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**HW 3.2 (50 points)**

Write a program, called parseC, to parse a C++ program into tokens. You should recognize and discard program comments (/\* to \*/ or after //).

**Section 1: Successful compilation of program**Graphical user interface

Description automatically generated with low confidence

**Section 2: program running on the provided example from the assignment**

Graphical user interface

Description automatically generated with medium confidence

**Section 3: Provided test input**

Text

Description automatically generated

**Section 4: Edge Case #1  
Description: Multi-line comments with many /\* characters within the comment  
  
Input:**#include <iostream>  
/\* A "Hello World" program in C++  
\*abacus/\*  
\*/  
int main() {  
 std::cout << "/\*Hello World!\*/";  
 int a += 10;  
 int c <<=a;  
 return 0;  
}

**Expected Output: Program is able to successfully decode correct closing multi-line comment.  
Output:**

A picture containing text

Description automatically generated

**Section 5: Edge Case #2  
Description: Empty file  
  
Input: {empty file}  
  
Expected Output: Program will not be able to tokenize anything and should print empty output.**

**Output**

Chart

Description automatically generated

**Section 6: Edge Case #3  
Description: input file does not exists**

**Input: non-existent cpp file  
  
Expected Output: Program will not be able to open the file and should print error handling statement.**

**Output**

Text

Description automatically generated

**Section 7: Edge Case #4  
Description: There is no closing quote.**

**Input:**  
#include <stdio.h>  
int main(int argc, char \*argv[]) /\* here is a comment \*/  
{  
 printf("\"This\" will not close.\n);  
}  
  
**Expected Output: Program will still print everything after last open quote**

**Output:**

Text

Description automatically generated Note: above, last ‘}’ is printed as part of string after opening quote

Leetcode problems 1190. Reverse Substrings Between Each Pair of Parentheses and 946. Validate Stack Sequences given below.

<https://leetcode.com/problems/reverse-substrings-between-each-pair-of-parentheses/>

Bar chart

Description automatically generated with medium confidence

<https://leetcode.com/problems/validate-stack-sequences/>  
 Bar chart

Description automatically generated