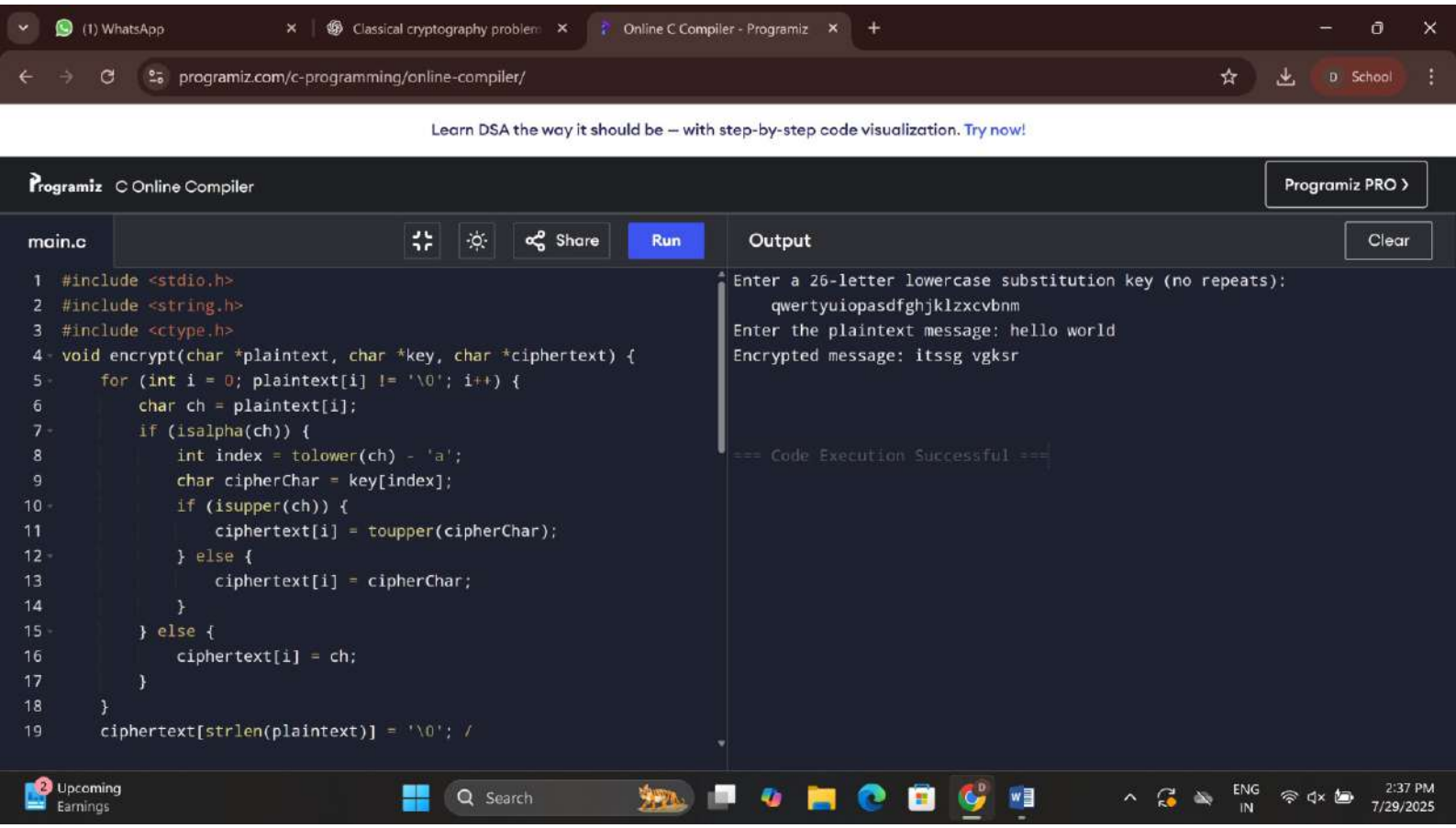
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#include <stdio.h>
#include <string.h>
#include <ctype.h>
void encrypt(char *plaintext, char *key, char *ciphertext) {
for (int i = 0; plaintext[i] != '\0'; i++) {
char ch = plaintext[i];
if (isalpha(ch)) {
int index = tolower(ch) - 'a';
char cipherChar = key[index];
if (isupper(ch)) {
ciphertext[i] = toupper(cipherChar);
} else {
ciphertext[i] = cipherChar;
}
} else {
ciphertext[i] = ch;
}
}
ciphertext[strlen(plaintext)] = '\0'; /
Enter a 26-letter lowercase substitution key (no repeats):
qwertyuiopasdfghjklzxcvbnm
Enter the plaintext message: hello world
Encrypted message: itssg vgksr
=== Code Execution Successful ===
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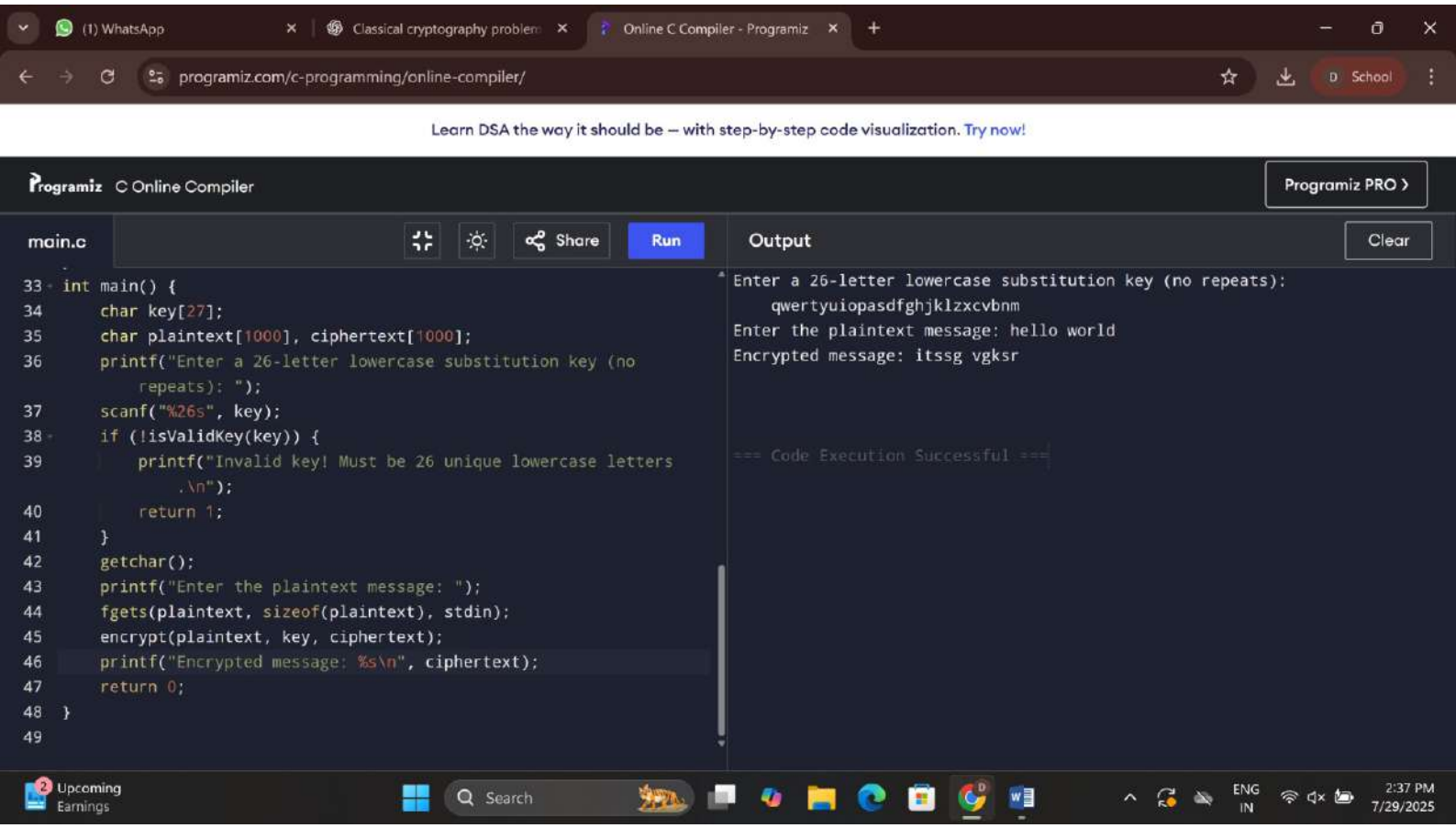
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int main() {
char key[27];
char plaintext[1000], ciphertext[1000];
printf("Enter a 26-letter lowercase substitution key (no repeats): ");
scanf("%26s", key);
if (!isValidKey(key)) {
printf("Invalid key! Must be 26 unique lowercase letters.\n");
return 1;
}
getchar();
printf("Enter the plaintext message: ");
fgets(plaintext, sizeof(plaintext), stdin);
encrypt(plaintext, key, ciphertext);
printf("Encrypted message: %s\n", ciphertext);
return 0;
}
Enter a 26-letter lowercase substitution key (no repeats):
qwertyuiopasdfghjklzxcvbnm
Enter the plaintext message: hello world
Encrypted message: itssg vgksr
=== Code Execution Successful ===
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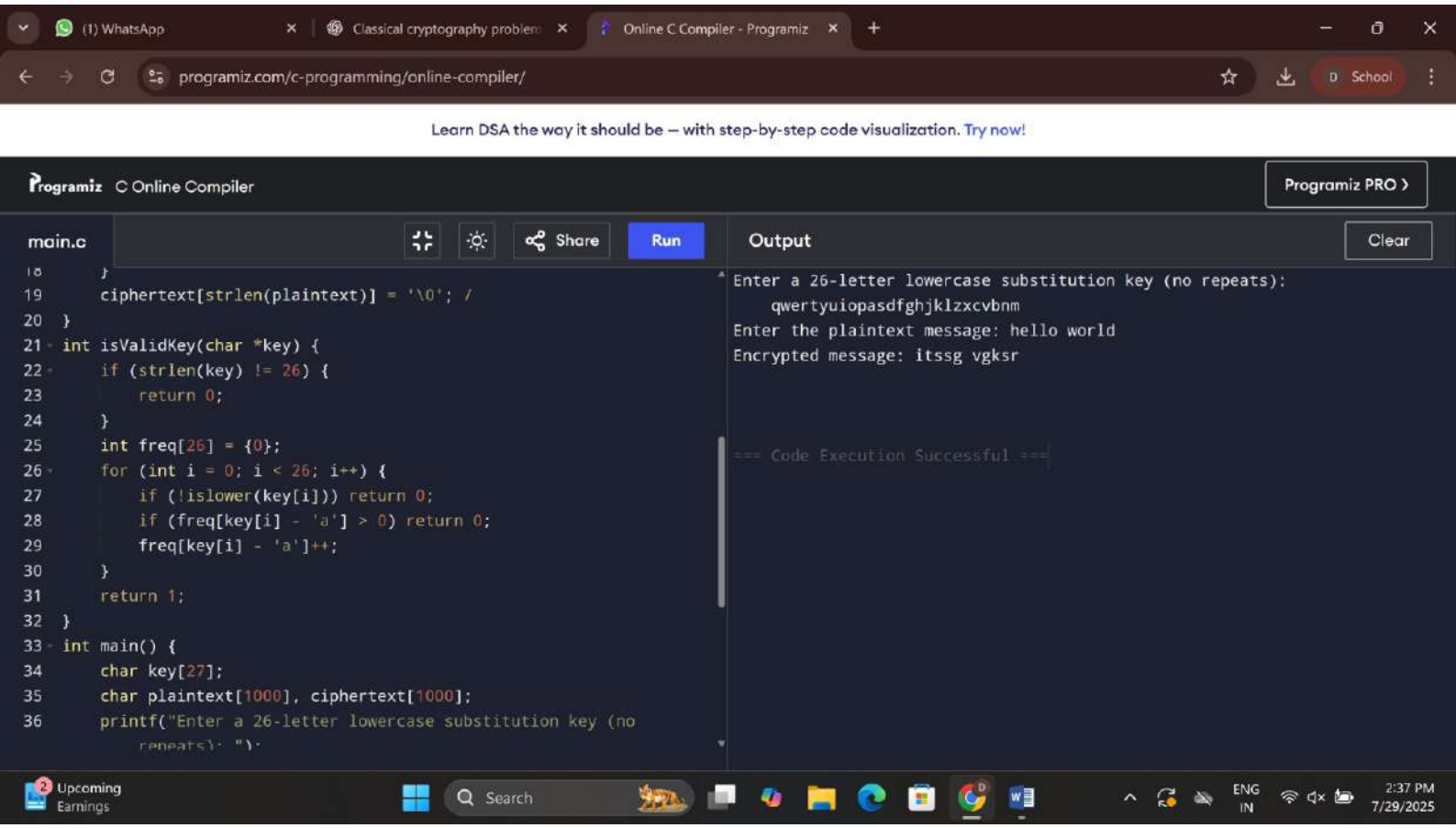
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}
ciphertext[strlen(plaintext)] = '\0'; /
}
int isValidKey(char *key) {
if (strlen(key) != 26) {
return 0;
}
int freq[26] = {0};
for (int i = 0; i < 26; i++) {
if (!islower(key[i])) return 0;
if (freq[key[i] - 'a'] > 0) return 0;
freq[key[i] - 'a']++;
}
return 1;
}
int main() {
char key[27];
char plaintext[1000], ciphertext[1000];
printf("Enter a 26-letter lowercase substitution key (no
repeats): ");
Enter a 26-letter lowercase substitution key (no repeats):
qwertyuiopasdfghjklzxcvbnm
Enter the plaintext message: hello world
Encrypted message: itssg vgksr
=== Code Execution Successful ===
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