Notes on the Development Environment

- In order to compile and run your programs you will need a compiler (javac) and a runtime virtual machine (java). Both tools are part of the Java Development Environment (JDK).
- The JDK is installed on all lab machines in Bliss. Those of you who plan to write your programs on your own laptops and desktops should download the appropriate version of JDK 8 from Moodle.
- Detailed instructions for installation of the JDK may be found on the Moodle site as well. Please read and follow the detailed instructions for verifying the installation.

Exercise 1

Write a program **Personal.java** that prints your identity and personal information as follows:

```
My name is: FirstName LastName
I am born on: day/month/year
My favorite hobby is: xxx
My favorite sport is: xxx
My favorite team is: xxx
My favorite movie is: xxx
```

Exercise 2

Write a program **Rhombus.java** that prints the following shape:

```
    o
   ooo
  ooooo
 ooooooo
ooooooooo
 ooooooo
  ooooo
   ooo
    o
```

Exercise 3

Write a program **Shape.java** that draws the following output (see below). Use static methods to show structure and eliminate redundancy in your solution.

```
_____
\      /
 \    /
  \  /
  /  \
 /    \
/      \
********
_____
\      /
 \    /
  \  /
  /  \
 /    \
/      \
********
```

Exercise 4

Write a program **Lebanon.java** that prints the following logo. Use static methods to show structure and eliminate redundancy in your solution.

```
|
|
|
|____


 ____
|
|____
|
|____


 ____
|    |
|____|
|    |
|____|


   _
  / \
 /___\
 /     \
/       \


.     .
|\    |
| \   |
|  \  |
|   \ |


   _
  /   \
 |     |
 |     |
  \ _ /


.     .
|\    |
| \   |
|  \  |
|   \ |
```

Exercise 5

Write a program **JavaLogo.java** that displays the following pattern:

```
    J    A     V     V     A
    J   A A     V   V    A A
J   J  AAAAA    V V    AAAAA
 J J  A     A    V    A     A
```

Exercise 6

Write a program **GenerateJavaCode.java** that <u>prints</u> Java programs (see below). Use static methods to show structure and eliminate redundancy in your solution.

```
// Program starts here...
public class Hello {
    public static void main(String[] args) {
        System.out.println("Create Programs Automatically!");
    }
}
// Program ends here...

// Program starts here...
public class Hello {
    public static void main(String[] args) {
        System.out.println("print test!");
        System.out.println("print hello!");
    }
}
// Program ends here...

// Program starts here...
public class Hello {
    public static void main(String[] args) {
        System.out.println("print test!");
        System.out.println("print hello!");
    }
}
// Program ends here...

// Program starts here...
public class Hello {
    public static void main(String[] args) {
        System.out.println("Create Programs Automatically!");
        System.out.println("print test!");
        System.out.println("print hello!");
        System.out.println("Create Programs Automatically!");
    }
}
// Program ends here...
```

Submission Instructions

- Your submission must consist of a single zip folder that contains .java files only (**Personal.java**, **Rhombus.java**, **Shape.java, Lebanon.java, JavaLogo.java,** and **GenerateJavaCode.java**). No additional files should exist in the .zip folder.
- Give meaningful names to your methods and variables in your code.
- Include a comment at the beginning of your program with basic information about yourself and a description of the program. Include also a comment at the start of each method.
- The name of the zip file must adhere to the following naming convention s#_A$_*netid*, where # stands for your section number (between 1 and 12), $ stands for the assignment number, and *netid* stands for your AUBnet user name. For example, if your AUBnetid is abc65 and you are in section 4, you should submit Assignment 1 using following file: s4_A1_abc65.zip. The zip files will be processed automatically so please make sure you use this naming convention.
- **Failing to follow these guidelines will result in deducting marks form your grade.**