New York University
Computer Science Department
Introduction to Software Development
Dr. Anasse Bari
Homework#1: _**Getting Started with Java using Command Line**_
Deadline: _See NYUclasses for the deadline, 20pts off per day after the deadline (3 days maximum)._

Learning Objectives:

- Getting familiar with Command Line
- Writing simple programs in Java
- Learning the scanner class in Java
- Learning how to explain basic programming concepts

Please read the guidelines carefully to avoid receiving a zero on the HW:

- Please use the following naming convention "ExerciseX.java", where X is the number of the exercise. Please apply this convention to all future homework assignments during the semester. Also please attach the answers for exercises that require answers in English, in word document or pdf and please include it within the HW's zip file. **((StudentName_Homework_X.zip)**

- **Please feel free to ask the tutors if you do not know how to create a Zip file. There are plenty of resource in google on how to create a zip file. (make sure you are uploading on NYU classes a zip file not a rar file).**

- **It is your responsibility to make sure you are uploading the right folder/file on NYU Classes. You can send the file to yourself by email then open it to make sure you are sending the right. If we are unable to open the file, there will be no second chance and we will assign a zero.**

- Compile and run the program for each exercise before you upload on NYU classes.

- Make an archive (zip file or compressed file) with all the **java files (the .java files NOT the .class files)** and post it on NYU Classes (StudentName_Homework_X.zip)

- It is your responsibility to make sure that the Zip files have your actual files. You may send the file to yourself by email to double check before you upload on NYU classes.

- **If the graders cannot open the file, you will receive a grade of zero.**
- **If you send the .class files instead of the .java files (source files) you will receive a zero.**
- Please **do not send the entire project**, but the Java file for each exercise is all that we need.
- Cheating will be severely addressed with an immediate zero on the homework and a report to the academic advisor and the administration.
- You will automatically lose 50%of the points for an exercise if the program does not compile and run correctly.
- Make sure to include the snapshots you took for every exercise if required, the Java code (.java files) all in one zip file named StudentName_Homework_1..zip

Exercise 0.(30pts) Consider the following program shown in the figure bellow.
For this exercise, you will need to refer to the guides of command line and Java installation on the Brightspace attached with this homework.
For this exercise, you will take snapshots of major steps and add them into a file named:
Exercise0.docx or Excesice0.pdf (pdf file) if you don't have MS Word.
Visit the tutors if you have any issues.

Follow the following instructions:

1. Use command line and create a folder in desktop named Exercise0_YourName.
2. Take a snapshot of the terminal (Mac) or CMD (windows) of command you used to create the folder.
3. Using the command line create a new file, use a text editor of your choice and type the content of Figure 1 into the file.
   Save the file under HelloWorld.java
4. Compile the Java file using the command: Javac HelloWorld.Java
5. Execute the program using *Java* command
6. Record the errors you got (take a snapshot and add it into a word document named: Exercise0.docx – a word document or a pdf if you do not have MS word).
7. Fix the errors, write a short description in bullet points formats how you fixed the errors and take a snapshot after you re-execute the program.

```
/ HelloWorld is the name of the Java class.
Every Java program needs at least one class.
public clss HelloWorld
  public static void main(String[]     ) {
    // Display the string
      print(Hello world!")
  }
}
```

Exercise 1. (10pts) Write a computer program in Java that displays your first name and your major (each in a separate line) on the screen.

Exercise 2.(10pts) Write a java program that displays the following table to the screen:

A	B	C
1	5	9
8	7	9
1	6	0
1	7	9

Exercise 3.(20pts) Write a computer program that asks the user for their name (first and last name in one line separated by a space) and the program will reply with a message that includes their name.
Hint: use Scanner.
Research Scanner in Java on the book or Oracle online documentation.
Example:
Please enter your name:
Anasse Bari

Hi Anasse Bari

Exercise 4.(20pts) Answer the following questions in your **own words in no more than 4 sentences per question:**
- What is a computer what are the main component of computer hardware?
- Explain the compilation process.
- What is the difference between an interpreter and a compiler?
- What is Java Virtual Machine?
- Define the following terms in no more than two sentences:

    - High level Language
    - Machine Language
    - Software Development
    - Programming
    - Algorithm
    - Compiler
    - Java Virtual Machine