STAT40780 Data Programming with C (online)

Lab Sheet 2

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Summer 2015

This week's lab requires you to write and spot errors in some basic C++ functions. You are not required to compile any code this week. Have fun!

1 Write a cube function

Open a new C++ script file in RStudio (File − > New file − > C++ file). Write a C++ function that returns the cube of its input argument. The function should accept (and return) a real number argument.

Hint: while R provides the ˆ operator for exponentiation (e.g. 2 ˆ 3 returns 8), this is not available in C++.

2 Identify the errors in this C++ function

The below C++ function (next page) is supposed to:

1. consist of a single function, main()

2. create a variable y that can store a real number value

3. initialize y to the value 12.2

4. create a new variable x and assign it twice the value of y

5. output the value x

However, the sleepy programmer who wrote this made lots of errors. Identify the errors and write an error-free version of this program.

Program with errors

```cpp
#include <iostream>;


int main()
{
  int y = 12.2;

 x = y * 2;
 cout <<  "The value of x is" <<  x

};
```