

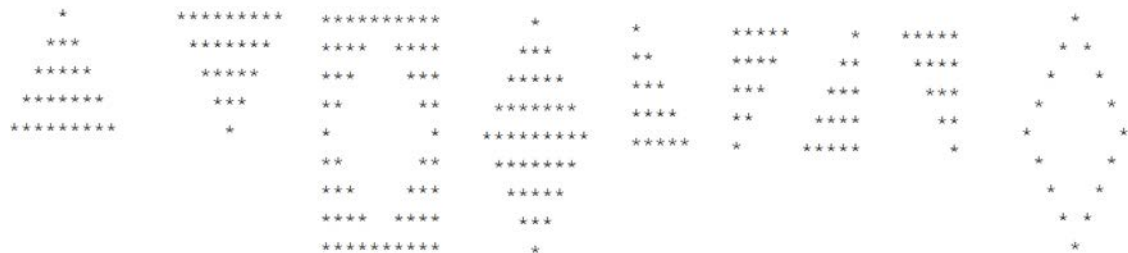
C212 Spring17 Lab 1

Objectives

- Set up Dr. Java Environment
- Get familiar with Linux account on `sil0`
- Understand Basics of a Java Program
- Programming assignment grading rubric
- Understand where to find and how to use Oracles Java API documentation and Oracle Java documentation tutorials
- Have a general understanding of Object-Oriented Concepts from reading – this will immensely help when beginning to learn the Java programming language

Submissions

- Java Program that prints *one* of the following patterns using Java's `System.out.println()` statements
- Test code using Dr. Java as well as in `sil0` account. Show it to your AI/UI for credit.
- Be sure to submit the code on Canvas in accordance with programming assignment **grading rubric**
 - i.e., Include header, test cases, comments etc.



Directions

- Download Dr. Java [here](#)
- For this lab read the *The Java Technology Phenomenon* and the *A Closer Look at "Hello World" Application* links from [here](#) and [Object-Oriented Programming Concepts](#) tutorials from Oracle's Java documentation tutorials (the readings are short)
 - **Note:** Not just the first Page of the link for Object Oriented Concepts. Click on all the Sub-topics
 - We will not be covering Classes and Object in depth until a few weeks into the semester, however Java is build entirely on the the concept of classes and Object-Oriented Programming Concepts. Thus to start learning Java successfully we need to cover the basics of OOP concepts.
- This will provide instructions on how to complete the required submission – example code is shown in getting started section
 - We will be covering objects and classes in more depth later in the semester, however Java is built entirely on Classes and the Object-Oriented paradigm so it is necessary to cover this topic (at least briefly) in the beginning when learning Java language

- Explore the [java doc API](#)
- **Add the following answer as a comments in your lab submission**
 - What fields does the System class have?
 - Hint: listed in *field summary* of Java Doc API

Hardlinks

If the Hyperlinks did not work, see hard links below:

- **Getting started:** *The Java Technology Phenomenon* and the *A Closer Look at "Hello World" Application* - <https://docs.oracle.com/javase/tutorial/getStarted/index.html>
- **OOP Concepts:** <https://docs.oracle.com/javase/tutorial/java/concepts/index.html>
- **Java 8 API:** <https://docs.oracle.com/javase/8/docs/api/index.html>
- **A detailed Linux Guide is provided on Canvas.** Here is how to use Putty to access `silو.soc.indiana.edu` and compile/run your Java Code (another link is <http://www.mybloggingthing.com/ssh-putty-commands/>)

```
aabhutta@silو:~/c212
[aabhutta@silو ~]$ mkdir c212
[aabhutta@silو ~]$ cd c212
[aabhutta@silو c212]$ ls
[aabhutta@silو c212]$ nano -w HelloWorldApp.java
[aabhutta@silو c212]$ ls -al
total 12
drwx----- 2 aabhutta faculty   39 Jan  6 16:07 .
drwx--x---+ 9 aabhutta faculty 4096 Jan  6 16:04 ..
-rw----- 1 aabhutta faculty  130 Jan  6 16:07 HelloWorldApp.java
[aabhutta@silو c212]$ javac HelloWorldApp.java
Picked up _JAVA_OPTIONS: -Xms512m -Xmx512m
[aabhutta@silو c212]$ ls -al
total 16
drwx----- 2 aabhutta faculty   69 Jan  6 16:07 .
drwx--x---+ 9 aabhutta faculty 4096 Jan  6 16:04 ..
-rw----- 1 aabhutta faculty  432 Jan  6 16:07 HelloWorldApp.class
-rw----- 1 aabhutta faculty  130 Jan  6 16:07 HelloWorldApp.java
[aabhutta@silو c212]$ java HelloWorldApp
Picked up _JAVA_OPTIONS: -Xms512m -Xmx512m
Hello World!
[aabhutta@silو c212]$
```

```
aabhutta@silو:~/c212
[aabhutta@silو c212]$ cat HelloWorldApp.java
class HelloWorldApp {
    public static void main(String[] args) {
        System.out.println("Hello World!"); // Display the string
    }
}
[aabhutta@silو c212]$
```