You will complete the implementation for **a simplified version of the Standard Library string class**. Please download and read through this header file: `mystring.h`

You are to write the implementation for the above header file in a file named `mystring.cpp`. Please note that the name of the actual class that you are writing is `string`, not `mystring`. For this reason, the use of namespaces is particularly important to this lab, as your class will have the same name as that of the Standard Library's `string` class.

Add the following functions to the string class:

(a) An insertion function that allows you to insert a string at a given position in another string.
(b) A replacement function that allows you to replace a single character in a string with a new character.
(c) A search function that searches a string for the first occurrence of a specified character.
(d) A search function that counts the number of occurrences of a specified character in a string.

You are allowed to use functions from the library `string.h` to assist you in writing your functions for things like copying between strings or appending strings to one another. You are to make sure, however, that you use safe versions of these strings. For example, you should use `strncpy` and `strncat`, not their less secure alternatives of `strcpy` and `strcat`. Finally, you may NOT use the "`strdup`" function.

Before submitting, make sure to write a test file to thoroughly test all of the functions of your class. I recommend that, for this test file, you do not use the namespace `std` (i.e. don't have the line "`using namespace std`" in your code). It will likely be easier to just use your namespace: `coen70_lab`. If you don't like putting `std::` in front of `cout`, `cin`, and endl every time you write them, you can use lines like "`using std::cout`", "`using std::cin`", etc.

You should download `mystring.h`, and modify the header file (need to add more functions). You will need to upload `mystring.h` and `mystring.cpp` on Camino.