Computer Science 161

Second Hour Exam

Name _____

Friday, Oct. 20, 2006
90 Pts. (will be normalized to 100 pts.)

I.   Some storage structures: ArrayList and HashMap with iteration.

         Suppose that we have an Employee class with private fields empNo, empName (both
         Strings), and salary (a double), a constructor Employee(String eNo, String eNme,
         double sal), and accessors for each field (make up your own (reasonable) names for
         these). The toString method has been over-ridden to make a nice String for an
         Employee object.

a.   (10 pts.)   Write the code necessary to specify an ArrayList of Employee. Call
         this ArrayList **workingGroup**.   Include any **import** statements necessary..

b.   (10 pts.)   Write the code necessary to insert into **workingGroup** a new
         Employee with sNo = "E02", sNme = "Dupin", sal = 24.00.

c.   (10 pts.)   Use a for loop (either kind) to print out each of the employees in workingGroup (assume that some kind person has already entered them in). Remember that the toString method of Employee has been over-ridden.

d.   (15 pts.)   Construct an iterator for workingGroup and use it to print out each of the employees in your ArrayList. Be sure to include any **import** statements necessary.

e. (15 pts.)

    i. Now define workingGroup as a HashMap of Employee with the (String) employee number as the key.

    ii. Write the code needed to retrieve the Employee object with employee number "E02".

II.   Arrays (a brief taste)

a.   (10 pts.)   Write the code necessary to specify **numberList** as an array of 100
       integers.

b.   (10 pts.)   Write the code necessary to add up the elements in the array
       numberList and print the sum.