Assignment 4

Assigned on December 1, 2005
Due on December 13, 2005

Write a program that
a. Declares a class named Clock that
   i. maintains two private instance variables (instance data members) hour and
      minute of type int;
   ii. maintains a public class variable (class data member) nbrOfClocks of type int,
       and initialize it to 0; at any time, this variable should tell us how many Clock
       objects have been created;
   iii. provides a constructor that can initialize the attributes hour and minute to values
       specified by the parameters;
   iv. provides an overloaded default constructor for initializing both hour and minute
       to zero;
   v. provides public accessors and mutators for attributes hour and minute;
   vi. overloads method toString() so that the current time of a Clock object can be
       printed in a readable format.

b. Declares a public class TestClock, and in its main() method, first creates a Clock
   instance c1 with the Clock’s default constructor, and then creates a separate Clock
   object c2 with the first constructor and specifying the current time to be 10:15. Print
   both of the two Clock objects to verify that they contain the correct time. Print
   c1.nbrOfClocks, c2.nbrOfClocks, and Clock.nbrOfClocks to verify that they all print out
   value 2, the number of Clock objects that we have created.

The assignment is also posted in forum Assignments inside Discussion Board of CS121 Blackboard. Submit your completed source code file as an attachment to your reply to my assignment 4 thread.

Please add your name, your assignment completion date, and the above assignment problem description as comments at the beginning of your source code.

Please make sure that your program works correctly, and the source code is formatted properly with proper column alignment and line indentation. Add necessary concise comments to your tricky points for helping readers understand your program. There will be penalties for improper code alignment or indentation. Make sure that your program doesn’t contain lines longer than 80 characters so its printout doesn’t contain wrap-around lines.