**Institute of Technology Tralee**

**BSc. in Computing with Specialism (Group 2) - Year 1**

**Continuous Assessment #2**

**Date: 8/12/14**

**Time: 1 – 3 p.m.**

**Introduction to Programming**

**Instructions:** Attempt the following question. You should use the JCreator IDE for coding. When you are finished you must print out your code for correction.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Q1.**

A program is required that will use a counter-controlled while loop to read in the decimal odds and bookmaker name for the odds being given by 5 different bookmakers on a certain horse winning the Grand National. You can take it here that valid decimal odds values will be within the range 1.01 to1000 inclusive. If the user enters any value outside of this range then it will be rejected until a valid one is supplied.

Once the 5 valid odds values are entered, the program should determine

* The bookmaker who gave the highest decimal odds on the horse
* The average decimal odds given (to 2 decimal places)
* The average percentage chance of the horse winning the race (to the nearest whole number) - this is given by the formula

Using the test values as indicated in the screen shots below, the program should give you **exactly** the following output when it runs, including any banners, blank lines, tabs etc.

Also note that there will be a few marks awarded for having a **single-line comment** and **a meaningful multi-line comment at the top of the program**.

**Sample Screen Shot**

**Run 1 - The main loop runs and the odds entered in the 1st iteration are valid. However, the odds entered in the 2nd iteration are invalid on 3 consecutive occasions, so the user is asked to re-enter each time until a valid value is supplied. Similarly, some invalid odds values are supplied in the 3rd iteration. Once the main loop finishes, the program results are displayed.**

