#include <stdio.h>

#include <string.h>

int isBelongToCFG(char str[], int start, int end);

int main() {

char str[100];

printf("Enter a string to check if it belongs to the CFG: ");

scanf("%s", str);

if (isBelongToCFG(str, 0, strlen(str) - 1)) {

printf("The string belongs to the CFG.\n");

} else {

printf("The string does not belong to the CFG.\n");

}

return 0;

}

int isBelongToCFG(char str[], int start, int end) {

if (start > end) {

return 1;

}

if (str[start] == '0' && str[end] == '0') {

return isBelongToCFG(str, start + 1, end - 1);

} else if (str[start] == '1' && str[end] == '1') {

return isBelongToCFG(str, start + 1, end - 1);

} else if ((str[start] == '0' || str[start] == '1') && start == end) {

return 1;

}

return 0;

}