**Compiler Desigin program 2**

**Q.** Develop a lexical Analyzer to identify whether a given line is a comment or not using C

**Program:**

#include <stdio.h>

#include <string.h>

#include <stdbool.h>

bool isSingleLineComment(char \*line) {

char \*commentStart = strstr(line, "//");

if (commentStart != NULL) {

return true;

}

return false;

}

bool isMultiLineComment(char \*line) {

char commentStart = strstr(line, "/");

char commentEnd = strstr(line, "/");

if (commentStart != NULL && commentEnd != NULL && commentStart < commentEnd) {

return true;

}

return false;

}

void lexicalAnalyzer(char \*line) {

char \*start = line;

while (\*start == ' ' || \*start == '\t') {

start++;

}

char \*end = line + strlen(line) - 1;

while (\*end == ' ' || \*end == '\t') {

end--;

}

\*(end + 1) = '\0';

if (isSingleLineComment(start)) {

printf("This is a single-line comment.\n");

} else if (isMultiLineComment(start)) {

printf("This is a multi-line comment.\n");

} else {

printf("This is not a comment.\n");

}

}

int main() {

char line[200];

printf("Enter a line of code: ");

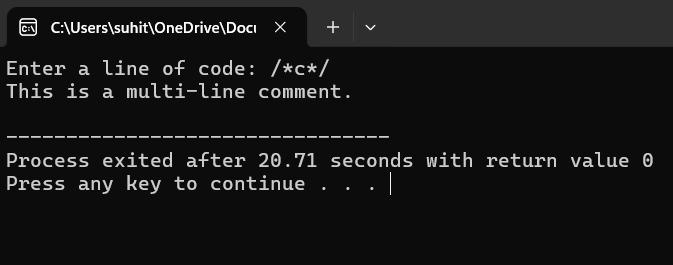
fgets(line, sizeof(line), stdin);

lexicalAnalyzer(line);

return 0;

}

**Output:**

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