Programming 1

Tutorial 1

Activity 1

- Check if your computer has a text editor which supports code editing (e.g. Notepad++ , Sublime Text, etc.). If not, download and install one:
  - Notepad++ (Windows only): https://notepad-plus-plus.org/downloads/
  - Sublime Text (Windows & MacOS): https://www.sublimetext.com/3
- Check if you computer has **IntelliJ IDEA (Community Edition)** installed. If not, download and install it:

  https://www.jetbrains.com/idea/download/?section=windows

  (Remember to scroll down to the Community Edition. You should not download the Ultimate Edition unless you have the account to use it!)
- Open IntelliJ IDEA, attempt to create a new project and install JDK version 1.8.
- Add JDK's bin directory to `Path` environment variable.
- Test `javac` command in CMD.

Deliverables

Screenshots:

1. Notepad++ or Sublime Text main screen
2. IntelliJ IDEA – *New Project screen* where JDK 1.8 can be seen
3. `Path` environment variable screen (Windows only)
4. `javac` output on CMD (Terminal for Mac)

Activity 2

`HelloWorld` is the program which prints out the text "Hello, world!". Write, compile and run the `HelloWorld` program using a text editor and CMD only. Next, compile and run the `HelloWorld` program using the IDE, which is IntelliJ IDEA.

Note that you will have to create a Java project in IntelliJ IDEA for this exercise. Many Java programs can be created in a project. Therefore, it is advisable to create as few projects as possible to avoid littering your IDE with small, temporary projects.

Deliverables

HelloWorld.java

Screenshots:

1. Running on IntelliJ IDEA.

2. Running on CMD (Terminal on Mac).

Activity 3

Edit the following program so that it shows your personal information, then run the program twice using both CMD and IDE.

```
public class Greeting {
    public static void main(String[] args) {
        String myName = "Your name here";
        String mob = "March"; // month of birth
        int yob = 2001; // year of birth
        String intro = "I'm from Hanoi. I went to ... school, etc";
        System.out.println("Hi, my name is " + myName + ".");
        System.out.println("I was born in " + mob + ", " + yob + ".");
        System.out.println(intro);
    }
}
```

Deliverable

Greeting.java

Activity 4

Typically, we want to provide inputs to our programs so that they can be processed to produce results. The simplest way to provide input data is through command-line arguments. This feature is illustrated in `UseArgument.java`. Whenever this program is executed, it reads the command-

line argument that you type after the program name and prints it back out to the terminal as part of the message.

The source code has been provided for you in the file `UseArgument.java` that you can download from the course website. Please compile and run this program with argument. You already know how to compile a Java program from a previous exercise.

For this exercise, the following command can be used to run this program with the argument value "Alice". Change the value to your own first name.

```
% java UseArgument Alice
Hi, Alice. How are you?
```

Deliverables

A screenshot of CMD (or Terminal) showing the command you used and the program's output.

Activity 5

(optional)

The `System.out.println()` statement can output an arithmatic expression. Your age can be calculated by substracting your birth year from the year 2021. For example, if you're born in 2002, then your age should be 2021 – 2002. Write a program, named `PrintMyAge`, to calculate and print your age. Run the program using both CMD and IDE.

Sample result

```
I was born in 2002. This year is 2021.
Therefore, my age is:
19
```

Deliverable

PrintMyAge.java

Submission

Submit a **zip** file containing all Java programs to this tutorial's submission box in the course website on FIT Portal.