

CMSC203 Assignment 2 Implementation (Documentation)

Class: CMSC203 CRN 46519

Program: Assignment #2

Instructor: Professor Eivazi

Summary of Description: (Give a brief description for each Program)

The program RandomNumberGuesser implements a guessing game based on a random number generator. The user attempts to guess the number between 1 and 100. The random number generator and control of user input are implemented in the class RNG.java. The program allows for infinite number of trials and runs, if the user desires.

Due Date: 07/01/2022

Integrity Pledge: I pledge that I have completed the programming assignment independently.

I have not copied the code from a student or any source.

Leon Gabrielian

Part1: Pseudo Code: Here is a pseudo code for Assignment 2 program:

```
The program asks the user to guess a number. The program will generate a
number that the user has to guess but which will not be displayed to the user.
The user will then be given a hint about the range where the number is
located.(if the user guessed wrong)If the user guesses wrong again but is
closer, the range will adjust. If the user submits a number not within the
proper range, the program will remind them of the right one. When the user
guesses the right number the program will ask the user if they want to continue
playing the game; if the user says no, the program stops, and if the user says
yes the same process will continue with a different generated number.
```

Part2: Comprehensive Test Plan

A good test plan should be comprehensive. This means you should have a few test cases that test when the input is in and out of range, division by 0, incorrect Data type, etc. (Provide valid and invalid input)

Cases	Input	Expected Output	Actual Output	Did Test Pass?
Case 1	1	Number of guesses is 1... ?(unknown)	Number of guesses is 1 Your guess is too low Enter your next guess between 1 and 100	Yes
Case 2	101	>>> Guess must be between 1 and 100. Try again	>>> Guess must be between 1 and 100. Try again	yes
Case 3	50	Number of guesses is 3...?(unknown)	Number of guesses is 3 Your guess is too low Enter your next guess between 50 and 100	Yes

Case 4	-1	>>> Guess must be between 50 and 100. Try again	>>> Guess must be between 50 and 100. Try again	Yes
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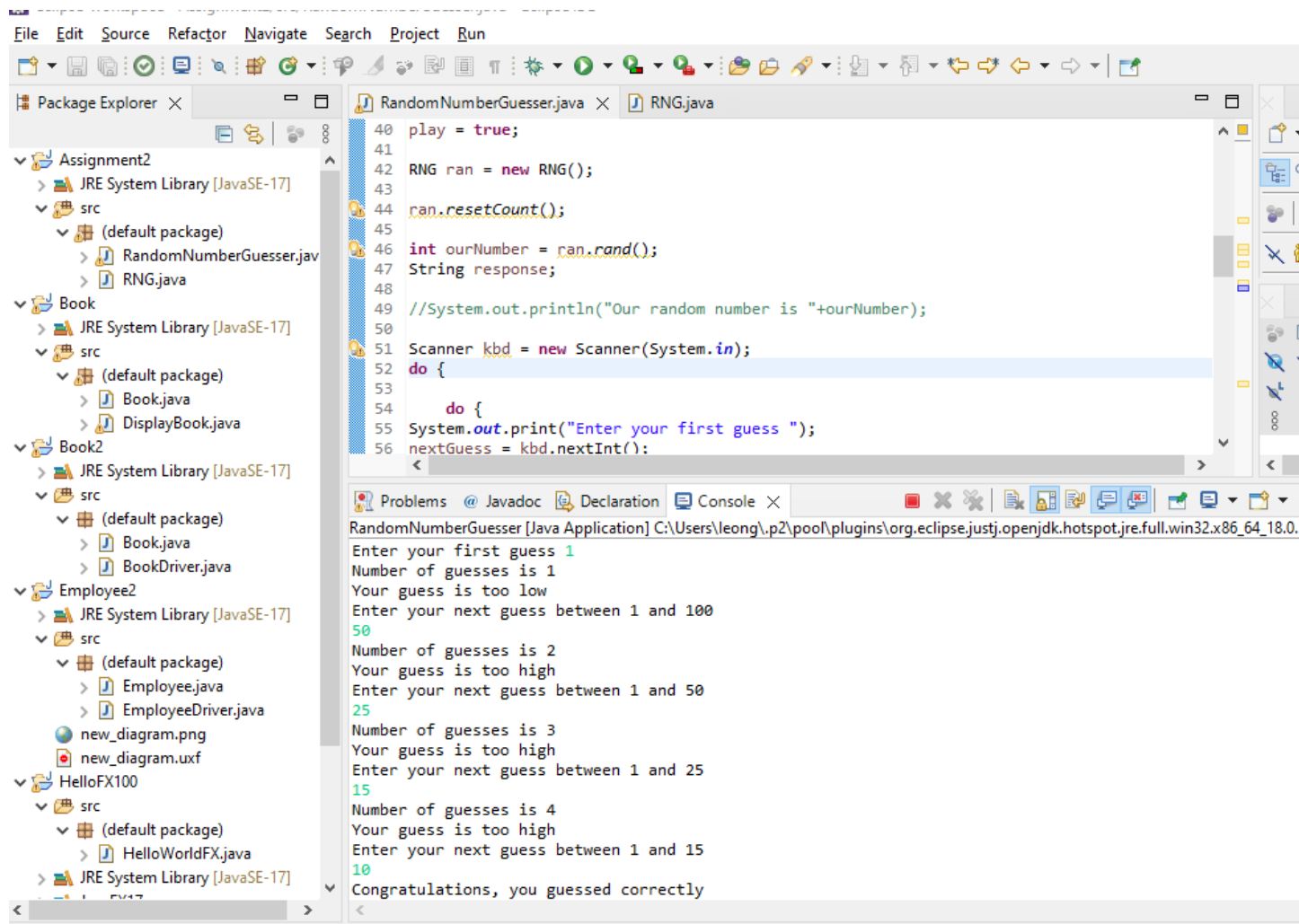
The screenshot shows the Eclipse IDE with the following components:

- Package Explorer:** Displays the project structure, including 'Assignment2', 'Book', 'Book2', 'Employee2', and 'HelloFX100'.
- Main Editor:** Shows the code for 'RandomNumberGuesser.java'. The code includes a Scanner for user input and a loop for guessing a random number. The code is as follows:


```

40 play = true;
41
42 RNG ran = new RNG();
43
44 ran.resetCount();
45
46 int ourNumber = ran.rand();
47 String response;
48
49 //System.out.println("Our random number is "+ourNumber);
50
51 Scanner kbd = new Scanner(System.in);
52 do {
53
54     do {
55         System.out.print("Enter your first guess ");
56         nextGuess = kbd.nextInt();

```
- Console:** Shows the program's execution. It displays prompts for guesses and feedback messages like 'Your guess is too low' and 'Guess must be between 50 and 100. Try again'.



Part3: Screenshots related to the Test Plan:

Case 1

Case 2

Case 3

Case 4

Lessons Learned <Provide answers to the questions listed above>:

Write about your Learning Experience, highlighting your lessons learned and learning experience from working on this project.

What have you learned?

It was difficult to take into account all possible scenarios of guesses and stops (user interactions). Thus, the code became bulky.

What did you struggle with?

Envisioning all possibilities and outcomes.

What would you do differently on your next project?

Will try to re-use some snippets of my previous projects/code that I like, because many parts seem to be interchangeable.

What parts of this assignment were you successful with, and what parts (if any) were you not successful with?

Ultimately the code worked successfully, but many tests and trials were required.

Provide any additional resources/links/videos you used to while working on this assignment/project.

Revel Java book.

Check List: <Provide answers to the column Y/N or N/A >:

#		Y/N	Comments
1.	Assignment files:		
	FirstInitialLastName_Assignment#_Moss.zip	Yes or No	
	FirstInitialLastName_Assignment#.docx/.pdf	Yes or No	
	Source java files	Yes or No	
2.	Program compiles	Yes or No	
3.	Program runs with desired outputs related to a Test Plan	Yes or No	

4.	Documentation file:		
	Comprehensive Test Plan	Yes or No	
	Screenshots related to the Test Plan	Yes or No	
	Screenshots of your GitHub account with submitted Assignment# (if required)	Yes or No or N/A	
	UML Diagram (if required)	Yes or No or N/A	
	Algorithms/Pseudocode (if required)	Yes or No or N/A	
	Flowchart (if required)	Yes or No or N/A	
	Lessons Learned	Yes or No	
	Checklist is completed and included in the Documentation	Yes or No	