Seneca College   **Mar 16, 2020**

Applied Arts & Technology
SCHOOL OF COMPUTER STUDIES

JAC444   **Final Code Submission Date: Apr 03, 2020**
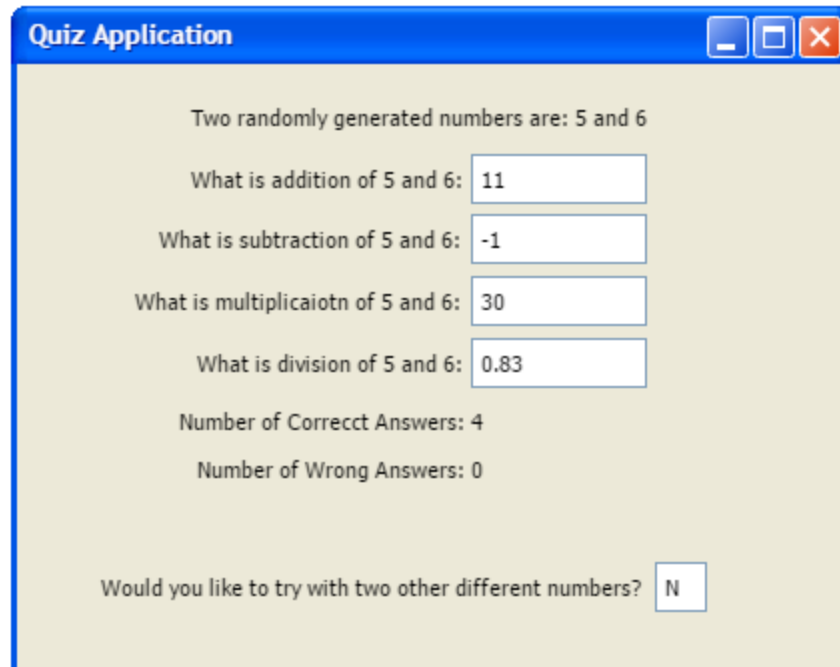
Workshop 9

Notes:
  i.   Make sure you have all security and check measures in place (with proper use of Exceptional Handling wherever needed), like wrong data types etc.
  ii.   Make your project in proper hierarchy; introduce proper class coherence in your project. Proper packages and **your project should be handled by only one main method which should be in a TesterClass**.
  iii. Given output structure is just for student to have a glimpse what the output can look, students are free to make the output better in any way.
  iv.   The final code as zip should be submitted by the midnight to avoid late penalties which are 10% each day late.
  v.   The workshop will be marked as follows:
        a. Proper naming of the class/s expected.
        b. Proper documentation for all the class/s, method/s etc. used.
        c. Clear naming for the variables, class/s, methods expected.
        d. Output should be clear, and sentences should make sense.
        e. Clear all debugging fields, data, line etc. used in the code.

Other inputs can be given during demo, so make sure you test your program properly.

Task 1: (JavaFX required)

Write an application which randomly generate two numbers between (0 – 1000) and asks the user to perform addition, subtraction, multiplication and division on the two numbers. Use "Set" to store your answers. **Note:** Set doesn't store the duplicates. Keep track of answers that user is providing and if the user enters the same answer for a question(s) then display a message "You already answer this, Try a different answer".
Following are some sample screen shots of the program. You can improve the output if you would like, for example you can highlight which questions are not correct as well. You can also time the user for how much time the user took to answer 4 questions.

Quiz Application

Two randomly generated numbers are: 5 and 6

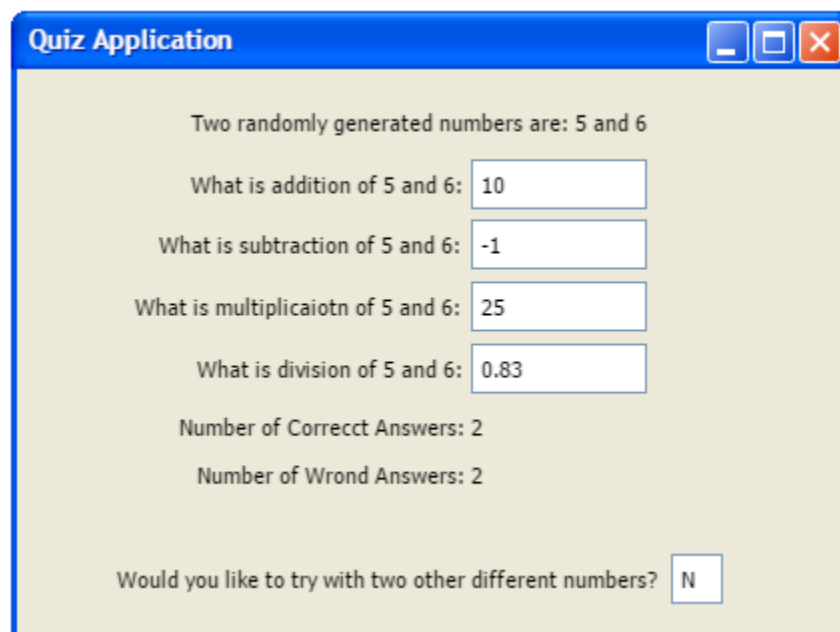What is addition of 5 and 6: `11`

What is subtraction of 5 and 6: `-1`

What is multiplicaiotn of 5 and 6: `30`

What is division of 5 and 6: `0.83`

Number of Correcct Answers: 4

Number of Wrong Answers: 0

Would you like to try with two other different numbers? `N`

Quiz Application

Two randomly generated numbers are: 5 and 6

What is addition of 5 and 6: `10`

What is subtraction of 5 and 6: `-1`

What is multiplicaiotn of 5 and 6: `25`

What is division of 5 and 6: `0.83`

Number of Correcct Answers: 2

Number of Wrond Answers: 2

Would you like to try with two other different numbers? `N`

Task 2: (Design your own output for this you are free to use JavaFX or not)

Assume that **25** countries and their capitals are stored in a map. Your program should prompt the user to enter a country and should display the capital for that country.