

CSE21 : Project #1

Create a new class called BBall (BBall.java) to do scoring for a basketball game. You will also need to create BBallTest.java to put all your tests of the methods you created.

You may work in pairs or by yourself. The expectation is that you work on the project outside of lab time but you may certainly use any extra time in lab this week. Your partner can be in any section, both of you will make your own submission while noting your collaborator/partner in the text box of the submission.

Your job is to create a new scorer that understands basketball. In Basketball, the game is played in quarters with the minimum being 4; this is called Regulation. If the score is tied after Regulation then overtime is played until the winner is determined. You may assume that no more than **9** overtimes will be played in this program. The boxscore of the game should display the proper column header for each quarter numbering 1-4. In event of overtime then it starts counting from 1OT to 9OT. You should only display as many quarters including overtime that has been played. You should ask the user whether they want to see the boxscore and then prompt them to enter the scores. The result should be printed out in the summary at the end about who won with the total combined scores.

You are free to design BBall.java with the number of methods that makes sense. Part of your grade will be for the design of your solution. Note that for every method you create (besides main), you will need to supply at least 5 tests in BBallTest.java. So try to strike the optimal number of methods for both testing and sensible functionality. We will not accept any solution with just main or too little methods in it with obvious attempts to reduce testing. So be sure to create variables and the methods that can be tested properly by BBallTest.java.

Next you will find some sample outputs, which are purposely incomplete. Your testing should be more thorough and created by yourselves. It is only given here to give a general sense of the functionality and the output expected. Summary of the game should know whether it finished in Regulation or # of overtime to print out appropriately.

Incomplete Sample Outputs

Do you want to see BoxScore? (y or n): **y**

Please enter the scores below

23 25 32 13 21 34 21 23

1 2 3 4

Visitor: 23 32 21 21

Home: 25 13 34 23

The visiting team won 97 to 95 in Regulation

Do you want to see BoxScore? (y or n): **n**

Please enter the scores below

23 25 32 13 21 34 21 23

The visiting team won 97 to 95 in Regulation

Do you want to see BoxScore? (y or n): **y**

Please enter the scores below

12 13 13 12 14 15 15 14 16 17

1 2 3 4 10T

Visitor: 12 13 14 15 16

Home: 13 12 15 14 17

The home team won 71 to 70 in 1 Overtime

Do you want to see BoxScore? (y or n): **y**

Please enter the scores below

12 13 13 12 14 15 15 14 16 16 17 18

1 2 3 4 10T 20T

Visitor: 12 13 14 15 16 17

Home: 13 12 15 14 16 18

The home team won 88 to 87 in 2 Overtimes

What to hand in

- ◆ Completed BBall.java & BBallTest.java
- ◆ Partner's name in the submission text box if any