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#include <stdio.h>
#include <string.h>
#include <ctype.h>

void generateKey(char *plaintext, char *key, char *fullKey) {
    int ptlen = strlen(plaintext);
    int keylen = strlen(key);
    int i, j = 0;
    for (i = 0; i < ptlen; i++) {
        if (isalpha(plaintext[i])) {
            fullKey[i] = key[j % keylen];
            j++;
        } else {
            fullKey[i] = plaintext[i];
        }
    }
    fullKey[i] = '\0';
}

void encrypt(char *plaintext, char *key, char *ciphertext) {
    char fullKey[100];
    generateKey(plaintext, key, fullKey);
    for (int i = 0; i < strlen(plaintext); i++) {
        if (isalpha(plaintext[i])) {
            char base = isupper(plaintext[i]) ? 'A' : 'a';
            ciphertext[i] = ((plaintext[i] - base) + (toupper(fullKey[i]) - 'A')) % 26 + base;
        } else {
            ciphertext[i] = plaintext[i];
        }
    }
    ciphertext[strlen(plaintext)] = '\0';
}

int main() {
    char plaintext[100], key[100], ciphertext[100];
    printf("Enter the plaintext: ");
    fgets(plaintext, sizeof(plaintext), stdin);
    plaintext[strcspn(plaintext, "\n")] = '\0';
    printf("Enter the key: ");
    fgets(key, sizeof(key), stdin);
    key[strcspn(key, "\n")] = '\0';
    encrypt(plaintext, key, ciphertext);
    printf("Ciphertext: %s\n", ciphertext);
    return 0;
}

```