University of Dhaka
Dept. of Computer Science and Engineering

CSE-2112: Object Oriented Programming Lab (Spring, 2022)
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Lab 1: Getting Familiar with Java
Date : January 20, 2022

Agenda

1. Getting familiar with an IDE and command line.
2. Getting familiar with the very basics of Java.
3. Translating some (easy) problems from C to Java.

1. An IDE of your choice (Netbeans, Eclipse, IntelliJ, …)

- Creating a Java project, source file,
- Examining the bytecode
- Compiling and running a project, files, passing arguments to the main function etc.
- Examining the source code of a construct
- Refractoring, debugging etc.
- A short note on build tools

2. Getting familiar with the very basics of Java

- Variables (and assignments)
    - Built-in
    - User-defined
- Branching statements
    - Conditional
    - Unconditional
- Iterations
- Methods (functions)
- Console input and output

3. Warm-up exercise with some naive problems

a. Write a program in Java that takes a non-negative number (an integer less than 10) as input (Using Scanner Object) and calculates its factorial. [Topic: loop + keyboard input]
b. Solve Problem 1 using a user defined static function. [Topic: function]
c. Write a program in Java that takes an integer array as input and finds the minimum and maximum number of the array. [Topic: 1-D array]

d. Write a program in Java that adds two 2x3 matrices and prints the result. You can use initialized matrices. [Topic: multi-D array]

e. Solve Problem 4 by writing a method that takes the three matrices as parameters. Print the result from the main function.

f. Write a Java program that takes a string as console input and prints the characters in reverse order. You are allowed to use any built-in string function. [Hint: use charAt() and length() functions]

Submission Policy: Solve each problem as an individual java file in a single Netbeans Project if you intend to use IDE. For submission, compress the entire Netbeans project as a single file. You have to submit this compressed file along with screenshots of the output screens for each problem. If you do not use an IDE, then submit all the six source files along with respective screenshots of the outputs.