



main.c

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### Output

Clear

```

25     5.987,
26     6.327,
27     9.056,
28     2.758,
29     0.978,
30     2.360,
31     0.150, // X
32     1.974, // Y
33     0.074 // Z
34 };
35 typedef struct {
36     int key;
37     double score;
38     char plaintext[MAX_TEXT];
39 } DecryptionResult;
40 int charToIndex(char c) {
41     return tolower(c) - 'a';
42 }
43 void caesarDecrypt(char* input, char* output, int key) {
44     int i = 0;
45     while (input[i]) {
46         if (isalpha(input[i])) {
47             char base = isupper(input[i]) ? 'A' : 'a';
48             output[i] = (input[i] - base + 26 - key) % 26 + base;

```

```
Enter ciphertext (Caesar-encrypted):  
DEEPA  
Enter number of top possible plaintexts to display (e.g. 5 or 10): 2  
  
Top 2 most likely plaintexts:  
  
[Key = 22] Score = 835.68  
HIITE  
  
[Key = 0] Score = 795.06  
DEEPA
```

Online C Compiler - Programiz

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

Programiz C Online Compiler

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..
    output[i] = (input[i] - base - key + 26) % 26 + base;
48- } else {
49-     output[i] = input[i];
50- }
51- i++;
52- }
53- output[i] = '\0';
54- }
55- }
56- double computeScore(const char* text) {
57-     int letterCounts[ALPHABET_SIZE] = {0};
58-     int totalLetters = 0;
59-     for (int i = 0; text[i]; i++) {
60-         if (isalpha(text[i])) {
61-             letterCounts[charToIndex(text[i])]++;
62-             totalLetters++;
63-         }
64-     }
65-     if (totalLetters == 0) return 0;
66-     double score = 0;
67-     for (int i = 0; i < ALPHABET_SIZE; i++) {
68-         double observed = (double)letterCounts[i] / totalLetters * 100;
69-         score += englishFreq[i] * observed;
70-     }
..
```

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[Key = 22] Score = 835.68  
HIITE  
  
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DEEPA  
  
=== Code Execution Successful ===

USD/INR  
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2065  
29-07-2025