Seneca College

Applied Arts & Technology
SCHOOL OF COMPUTER STUDIES

JAC444   **Submission date:**   **Nov 10, 2021**

Workshop 6

Description:
The following workshop lets you practice basic java coding techniques, creating classes, methods, using arrays, inheritance, polymorphism, Exceptional Handling, Java I/O.

Task - 1 (Simple)

Typically, banks offer car loans for periods ranging from two to five years (24 to 60 months). Borrowers repay the loans in monthly installments. The amount of each monthly payment is based on the length of the loan, the amount borrowed and the interest rate.
Create an app that allows the customer to enter the price of a car, the down-payment amount and the loan's annual interest rate. The app should display the loan's duration in months and the monthly payments for two-, three-, four- and five-year loans. The variety of options allows the user to easily compare repayment plans and choose the most appropriate.

Task – 2 (Bit Challenging)

Write an application that plays "guess the number" as follows:
Your application chooses the number to be guessed by selecting an integer at random in the range 1–1000.
The application then displays the following in a label:
    I have a number between 1 and 1000. Can you guess my number?
    Please enter your first guess.

A TextField should be used to input the guess. As each guess is input, the background color should change to either red or blue. Red indicates that the user is getting "warmer," and blue, "colder." A Label should display either "Too High" or "Too Low" to help the user zero in. When the user gets the correct answer, "Correct!" should be displayed, and the TextField used for input should be changed to be un-editable. A Button should be provided to allow the user to play the game again. When the Button is clicked, a new random number should be generated and the input TextField changed to be editable.

Workshop Header

```
/*********************************************
Workshop #
Course:<subject type> - Semester
Last Name:<student last name>
First Name:<student first name>
ID:<student ID>
Section:<section name>
This assignment represents my own work in accordance with Seneca Academic Policy.
Signature
Date:<submission date>
*********************************************/
```

Code Submission Criteria:

Please note that you should have:

- Appropriate indentation.
- Proper file structure
- Follow java naming convention
- Document all the classes properly
- Do Not have any debug/ useless code and/ or files in the assignment

Deliverables and Important Notes:

All these deliverables are supposed to be uploaded on the blackboard once done.

- You are supposed to create video/ record voice/ detailed document of your running solution.

(50%)

  o Screen Video captured file should state your last name and id, like Ali_123456.mp4 (or whatever the extension of the file is)
  o Detailed document should include screen shots of your output, have your name and id on the top of the file and save the file with your last name and id, like Ali_123456.docx (or whatever the extension of the file is)

- A word/ text file which will reflect on learning of your concepts in this workshop.

(30%)

  o Should state your Full name and Id on the top of the file and save the file with your last name and id, like Ali_123456.txt

- Submission of working code.

<mark>**(20%)**</mark>

  o Make sure your follow the "**Code Submission Criteria**" mentioned above.
  o You should zip your whole working project to a file named after your Last Name followed by the first 3 digits of your student ID. For example, **Ali123.**zip.
- Your marks will be deducted according to what is missing from the above-mentioned submission details.
- Late submissions would result in additional 10% penalties for each day or part of it.

Remember that you are encouraged to talk to each other, to the instructor, or to anyone else about any of the assignments, but the final solution may not be copied from any