

1. Write a program called **s1.cpp** that does the following inside the `main()`:

- Declare a `string` variable called `name`
- Ask the user to enter her first name
- Read in the user's first name using `cin >>` and store their input in your `name` variable
- Output "hello *user*", substituting the value that the user entered for *user*
- Don't forget to put `#include <string>` at the top of your program!

Compile and run your code to make sure it works.

What happens if you enter just your first name when you run the program?

What happens if you enter your first AND last name when you run your program?

2. Copy your program to a new file called **s2.cpp** and do the following:

- Read the user's input using `getline()` instead of `cin >>`

Compile and run your code to make sure it works.

Now what happens if you enter your first and last name when you run your program?

3. Create a new program called **s3.cpp** and do the following:

- Declare two variables called `fname` and `lname`
- Ask the user to enter her first name and then her last name
- Read in the names using `cin >> fname >> lname`
- Echo the user's input by outputting "hello *firstname lastname*", substituting in the user's input
- Compare the length of the two names the user entered and output a message telling the user whether her first or last name is longer or whether they are equal
- Sum the lengths of both names and output a message telling the user how many letters are in her names

Compile and run your code to make sure it works.

4. *Challenge #1:*

Modify the third program (**s3.cpp**) to use the `getline()` function for reading in the user's input into a single variable called `name`, like the **s2.cpp** program above.

Use the string function `name.find()` to locate the whitespace between the user's first and last name, since both names will now be stored in a single string variable.

As above, compare the lengths of the user's first and last names, and output the result, as well as the total number of characters in the user's name.

5. *Challenge #2:*

Modify the above program to take the user's input (`name`) and split it into two variables: `fname` and `lname`.

Use the string function `name.substr()` to extract the two strings (`fname` and `lname`) from `name`.