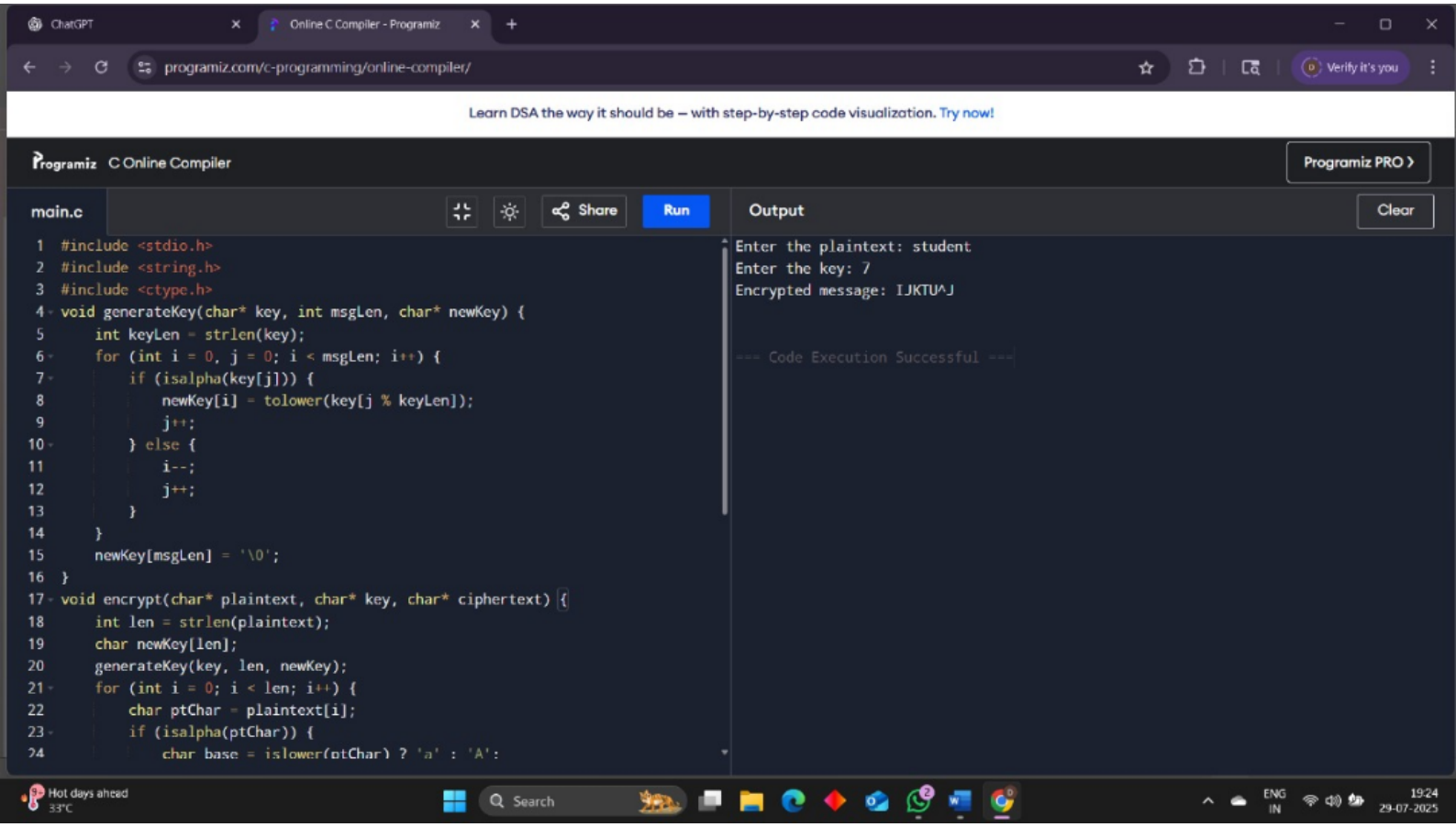
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#include <stdio.h>
#include <string.h>
#include <ctype.h>
void generateKey(char* key, int msgLen, char* newKey) {
int keyLen = strlen(key);
for (int i = 0, j = 0; i < msgLen; i++) {
if (isalpha(key[j])) {
newKey[i] = tolower(key[j % keyLen]);
j++;
} else {
i--;
j++;
}
}
newKey[msgLen] = '\0';
}
void encrypt(char* plaintext, char* key, char* ciphertext) {
int len = strlen(plaintext);
char newKey[len];
generateKey(key, len, newKey);
for (int i = 0; i < len; i++) {
char ptChar = plaintext[i];
if (isalpha(ptChar)) {
char base = islower(ptChar) ? 'a' : 'A';
Enter the plaintext: student
Enter the key: 7
Encrypted message: IJKTU^J
=== Code Execution Successful ===
Hot days ahead
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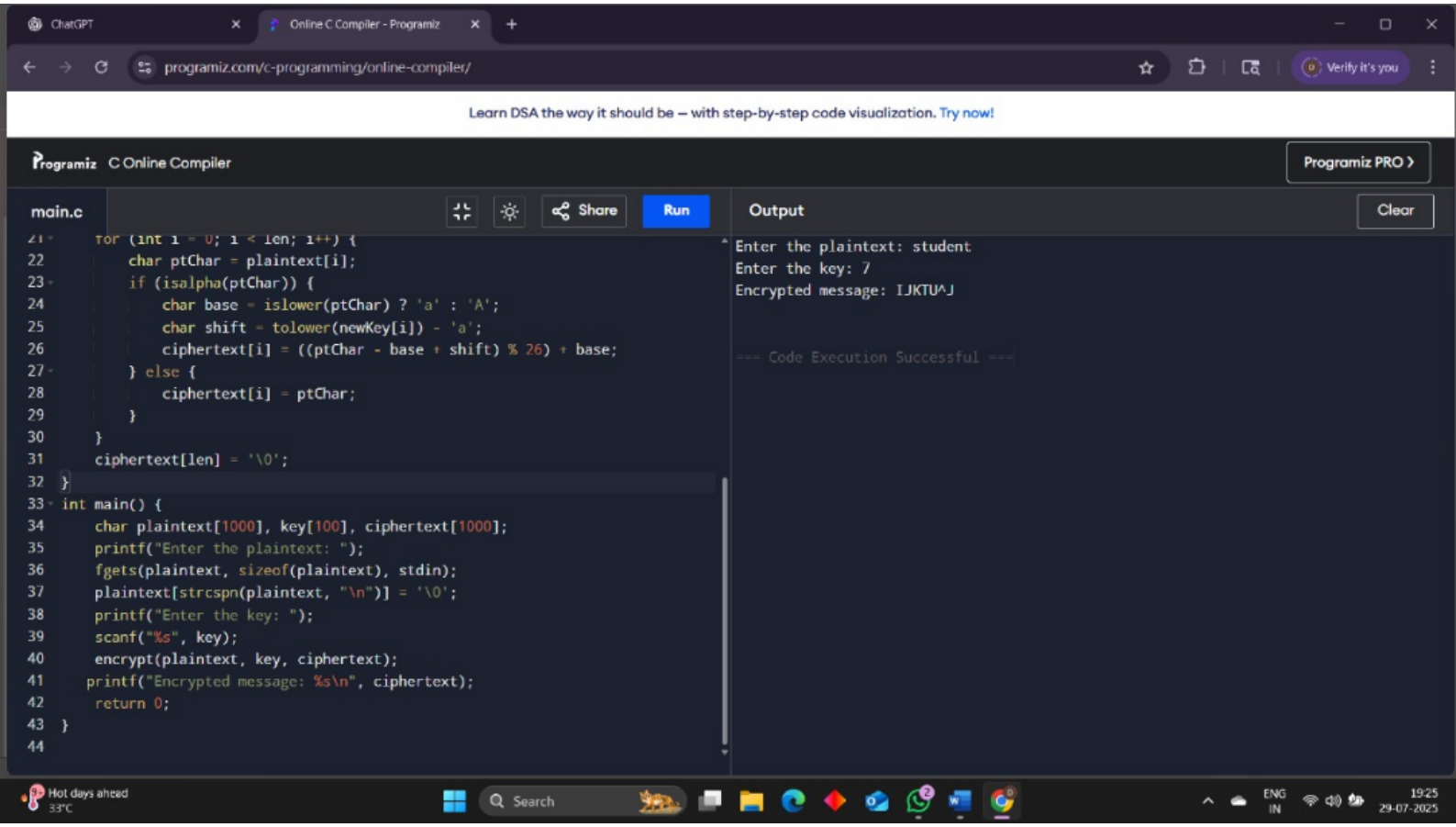
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for (int i = 0; i < len; i++) {
char ptChar = plaintext[i];
if (isalpha(ptChar)) {
char base = islower(ptChar) ? 'a' : 'A';
char shift = tolower(newKey[i]) - 'a';
ciphertext[i] = ((ptChar - base + shift) % 26) + base;
} else {
ciphertext[i] = ptChar;
}
}
ciphertext[len] = '\0';
}
int main() {
char plaintext[1000], key[100], ciphertext[1000];
printf("Enter the plaintext: ");
fgets(plaintext, sizeof(plaintext), stdin);
plaintext[strcspn(plaintext, "\n")] = '\0';
printf("Enter the key: ");
scanf("%s", key);
encrypt(plaintext, key, ciphertext);
printf("Encrypted message: %s\n", ciphertext);
return 0;
}
Enter the plaintext: student
Enter the key: 7
Encrypted message: IJKTU^J
=== Code Execution Successful ===
Hot days ahead
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19:25
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