```
1 %{
2 #include <stdio.h>
3 #include <string.h>
4
5 int lines = 0, spaces = 0, comments = 0, keywords = 0, identifiers = 0, words = 0;
6
7 char *keyword_list[] = {
8     "auto", "break", "case", "char", "const", "continue", "default", "do", "double",
9     "else", "enum", "extern", "float", "for", "goto", "if", "int", "long", "register",
10    "return", "short", "signed", "sizeof", "static", "struct", "switch", "typedef",
11    "union", "unsigned", "void", "volatile", "while"
12 };
13
14 int is_keyword(char *word) {
15     for (int i = 0; i < sizeof(keyword_list)/sizeof(char*); i++) {
16         if (strcmp(word, keyword_list[i]) == 0)
17             return 1;
18     }
19     return 0;
20 }
21 %}
22
23 %%
24 "//".*                    { comments++; lines++; }
25 "/*"([^*]|\*+[^*/])*\*+"/"   { comments++; }
26 [ \t]+                    { spaces += yyleng; }
27 [\n]+                     { lines += yyleng; }
28 [a-zA-Z_][a-zA-Z0-9_]*    {
29                             words++;
30                             if (is_keyword(yytext)) {
31                                 keywords++;
32                             } else {
33                                 identifiers++;
34                             }
35                           }
36 .                         { words++; }
37 %%
38
39 int yywrap() { return 1; }
40
41 int main(int argc, char **argv) {
42     if (argc != 2) {
43         printf("Usage: %s <input_file>\n", argv[0]);
44         return 1;
45     }
46
47     FILE *f = fopen(argv[1], "r");
48     if (!f) {
49         perror("File open failed");
50         return 1;
51     }
52
53     yyin = f;
54     yylex();
55     fclose(f);
56
57     printf("\n--- ANALYSIS REPORT ---\n");
58     printf("Lines      : %d\n", lines);
59     printf("Spaces     : %d\n", spaces);
60     printf("Words      : %d\n", words);
61     printf("Comments   : %d\n", comments);
62     printf("Keywords   : %d\n", keywords);
63     printf("Identifiers: %d\n", identifiers);
64
65     return 0;
66 }
```