# Program 3

Design a lexical Analyzer for given language should ignore the redundant spaces, tabs and new lines and ignore comments using C.

**Code:**

#include <stdio.h>

#include <string.h>

int isWhitespace(char ch) {

   return ch == ' ' || ch == '\t' || ch == '\n';

}

int isCommentStart(char \*line) {

   return (line[0] == '/' && line[1] == '/') || (line[0] == '/' && line[1] == '\*');

}

void lexicalAnalyzer(char \*input) {

   char processed[200];

   int index = 0, inComment = 0;

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

       if (input[i] == '/' && input[i + 1] == '/') {

           break; // Ignore single-line comments

       }

       if (input[i] == '/' && input[i + 1] == '\*') {

           inComment = 1; // Start of multi-line comment

           i++;

           continue;

       }

       if (inComment && input[i] == '\*' && input[i + 1] == '/') {

           inComment = 0; // End of multi-line comment

           i++;

           continue;

       }

       if (!inComment && !isWhitespace(input[i])) {

           processed[index++] = input[i];

       }

   }

   processed[index] = '\0';

   printf("Processed Code: %s\n", processed);

}

int main() {

   char input[200];

   printf("Enter a line of code: ");

   fgets(input, 200, stdin);

   lexicalAnalyzer(input);

   return 0;

}

