**LESSON SET 2**

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**Introduction to the C++ Programming Language**

**OBJECTIVES FOR STUDENT**

**Lesson 2A:**

1. To learn the basic components of a C++ program

2. To gain a basic knowledge of how memory is used in programming

3. To understand the basic data types:

a. Integer

b. Character

c. Float

d. Boolean

e. String (the string class is treated as a data type here)

4. To introduce the five fundamental instructions and to use the assign and

output statements

**Lesson 2B:**

5. To develop a small program using simple C++ instructions

6. To work with characters and strings

**ASSUMPTIONS**

**Lesson 2A:**

1. Students have a basic knowledge of the programming environment. They can open, edit,

compile and run simple programs.

**Lesson 2B:**

1. Students are familiar with the output and assignment statements in C++

2. Students are familiar with the general basic outline of a C++ program so

that they can generate a simple program

3. Students are familiar with the basic data types including character and string (class treated

as a data type )

**PRE-LAB WRITING ASSIGNMENT SOLUTIONS**

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1. constant

2. Integer

3. Real or Floating point

4. Modulus or mod

5. output

6. Boolean

7. 8

8. comment

9. variable

10. string

**LAB ASSIGNMENTS**

**Lesson 2A:**

Lab 2.1: Working with the cout statement.

Lab 2.2: Working with constants, variables and arithmetic operators

**Lesson 2B:**

Lab 2.3: Rectangle area and perimeter

Lab 2.4 Working with characters and Strings

**LESSON 2A**

**LAB 2.1: Working with the cout Statement**

This is a simple lab that works with the cout statement.

A solution is found in nameKey.cpp in the instructor’s folder for Lesson Set 2.

**LAB 2.2: Working with Constants, Variables and Arithmetic Operators**

This is a simple lab that continues to work with the cout statement and introduces

the assignment statement.

A solution is found in circleareaKey.cpp in the instructor’s folder for Lesson Set 2.

**LESSON 2B**

**LAB 2.3: Rectangle Area and Perimeter**

Although Lab 2.3 asks students to create a program from scratch, it is not labeled

as optional since it is so similar to Lab 2.2 that most students should not find it

too difficult.

A solution is found in rectangleKey.cpp in the instructor’s folder for Lesson Set 2.

**LAB 2.3: Working with characters and Strings**

This lab introduces characters and the string class which is treated as a data type. The distinction of the string class from true data types is not explained until the student is introduced to arrays of characters later in the manual.

A solution is found in stringcharKey.cpp in the instructor’s folder for Lesson Set 2.

Possible solutions to all labs are given in the instructor’s folder for Lesson Set 2.