout<<"Now would you please enter the keyword for the encryption:"<<endl;

cin>>keyword;

cin.ignore();

break;

case 2:

cout<<"You have chosen Decryption please enter the message you would like decrypted:"<<endl;

cin>>str;

cin.ignore();

cout<<"Now the key which you want to use: ";

cin>>keyword;

cin.ignore();

break;

default:

cout<<"Unfortunately there was an error please restart the program. ";

}

string key = generateKey(str, keyword);

string cipher\_text = cipherText(str, key);

cout<<"Thank you your message is: "<<cipher\_text<<" also the reverted form is "<<originalText(cipher\_text, key);

return 0;

}