

Lab 2

Comp 11 - Summer Session — Manipulating Data

2.1 Description

In this lab we are going to write several statements to perform manipulate the primitive data types in C++.

Our objectives are the following:

- Continue becoming familiar with the terminal
- Become comfortable with the primitive data types

2.2 Files

You will be creating the files from scratch for this lab. It is recommended to create a file called `data.cpp` and `README`.

2.3 Refresher

Remember the `clang++` compile command:

```
clang++ yourCppFile.cpp -o yourProgramName  
./yourProgramName
```

2.4 Task

Analyze the code listing below. The code listing has several (5) tasks for you to complete. Read through each of the tasks.

```
1 #include <iostream>
2 #include <string>
3
4 int main(){
5
6     // (1)
7     // Create some initial values for
8     // each of the variables. Be sure to
9     // give each variable a unique name.
10    // Try using the +, -, *, / operators
11    // with each variable type (where valid)
12    // to form some interesting equations.
13    int ???
14    long ???
15    bool ???
16    float ???
17    double ???
18    char ???
19
20    // (2)
21    // Output each of the variables above
22    // std::cout << what_you_named.int
23    // std::cout << what_you_named.long
24    // etc.
25
26    // (3)
27    // Next create two strings
28    // Call them: first and last
29    // e.g. std::string first = "your_name";
30
31    // (4)
32    // Output each string
33
34    // (5)
35    // Try creating a third std::string
36    // Now add first and last, and then
37    // output the string third
38
39    return 0;
40 }
```

Listing 2.1: template

2.5 Submission

```
1 provide comp11 lab2 data.cpp README
```

Listing 2.2: Submit Assignment

2.6 Going Further

Did you enjoy this lab? Want to try out some additional commands to go further?

Try looking up some other data types and outputting their values.

Do you think it is possible to store too much information in a variable? Google the ideas of overflow and underflow. Experiment in C++!