**Jeopardy Questions – Week 9 SI Session**

**1 point**

**Q:** What are the reserved words in a class definition?

**A:** public, class, classname

**Q:** How do you declare a string literal?

**A:** String data type – enclose string in quotation marks.

**Q:** What are the two print statements covered in class so far?

**A:** print() & println()

**Q:** What programming language did Java develop from?

**A:** C/C++

**Q:** How do we improve the readability of a Java program?

**A:** Use indents, spaces between operators, group similar functionality code.

**Q:** What case-style are java identifiers written in?

**A:** camelCase

**Q:** What keyword do we use to ensure that a value stored in a variable cannot be changed?

**A:** final

**Q:** What are the 5 mathematical operators?

**A:** + - / \* %

**Q:** How many variables can you have on the left side of of an assignment operator?

**A:** 1

**Q:** Scanners are a type of:

**A:** Object

**Q:** Draw the 6 relational operators:

**A: == != >= <= < >**

**Q:** How many decimal digits can an integer store?

**A:** 0

**Q:** How many bits are in a byte?

**A:** 8

**Q:** what values does a boolean store?

**A:** true or false

**2 points**

**Q:** What are the reserved words in the main method?

**A:** public, static, void, main, String[], args

**Q:** What is it called when you name a variable but don’t give it a value?

**A:** Declaring

**Q:** True or false: All methods have a return statement:

**A:** True!

**Q:** What command compiles a Java program from the command line?

**A:** javac

**Q:** What command runs a Java program from the command line?

**A:** java

**Q:** What file extension does a java file have?

**A:** .java

**Q:** What are the two major types of branching statements?

**A:** if statements & switch statements

**Q:** Compiling a java program creates a file with what type of extension?

**A:** .class

**Q:** How do we create a Scanner object?

**A:** import java.util.Scanner;

Scanner scnrName = new Scanner(SCANNER\_TARGET)

**Q:** How do we read to the end of the line using the scanner?

**A:** SCANNER\_NAME.nextLine();

**Q:** Draw the 3 logical operators

**A:** && || !

**Q:** Where does code execution go in a switch statement if no case evaluates to true?

**A:** the default case

**Q:** In Java, what are the types of statements we can use in an if-clause?

**A:** if, else if, else

**Q:** What module do we import if we want to generate random numbers?

**A:** java.util.Random;

**3 points**

**Q:** What do we give to a random object to ensure it generates the same values consistently?

**A:** A seed

**Q:** In an if statement, what happens to our code execution if the if conditional is not met, and we don’t have an else clause?

**A:** Execution skips the if statement and continues as normal.

**Q:** What is the only way a statement using the **and** logical operator can evaluate to true?

**A:** Both statements connected by the and are true

**Q:** What is the only way a statement using the **or** logical operator can evaluate to false?

**A:** Both statements connected by the or are false

**Q:** Write a statement comparing the equality between string1 and string2**:**

**A:** string1.equals(string2); or vice-versa

**Q:** Write a statement that retrieves the length of string1:

**A:** int strlen = string1.length()

**Q:** Write a statement that combines string1 with string2

**A:** string1.concat(string2) or string1 += string2

**Q:** what statement do we use to retrieve a portion of a string?

**A:** .substring()

**Q:** What are the two types of looping statements discussed in class so far?

**A:** for loops & while loops

**Q:** How long will a while loop run?

**A:** Until the conditional statement evaluates to false or an exit condition is given

**Q:** How long will a for loop run?

**A:** Until the conditional statement evaluates to false or an exit condition is given

**Q:** What statements can we use as an exit condition for a loop?

**A:** break or return

**Q:** How are exit conditions maintained in a for loop?

**A:** The third statement in a for loop updates the sentinel variable

**Q:** How are exit conditions maintained in a while loop?

**A:** The programmer must explicitly update the exit condition within the while loop.

**Q:** How can we extend a variable’s scope?

**A:** Declare the variable in a less nested section of code.

**4 points**

**Q:** Name 6 of 8 primative data types:

**A:** boolean, byte, int, short, long, double, float, char

(DAILY DOUBLE): Name all 8!

**Q:** Where can a Scanner object read data from?

**A:** Console (user input), Strings, and files

**Q:** A newly declared Scanner has how many targets?

**A:** 0 – a declared Scanner has not been instantiated and thus has no targets.

**Q:** What are the benefits of variable scope?

**A:** Variable scope reduces memory usage by freeing held memory after the variable is no longer needed. It also allows the programmer to reuse variable and object names at later points in code.

**Q:** What happens if we do not use a break statement in a switch statement?

**A:** Code execution will “fall through” to the next case and so on

**Q:** What escape sequence outputs a tab in a string literal?

**A:** \t

**Q:** What can a variable or object indentifier not start with?

**A:** An identifier cannot start with a number or special character

**Q:** What is the name of the set of documentation for a programming language?

**A:** Application Programming Interface

**Q:** What is the difference between a pre- and post- increment operator?

**A:** Preincrement adds/subtracts from the variable before evaluating the mathematical expression; Postincrement adds/subtracts from the variable after evaluating the mathematical expression.

**Q:** Describe variable scope:

**A:** The lifetime of an object or variable. It applies only within the braces of the statement the object or variable is is declared in.

**Q:** Assigning a value to a variable is called?

**A:** Initializing

**Q:** The process of a program automatically converting one data type to another is called?

**A:** implicit conversion

**5 points**

**Q:** How do we retrieve the hundred’s digit from a six digit number?

**A:** Number %= 1000 then Number /= 100;

**Q:** When evaluating a logical expression, what are the first and last logical operators to be evaluated?

**A:** first: ! last: ||

**Q:** Write a statement on the board to generate a random number between 1 and 100:

**A:** import java.util.Random;

Random randGenName = new Random();

Int randomNumber = randGenName.nextInt(100) + 1;

**Q:** Write a statement that retrieves the position of the letter ‘a’ from the string: string1 = “taco”

**A:** int letterPos = string1.indexOf(‘a’);

**Q:** Write a statement that stores the last character in string1:

**A:** char charName = string1.charAt(string1.length() – 1)

**Q:** How do we compare floating point equality?

**A:** Subtract one number from the other, then the absolute value of the result and compare it to an

epsilon value.

**Q:** Write a statement comparing string1 to string2 lexicographically:

**A:** string1.compareTo(string2); or vice-versa

**Q:** In Java, how many bits are in an double?

**A:** 64

**Q:** What is the maximum value that can be stored in a signed byte?

**A:** 127

(Daily Double: What is the minimum value as well)