Programiz C Online Compiler

Programiz PRO >

main.c

Share Run

```c
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include <ctype.h>

int gcd(int a, int b);
char encrypt_char(char p, int a, int b);
void affineCipher(const char *plaintext, int a, int b);

int gcd(int a, int b) {
    return b == 0 ? (a >= 0 ? a : -a) : gcd(b, a % b);
}

/* Encrypt a single character (handles upper- and lowercase; returns unchanged for non-letters) */
char encrypt_char(char p, int a, int b) {
    if (isupper((unsigned char)p)) {
        int base = 'A';
        int x = p - base;
        int y = ( (a * x + b) % 26 + 26 ) % 26; /* safe modulo */
        return (char)(y + base);
    } else if (islower((unsigned char)p)) {
        int base = 'a';
        int x = p - base;
        int y = ( (a * x + b) % 26 + 26 ) % 26;
        return (char)(y + base);
```

Output

Clear

```
Enter plaintext: HELLO
RCLLA


=== Code Execution Successful ===
```