**BCS 230 Lab – Operator Overloading**

***Overview***

Write a program that contains a class called **Score**. This class should contain the following member variables: name(string), score(int).

***Part 1***

Create a new solution and add the following files to it:

* Score.h – Add to the Headers folder.
* Score.cpp – Add to the Source folder.
* Main.cpp – Add to the Source folder. Will contain the main function.

***Part 2***

Score class specifications:

1. You should write get/set functions for all member variables.
2. You should write a constructor that takes all parameters and initializes the member variables.
3. Overload the following operators:
   1. operator= Create as a member method. Should assign all member variables from rhs to current instance.

**Score& operator=(const Score& rhs)**

Create two instances of Score in main. You should set the values on one instance using either the constructor or the set functions. Make sure you call the operator= overload in main to set the values on the other instance.

***Part 3***

Add a non-member overload for the **<< operator** (this is the insertion operator). The overload should print both the name and score on the ostream. Here is the function signature:

**ostream& operator<<(ostream& os, Score& rhs)**

Add code in main to test the operator<< overload.

***Part 4***

Add a non-member overload for the **>> operator** (this is the extraction operator). The overload should read both the name and score from the istream. Here is the function signature:

**istream& operator==(istream& is, Score& rhs)**

Add code in main to test the operator >> overload.

***Part 5***

Overload the following operators for the Score class:

1. operator+ Create as a non-member function. Should add only the scores together. Semantically, it would not make sense to add the name in this context.

**Score operator+(Score& lhs, Score& rhs)**

1. Operator> Create as a non-member function. Should only compare the score member variable.

**bool operator<(Score& lhs, Score& rhs)**

Add code in main to test these new operators.

***Part 6***

Overload the following operators for the Score class:

1. Operator== Create as a non-member variable. Should only compare the score.

**bool operator==(const Score& lhs, const Score& rhs)**

1. Operator< Create as a non-member variable. Should only compare the score.

**bool operator<(const Score& lhs, const Score& rhs)**

Add code in main to test these new operators.