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| **CSE1206 : Object Oriented Programming Lab Fall 2018** | **Set- B** |

**Online: 2 Date: 27 January, 2019 Group: A1 Time: 35 minutes**

**Marks**

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| 1. Create a Java Project Named **‘CricketerDatabase’**. Inside this project (folder) create a new class named **‘Cricketer’**. (There should be two classes: **CricketerDatabase** [the default class], **Cricketer** [the newly created class]. And the two classes should be in the same package). | **1** |
| 1. Inside the **Cricketer** class declare **3** **private** variables: **name (String), numberOfRuns (double), numberOfWickets (double).** | **1** |
| 1. Declare **2 public** Constructorsin **Cricketer Class:**     1. A consturctor that takes no parameter.    2. Another Constructor which takes all the variables as parameter and assigns those parameters to the class variables. | **2+2** |
| 1. Declare necessary **public** getter() and setter() methods for all the 3 variables. Set both the **numberOfRuns and numberOfWickets** using its **setter method** 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** |
| 1. Declare a **public** method called **calculateAllrounderScore()** in **Cricketer Class** that returns a **double** value and takes no parameters. The method calculates the allrounder score with this equation **2\*runs\*matches/(runs+matches)** and returns it. | **3** |
| 1. Declare another **public** method called **compareBetterAllrounder()** in **Cricketer Class** which takes the **Cricketer object** as parameter and returns a **String** variable. This method compares **the allrounder score** of two separate Cricketer and returns the following Strings:  * If allrounder score of both Cricketers are same then return “<Cricketer-1.name> is equal with <Cricketer-2.name>” * If all rounder score of Cricketer-1 is greater than Cricketer-2 then return “<Cricketer-1.name> is better allrounder than <Cricketer-2.name>” * If all rounder score of Cricketer-1 is lesser than Cricketer-2 then return “<Cricketer-2.name> is better allrounder than <Cricketer-1.name>”   (It- Cricketer -1 = Cricketer Object of Current Class , Cricketer-2 = Cricketer Object of the Class in the Parameter) | **3** |
| 1. Now test the methods of **Cricketer** Class in the **CricketerDatabase** Class. Take user input for Cricketer Names, goals and matches. In this way, create two objects. Print both Cricketer’s info using **toString() method.** Check the final **all rounder score** obtained for both and print the results. Also, print the results of comparison between them. Change any of the Cricketer’s wickets and runs. Then compare them and print the result again. | **5** |

**Total: 20**

**Hints:**

\*user Scanner class to take input:

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

\*When you wrtie 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.