Intro to Java

A class is a code file, using the class HelloWorld

Using the package of Basics to create a package

A package is something that is made which holds classes

Four privacy levels:

Public- other classes can see this same one

Protected

Public Protected

Private

Functions in Java are called methods

Instead of int main {}( like C++:

public static void main(String[] args) {

String[] is the input

System.out.println(“Hello World!”) is the same as cout in C++

Println is just the line but “print” continues to print the lines in order

In java, files are called filename.java

When compiled they are called filename.class

When installing java it is using jvm or java virtual machine

Upper CamelCase: FirstDay

Lower CamelCase: firstDay

In java, to get input, must use word “import”

java.util is accessing the class of Java which has utilities, “.\*” accesses all the classes within Java utilities.

Scanner input = newScanner(System.in) // how to get input (Acts like a function)

Input.close() // Acts like a closing bracket in C++ but instead closes the input or stop taking input

Int a = input.nextInt() // gets an int

System.out.println(“The product is” + a + b); // Must include the + in the middle because there is nothing combining the string and the integers

If a = 5 and b = 3

Output: The product is 53 // concatenation

If it is System.out.println(“The product is” + (a+b));

If a = 5 and b = 3;

Output: The product is 8

If it is System.out.println(“The product is” + a / b);

If a = 5 and b = 3

Output: The product is 1

If it is System.out.println(“The product is” + a / (double) b); // “casting” b to be a double but not changing the value of what it is and the integer

If a = 5 and b = 3

Output: The product is “decimal whatever number”

To declare input:

Int a = input.nextInt();

Double a = input.nextDouble();

String a = input.next();

Char a = input.nextChar();

Primitive Types:

(Focus on Boolean, int, double,char)

Boolean

Byte

Short char

Int float

Long double

(A && B) || C == (A || C) && (B || C) // Distributed || C to each

(A || B) && C == (A && C) || (B && C) // Distributed && C to each

Demorgans:

!(A && B) == !A || !B

!(A || B) == !A && !B

Max value for int in java is 2^31-1 == 2147483647

If I add 1, this then wraps around to the minimum (-2147483648)

x /= -2 is the same as x = x / -2

While Loop:

Do while loop- runs the code once then checks the condition, if it is true it then continues until it is false (Opposite of a while, do while runs once then checks the condition)

For a for vs while loop:

In a for loop, the variable z only exists within the scope of the “for” loop

In a while loop, the variable is preexisting

Methods in the Math class to Remember:

math.pow

math.abs

math.sqrt (square root)

math.random is default to a double which then is casted by (int) before whatever it is being casted

math.max

math.min

math.random gives number from 0 to 1 inclusive