

Hot days ahead 32°C Search [Taskbar icons: File Explorer, Edge, Chrome, Word, PowerPoint, Outlook, Teams, OneDrive, OneNote, Paint, Photos, Music, Video, Settings, System tray icons: Network, Volume, Battery, Date/Time: 21:08 29-07-2025]

Online C Compiler - Programiz

Upload to GitHub

Upload files - deepapreya-h/CNS

+

programiz.com/c-programming/online-compiler/

☆

Verify it's you

Learn DSA the way it should be – with step-by-step code visualization. Try now!

Programiz C Online Compiler

Programiz PRO

main.c

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Output

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```
25     return c + 'A';
26 }
27 return ch;
28 }
29 char decryptChar(char ch, int a, int b) {
30     if (isalpha(ch)) {
31         ch = toupper(ch);
32         int a_inv = modInverse(a, 26);
33         if (a_inv == -1) return '?';
34         int c = ch - 'A';
35         int p = (a_inv * (c - b + 26)) % 26;
36         return p + 'A';
37     }
38     return ch;
39 }
40 int main() {
41     char plaintext[100], ciphertext[100], decrypted[100];
42     int a, b;
43     printf("Enter values of a and b (a must be coprime with 26): ");
44     scanf("%d %d", &a, &b);
45     if (gcd(a, 26) != 1) {
46         printf("Invalid 'a' value! It must be coprime with 26.\n");
47         return 1;
48     }
```

Enter values of a and b (a must be coprime with 26): 1,2,5,6,7

Enter the plaintext (letters only, no special characters): Encrypted Text: ,2,5,6,7

Decrypted Text: ,2,5,6,7

=== Code Execution Successful ===

Hot days ahead
32°C

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ENG
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29.07.2025

```

41 char plaintext[100], ciphertext[100], decrypted[100];
42 int a, b;
43 printf("Enter values of a and b (a must be coprime with 26): ");
44 scanf("%d %d", &a, &b);
45 if (gcd(a, 26) != 1) {
46     printf("Invalid 'a' value! It must be coprime with 26.\n");
47     return 1;
48 }
49 printf("Enter the plaintext (letters only, no special characters): ");
50 scanf("%s", plaintext);
51 int len = strlen(plaintext);
52 for (int i = 0; i < len; i++) {
53     ciphertext[i] = encryptChar(plaintext[i], a, b);
54 }
55 ciphertext[len] = '\0';
56 printf("Encrypted Text: %s\n", ciphertext);
57 for (int i = 0; i < len; i++) {
58     decrypted[i] = decryptChar(ciphertext[i], a, b);
59 }
60 decrypted[len] = '\0';
61 printf("Decrypted Text: %s\n", decrypted);
62 return 0;
63 }
64

```

```
Enter values of a and b (a must be coprime with 26): 1,2,5,6,7
Enter the plaintext (letters only, no special characters): Encrypted Text: ,2,5,6,7
Decrypted Text: ,2,5,6,7

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