SAIL: Assignment 2

Student Name:	Grader Name:
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Reading Assignment: C++ Primer, 5th edition

- Chapter 2 – Variables and Basic Types

True or False:

1. **0.5 pt** – C++ is a statically typed language; type checking is done at compile time.
2. **0.5 pt** – Two string literals that appear adjacent to one another and that are separated only by spaces, tabs, or newlines are concatenated into a single literal.
3. **0.5 pt** – All objects must be explicitly initialized.
4. **0.5 pt** – Identifiers in C++ are not case-sensitive.

Short Questions:

1. **1 pt** – Describe the difference between initialization and assignment.
2. **1 pt** – What is the scope of a name?
3. **1 pt** – Determine the types and values of each of the following variables.
   (a) `int * ip, i, &r = i;`
   (b) `int i, *ip = 0;` (in a class as opposed to a function)
   (c) `int* ip, ip2;`
4. **1 pt** – Describe the difference between a pointer to a constant and a constant pointer.

Programming Challenge:

1. Construct a class named `TemperatureData` using `struct`. This class should contain three data members: a `string` named scale, a `double` named temperature, and an `int` named year. The scale should be Fahrenheit, Celsius or Kelvin.

   Write a first application that creates a `TemperatureData` using `stdin`, and then returns the temperature on `stdout` in the three aforementioned formats. Write a second application that takes two temperatures from `stdin` and returns the largest of the two.

2. Implement your application in C++.

3. Using Eclipse and SVN, commit your code as a project in a directory labeled `Cpp` and under project name `Code2`.