

Lab Tutorial 3

To pass this exercise you must:

- Complete the exercise below
- After completing the task, zip your java source file and submit it to canvas for assessment
- Discuss your work with your tutor for feedback
- Submit by the end of the tutorial or submit it by **due date Sunday** of this tutorial week

Exercise – using Java library classes with method calls

For this exercise, you are required to write a java class with a main method that does the following:

- Ask the user to enter an *int* number
- Display a message to tell the user what was just entered
- Generate a random *int* number between 20 to 40
- Display a message to tell the user what number has been generated
- Determine which one of the two numbers is smaller
- Display a message to tell the user which one is smaller
- Determine the difference of the two numbers
- Display a message to tell the user the difference
- Ask the user to enter a sentence that include the word “like”
- Replace “like” with the word “dislike”, and turn the whole sentence to all upper cases
- Display a message to tell the user what have happened and display the resulting sentence to the user.

Below shows a sample output of the program:

```
Please enter a whole number: 10
You just entered 10
Press enter to continue....
```

```
The computer just generated a random number between 20 to 40, and it is
36
We are about to determine the difference and the smaller number. Press
enter to continue...
```

```
The smaller number is 10
The difference of the two numbers is 26
```

```
Please enter a sentence that includes the word "like".
I like shopping
We have replaced "like" with "dislike" and turn the whole sentence to
all uppercases.
The resulting sentence is: I DISLIKE SHOPPING
```

Save, compile and execute (run) the program to test it. Keep working on the program until it is free from errors.

Submission

Submit your zipped single java source file to canvas for assessment.

Marking scheme

1. A proper class header comment, which has the following information (2 marks)
 - a) javadoc comment beginning with `/**` and end with `*/`
 - b) purpose of the class, for example: Tutorial 2: Converts Australian dollars to South African rand.
 - c) `@author` your name and id information
 - d) `@version` version number and/or date
2. The program works as required (4 marks)
3. Readability: name conventions (variable name, constant name, class name), meaningful names, indentation, comments for each variable (2 marks)
4. Keep the user well informed with proper messages (2 marks)