5.Design a lexical Analyzer to find the number of whitespaces and newline characters using C?

**Program:**

#include <stdio.h>

int main() {

char input[1000];

int i = 0;

int whitespace\_count = 0, newline\_count = 0;

printf("Enter the input string (Press Enter twice to finish):\n");

while (fgets(input, sizeof(input), stdin) != NULL) {

if (input[0] == '\n') {

break; // End input on a blank line

}

for (i = 0; input[i] != '\0'; i++) {

if (input[i] == ' ' || input[i] == '\t') {

whitespace\_count++;

} else if (input[i] == '\n') {

newline\_count++;

}

}

}

printf("Number of whitespace characters: %d\n", whitespace\_count);

printf("Number of newline characters: %d\n", newline\_count);

return 0;

}

