Activity 4

Comp 11 - Summer Session — Fun with functions

With a partner(or two), discuss the following code sample and answer the questions below. The instructor and teaching assistants will let you discuss and then be around to answer questions. 1

4.1 Description

Functions are a way to reuse code. The idea is we can write more modular code if our program is split into functions (as opposed to writing all of our code in the int main() function).

```
#include <iostream>

// Simple function
int square(int x) {
   return x*x;
}

// Sample function with multiple parameters
int addFour(int a, int b, int c, int d) {
   return a+b+c+d;
}

int main() {
   square(5);
   addFour(1,2,3,4);
   return 0;
}
```

Listing 4.1: Function Example

1Activities do not need to be returned to instructors, they are for your benefit.
4.2 Questions

3. What is a function with no return type called? (In fact, the term itself is a type—but with no value returned).

2. What are three reasons to use functions in your code?

3. What is it called when I have multiple functions named the same thing, but with different parameters and/or return types?

4. Write a function called 'rightTriangle' that returns a boolean value for the condition: $a^2 + b^2 = c^2$ Note, you will have two 'return' statements.

5. From the previous question, revise the function so that it is templated. That is, I can use any valid data type on the function. template <class myType>

6. What happens if I use a std::string as my template parameter in the previous question?