

CS162 - Programming Assignment 1 (Ch 8 & 9) - Strings (StringDemo)

The purpose of this assignment is to give you some practice working with strings and see how strings are dealt with in two possible ways.

- Part 1 has you do some activities using c-strings (null terminated array of chars)
- Part 2 has you redo those activities using the C++ string datatype in place of the Cstring (char array) (Part 2 is easier, you might want to do it first)

Note: When C++ was first created, there was no string datatype, so compiler writers oftentimes created their own. Microsoft created a string class called CString (the C stands for class in this case, not the C language) and you may run across examples of this on the internet. This is not the code you are looking for. The code you are looking for will be conjured up in your brain. Go brain go!

Details

Your program's main() will simply call the following two functions:

```
cStringDemo();  
stringTypeDemo();
```

Each of those functions will do the same thing, but the first function will use Cstrings (null-terminated character arrays) and the second will use the C++ string datatype. This will allow you to see how to work with both types of strings and compare/contrast the differences.

Each demo function should do the following:

- Declare a variable that holds your name (first last) and initialize it to your name.
- Prompt the user to guess your name (first last)
- Display a message saying whether or not the entered name matches your name
- Output the entered name
- Pass the entered name to a function (named removeVowels) which then returns a copy of the string with all the vowels removed (without destroying the original string)
 - For the C-string version, you'll need to get the vowelless string back by reference (you can't "return" arrays)
 - For the string datatype version, you can return the vowelless string.
 - both functions should be named removeVowels (example of function overloading), which works because the argument list is different
 - Note: when working with c-strings (character arrays), you'll probably have to copy the non-vowel characters one by one, I don't think any of the str functions (aside from strlen) will help.
- Print the vowelless string (which was obtained from the function)
- Concatenate the entered name with the text " the Barbarian", storing the result into well named variable, and then print this out.

Possibly Helpful Information

Cstring Documentation: <http://www.cplusplus.com/reference/clibrary/cstring/>

string Documentation: <http://www.cplusplus.com/reference/string/string/>

Overview of common operations

	C-String	C++ string
necessary include file	cstring (use to be string.h)	string
declare/initialize	char name[]="Jill"; char name2[50];	string name="Jill"; string name2;
input	cin.get(name, maxlen);	getline(cin, name)
output	cout << name;	cout << name;
compare	if (strcmp(name, name2) == 0)	if (name==name2)
get length	strlen(name)	name.length();
get specific char	name[3];	name.at(3); or name[3]

Sample Output

The output of each section should look something like this:

```
Guess my name (first last): Conan Obrien
```

```
Nice try, but incorrect
```

```
You guessed Conan Obrien
```

```
Without vowels, that's Cnn Obrn
```

```
And in less civilized times, it would be Conan Obrien the Barbarian
```

The end.