Vigener Cipher:

#include <stdio.h>

#include <string.h>

#include <ctype.h>

void process(char\* text, char\* key, int encrypt) {

int len = strlen(text), keyLen = strlen(key);

for (int i = 0, j = 0; i < len; i++) {

if (isalpha(text[i])) {

char base = isupper(text[i]) ? 'A' : 'a';

int shift = tolower(key[j % keyLen]) - 'a';

if (!encrypt) shift = 26 - shift;

text[i] = ((tolower(text[i]) - 'a' + shift) % 26) + base;

j++;

}

}

}

int main() {

char text[100], key[100];

int choice;

printf("Enter text: ");

fgets(text, sizeof(text), stdin);

text[strcspn(text, "\n")] = '\0';

printf("Enter key: ");

scanf("%s", key);

printf("1. Encrypt\n2. Decrypt\nChoose (1/2): ");

scanf("%d", &choice);

if (choice == 1)

process(text, key, 1);

else if (choice == 2)

process(text, key, 0);

else {

printf("Invalid choice.\n");

return 1;

}

printf("Result: %s\n", text);

return 0;

}

