CS1428 Lab 6

# Name: Section:

1. (15pts) What will the following program segments display?
2. int v = 6;

do

{

cout << v;

++v;

} while(v < 5);

1. int v = 6;

while(v < 5)

{

cout << v;

v++;

}

1. int number = 1;

while(number <= 5)

{

cout << “Hello\n”;

number += 2;

}

1. (15pts) Write a **while** loop that prompts the user to input a number between the values **10** and **25**. The variable which stores this value is called **num**. Assume this variable has already been declared. The loop should run while **num**’s value is not in the proper range of values (between 10 and 25).
2. (15pts) Write a **do-while** loop that prompts the user to enter a value for the variable **num**, multiplies **num** by **5**, and stores the result in the variable **product**. The loop should continue to run while **product** contains a value less than **100**. Assume that all variables have been declared.
3. (25pts) Create a project in Eclipse. Create a source file named **lab6\_01.cpp** in your newly created project. Add **numbers.txt** to your newly created project (**this input file is provided for you;** **DO NOT create numbers.txt yourself**). Your program (**lab6\_01.cpp**) should open and read **numbers.txt,** and:
   1. Calculate the sum of the numbers in the file
   2. Calculate the average of the numbers in the file
   3. Calculate how many numbers are in the file

This should be accomplished with a **while** loop and **three variables**. Your program should display the **sum**, **amount**, and **average** to the screen. Your output should include **meaningful labels** for each of the variables; do not simply display the variables’ values through the console.

1. (30pts) Create a project in Eclipse. Create a source file named **lab6\_02.cpp** in your newly created project. Write a program (**lab6\_02.cpp**) that averages 3 test scores. The program should:
   1. Prompt the user to enter three scores
   2. Ensure valid scores have been entered (scores must be between 0 and 100)
   3. Calculate and display the average
   4. Ask the user if they wish to calculate another set of scores

**Hint:**  You will need to use a nested loop; this involves placing a **while** or **do-while** loop inside of another **while** or **do-while** loop. Any combination can be used; it’s up to you to make the logic work correctly.

**Once you’ve completed your work, staple a copy of your source files (*lab6\_01.cpp* and *lab6\_02.cpp*) to this worksheet and upload them through *hwupload*.**