

Online: 2

Date: 27 January, 2018

Group: A1

Time: 35 minutes

## Marks

1. Create a Java Project Named ' <b>FootballerDatabase</b> '. Inside this project (folder) create a new class named ' <b>Footballer</b> '. (There should be two classes: <b>FootballerDatabase</b> [the default class], <b>Footballer</b> [the newly created class]. And the two classes should be in the same package).	1
2. Inside the <b>Footballer</b> class declare 3 <b>private</b> variables: <b>name (String)</b> , <b>numberOfGoals (double)</b> , <b>numberOfMatches (double)</b> .	1
3. Declare 2 <b>public</b> Constructors in <b>Footballer Class</b> : a. A constructor that takes no parameter. b. Another Constructor which takes all the variables as parameter and assigns those parameters to the class variables.	2+2
4. Declare necessary <b>public</b> getter() and setter() methods for all the 3 variables. Set both the <b>numberOfGoals</b> and <b>numberOfMatches</b> using its <b>setter method</b> in such a way that it can never be less than or equal to zero. If zero or less than zero is assigned then set it to 1.	1+2
5. Declare a <b>public</b> method called <b>calculateAverageScore()</b> in <b>Footballer Class</b> that returns a <b>double</b> value and takes no parameters. The method calculates the average number of goals the footballer scored per match and returns it. For example: If the footballer scored 30 goals in 40 matches, return $30/40 = 0.75$	3
6. Declare another <b>public</b> method called <b>compareBetterScorer()</b> in <b>Footballer Class</b> which takes the <b>Footballer object</b> as parameter and returns a <b>String</b> variable. This method compares <b>the average number of Goals per matches</b> of two separate Footballer and returns the following Strings: <ul style="list-style-type: none"> <li>• If average of both footballers are same then return "&lt;Footballer-1.name&gt; is equal with &lt;Footballer-2.name&gt;"</li> <li>• If average of footballer-1 is greater than footballer-2 then return "&lt;Footballer-1.name&gt; is better scorer than &lt;Footballer-2.name&gt;"</li> <li>• If average of footballer-1 is lesser than footballer-2 then return "&lt;Footballer-2.name&gt; is better scorer than &lt;Footballer-1.name&gt;"</li> </ul> Footballer -1 = Footballer Object of Current Class , Footballer-2 = Footballer Object of the Class in the Parameter)	3

7. Now test the methods of <b>Footballer</b> Class in the <b>FootballerDatabase</b> Class. Take user input for Footballer Names, goals and matches. In this way, create two objects. Print both footballer's info using <b>toString() method</b> . Check the final <b>average goals per matches</b> obtained for both and print the results. Also, print the results of comparison between them. Change any of the footballer's matches and goals. Then compare them and print the result again.	<b>5</b>
--	----------

**Total: 20**

### Hints:

\*user Scanner class to take input:

for string use `nextLine()` , for double use `nextDouble()`

\*When you write `String a= sn.nextLine()`

`String b=sn.nextLine()`

After taking the first input when you press enter the **enter ("n")** that is the newline will be taken as the input for String b which you don't want. To solve this problem you can insert another `sn.nextLine()` between them like this:

`String a= sn.nextLine()`

`sn.nextLine()`

`String b=sn.nextLine()`

So after you take the first input and press enter the middle `nextLine()` will take the newline input and then won't effect your String b input. Do this after each String if you have more inputs.