

Lab 2

Create a **new Eclipse project** named `<yourStudentId>_Lab2` and **add a class** named `Lab2` to the project.

1. Math Operation:

- A. Write a program that prompts the user for two integers and then print the *gap* (positive number), the *multiplication*, the *average*, and the *minimum*:
 - a. Declare *num1*, and *num2* variables.
 - b. Display " *Please input two numbers (use space to split):* " on the console to remind the user to enter the number.
 - c. Use the *Scanner* object to read the input content and assign the object to *numScanner*.
 - d. Use *nextInt()* method to initialize the variable *num1*, *num2* with the numbers entered by the user.
 - e. Calculate and print the following results on the console.
- B. Random number generator: write a program to generate a *random number* between *num1* and *num2* (from section A), inclusive of both *num1* and *num2*.
 - a. Use *Math.random()* to get a random number between 0 to 1, and assign this number to a variable call *rand*.
 - b. Use the result of *gap* and *minimum* calculation from section A to justify the range of the random number.
 - c. Please parse the result to *Integer* type.
 - d. Remember the *random number* includes *num1* and *num2*.

Sample output (the green one is user input):

```
1 - A
Please input two numbers(use space to split):10 90
Gap: 80
Mul: 900
Avg: 50.0
Min: 10

1 - B
Random number between 10 and 90: 72
```

2. String Operation:

- a. Declare a String variable(*fullName*) to store your full name (your first name and last name).
- b. Use *substring* to get your *firstName* and *lastName* from *fullName* and print it with double quotation marks("").
- c. Print the length of your *firstName* and the *lastName*

Sample output:

```
2.
```

Johnny Chien

The length of my first name "Johnny" is 6.

The length of my last name "Chien" is 5.

Submission: Submit your project as “zip (or rar) file” via Moodle. No other submissions will be graded.

Reminder: Please zip **the whole project**

Deadline: 9/29 23:59 for Mon56 and 9/30 23:59 for Tue23