**1) How do you type cast a double into an int?**

Like this → var3 =(int)(5.0); you add the “(int)”

**2) How do you declare an array of int that goes from 10 to 1?**

Like this → int[] arri0 = {10, 9, 8, 7, 6, 5, 4, 3, 2, 1}; you add the “[]”

**3) What is the scope of the variable temp declared at line 20 of Lab21\_Vars.java? Where does it need to be declared if it is to be used for the if-clause and else-clause?**

It just exists within the scope of :

if (i < j) {

int temp = 0;

System.out.println("Temp is " + temp);}

It needs to be declared outside the if-else statement if you want to make the scope the whole class instead of just within the if-else- statement.

**4) What is the scope of the variable total declared in line 29 of Lab21\_Vars.java?**

The scope was only within the for-loop, after I changed it the scope is the whole class.

**5) What is X in the print out “i value is X” at line 32 of Lab21\_Vars.java? And why is it that value?**

The integer “i” had already been declared previously in the java file, so it was marking this as a duplicate.

**6) What is the logical error in the code at lines 36-42 of Lab21\_Vars.java? (How do you fix it?)**

The Data type “Cheese” couldn’t be resolved to be a proper data type, so, in order to fix it, all you have to do is import the Cheese.java class from last week’s lab and it should work just fine.

**7) How many pointers and objects are created in your fixed version of code at lines 36-42 of Lab21\_Vars.java?**

There are two objects being created, Jack and Monterey. There is only one pointer being created, Jack and Monterey share the same pointer because they are set equal to each other.

**8) What parts are redundant in the code at lines 46-66 of Lab21\_Vars.java?**

46 Scanner input = new Scanner(System.in);

47 System.out.print("Enter first number: ");

48 if (input.nextInt() > var3) {

49 System.out.print("Enter second number: ");

50 int num2 = input.nextInt();

51 System.out.println("First is greater");

52 if (num2 < var3)

53 System.out.println("Second is Less than");

54 else

55 System.out.println("Second is Greater or equal");

56 } else {

57 System.out.print("Enter second number: ");

58 int num2 = input.nextInt();

59 System.out.println("First is Less than or equal");

60 if (num2 < var3)

61 System.out.println("Second is Less than");

62 else

63 System.out.println("Second is Greater or equal");

64 }

**9) How do reduce or combine the redundant code at lines 46-66 of Lab21\_Vars.java so we have no redundancy?**

Scanner input = new Scanner(System.in);

System.out.println("Enter First number: ");

int num1 = input.nextInt();//added

if(num1>var3) {

System.out.println("First is greater");

}else {

if(num1<=var3)

System.out.println("First is Less than or equal");

}//end If-Else #1

System.out.print("Enter second number: ");

int num2 = input.nextInt();

if(num2<var3){

System.out.println("Second is Less than");

}else {

if(num2>=var3)

System.out.println("Second is Greater or equal");

}//end If-Else #2

**10) How can we figure out what was the first number for code at lines 46-66 of Lab21\_Vars.java? What is the println statement to print the first number?**

Just utilize System.out.println(num1); it will print the user’s input into that variable.

**11) Give two distinct characteristics of a constructor.**

A constructor can have the exact name as the class, and it does not return anything.

**12) What is the purpose of ‘.’ in System.out.println(); or dlist[1].display();?**

In our first method, the dot method is accessing the ‘System’ and then looks for the ‘out’ method and ends up accessing the ‘print’ method which prints our string.As for the second instance, the dot method is utilized to access a display method from Lab21\_Objects.java in the clas Dummy.java

**13) What happens if you swap the order of the two lines in Lab21\_Objects.java? (and why?)**

**dlist[0].display(); // Goes first**

**dlist[0] = new Dummy(); // Goes after**

If we try to do this, we will receive a compilation error. The error tells us that we are trying to display something that does not exist yet, meaning that ‘dlist[0] = new Dummy();’ does not even exist as a pointer, so there is nothing for the compiler to display.That is why you need to create the pointer first so that it can have an argumetn assigned to it and then you can proceed to display it.