Java Assignment2

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1 Subjects of examination

This is your second assignment. In this assignment your knowledge on the following subjects will be tested:

1. Input/output statements.
2. Math, Random in Java.util .
3. If-esle statements (selection control structures).

2 Grading

You need to code in **Netbeans**. The folder which contains the code has to be zipped and then uploaded in Omnivox. So if your code is stored at Documents/NetBeans/Assignment2 make sure you are zipping/compressing the entire folder **assignment 2**. No other format will be marked.

Your code has to run without errors. Meaning that in order to obtain a full mark on each question, you need to make sure your code runs without errors.

If the code corresponding to **none** of the questions runs properly and all of them have compile time errors, your assignment will be marked to zero.

Note: separate the answer of each one of your questions is the code section with a comment. Example:

//q1 .....
Code for q1
//q2
Code for q2

Don't forget to clean your code, write comments and **respect indentations.** You need to Zip the code that you will send.

3 Questions

3.1 q1

1. Your job will be to print the following string using one System.out.printf.
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2. Ask the user to input three elements. The first element should be an integer, the second one a double and the last one a string. Then print them using printf by putting a comma and a tab between each of the elements following the example. (The large space indicates a tab).

   - Example: Lets' say the user inputs 2, 6.7 , "assignment". you need to print:
   - " The Integer values is: 2, The double value is: 6.7 and the String is: assignment .

3.2 q2

A company has this policy of paying their employees monthly with respect to their age. Meaning that someone who is older is paid more using the following formula.

$$P(ageOfEmployee) = \sqrt{144 + \frac{\sqrt{ageOfEmployee} * 3^2}{30}} \tag{1}$$

Once P(ageOfEmployee) has been calculated, they round it down to the closest integer value for the payment of that month.

Your job is to: Ask the user for their age which should be an integer value and then compute their **annual** income using p(x).

Note: Assume that the age of the person stays the same throughout the year. So, if they enter 35, it will stay 35.

3.3 q3

Your job is to generate four different numbers between 20-70 and then find their maximum and their average and print them.

3.4 q4

Alice and Bob are playing a game. Alice rolls a die(a dice has six sides and generates random numbers between 1-6). Bob as well, will roll a die. Bob is a simple man and announces the value he has obtained to Alice truthfully without any statistical analysis.

If the positive difference(ABS) between the value that Alice has obtained and the value that Bob has obtained is less than 3, Alice will go out with James and dump Bob.

But since this will be a bit too unfair, Bob is given another chance. He will roll the dice again asking the pseudo random number generator of Java to save his relationship. If the new random number is even, Alice will stay with him otherwise Bob will be dumped.

Your job is to write the code of this evil game. So, first Alice rolls a die then Bob. If the abs of the distances is above 3, print the relationship is saved.

Else, If the distance was less than 3, print: Bob shall be given a new chance. After Bob rolls the dice for the second time, if he wins(the number is even), print: "relationship saved". If he looses, print: "dump him".

Good luck to you and Bob