

CSC 220 – Lab 7

April 16, 2014

Due: Friday, April 18, 11:59pm

Objective:

Exercise writing classes in Java.

Java programs:

1. Create a class named `YourName_Checkup` with the following:
 - Fields that hold a patient number, two blood pressure figures (systolic and diastolic), and two cholesterol figures (LDL and HDL). (5 points)
 - Include a constructor that initializes the patient number, (5 points) and
 - Methods to get and set each of these fields. (20 points)
 - Also include a method `double computeRatio()` that divides LDL cholesterol by HDL cholesterol and returns the result. (10 points)
 - Include a `String toString()` method that returns a string containing the values of all instance variables, as well as the result of `computeRatio()`, and a statement explaining that HDL is known as “good cholesterol” and that a ratio of 3.5 or lower is considered optimum. (10 points)
2. Write an application called `YourName_TestCheckup` that instantiates at least two `Checkup` objects (6 points) and calls each method of the class at least once. Place print statements in your code to demonstrate that methods were called and correct values were returned when appropriate. (24 points)

Notes:

The name of the files where you save your classes should contain your name, **last name first** (example `SmithJohn_Checkup.java`). (4 points)

Start your program with a Javadoc comment that has your name, the course number and section, and the title of the assignment (2 points):

```
/** John Smith
 *   CSC220-2
 *   Lab 7
 */
```

Continue with a Javadoc comment that describes the tasks that your program/class is performing. Be specific. (2 points)

Put more comments in strategic places in your program. You are required to put comments on top of each method, describing what the method does. (2 points)

Correctly indent your program. (5 points)

What to turn in:

JAR your Java files (and only your java files, no directories or other files) into a jar archive called `YourName_Lab07.jar`. Substitute `YourName` with your name (last name first)! (4

points) When you're done, upload the JAR file to canvas, under category Lab07, by the deadline. (5 points)

Notes:

- If your program (2 files) is not archived correctly in the JAR file, an extra 10 points will be subtracted. Please make sure you do not modify the submitted files in your machine / home directory after the deadline, so they can be retrieved and evaluated after the deadline if needed.
- If your program does not compile, you cannot receive more than half the total points of the lab (so the maximum score you can receive is 50).