Monoalphabetic Cipher:

#include <stdio.h>

#include <string.h>

#include <ctype.h>

char key[] = "QWERTYUIOPASDFGHJKLZXCVBNM";

void encrypt(char \*in, char \*out) {

for (int i = 0; in[i]; i++) {

char ch = toupper(in[i]);

out[i] = isalpha(ch) ? (islower(in[i]) ? tolower(key[ch - 'A']) : key[ch - 'A']) : in[i];

}

out[strlen(in)] = '\0';

}

void decrypt(char \*in, char \*out) {

for (int i = 0; in[i]; i++) {

char ch = toupper(in[i]);

if (isalpha(ch)) {

for (int j = 0; j < 26; j++)

if (key[j] == ch) {

out[i] = islower(in[i]) ? j + 'a' : j + 'A';

break;

}

} else out[i] = in[i];

}

out[strlen(in)] = '\0';

}

int main() {

char in[100], out[100]; int choice;

printf("Enter message: ");

fgets(in, sizeof(in), stdin);

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

printf("1. Encrypt\n2. Decrypt\nEnter choice: ");

scanf("%d", &choice);

if (choice == 1) encrypt(in, out);

else if (choice == 2) decrypt(in, out);

else return printf("Invalid choice.\n"), 1;

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

return 0;

}

