Lab Program - 3

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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;

}

**Screenshot for I/O:**

