The Stack Project: BracketMatcher

You are to write a function to determine if the brackets ([ ] ( ) { }) are properly nested, i. e. , balanced.

The function will have a string as a parameter that can contain bracket and other characters. If the brackets are properly nested, the function will print the message

T*he brackets in your string are properly matched*

Otherwise, it will print a message like this:

Bracket mismatch at index <i>: <left_bracket> and <right_bracket>

or

Unmatched bracket at index <i>: <unmatched bracker>

Thus, if the string argument is *"this is (and has been { adjective here })"*, then the output will be

The brackets in your string are properly matched.

On the other hand, if the input is *"[({}])"*, then the output will be

Bracket mismatch at index 4: (and]

And if the input is *"[({})] { ("*, then the output will be

Unmatched bracket at index 6: {

You will be provided the files *bracketMatcher.h* and *bracketMatcher.cpp*. Do not modify the (very simple) .h file. The .cpp file is partially filled; your job is to fill in the remaining code for the function `balanced(string str)`.

You should, of course, create a test program that repeatedly inputs a string and outputs the bracket matcher's message until the user enters an empty string.

The only file you will submit is *bracketMatcher.cpp*.