CSCI-101 Programming I
Exam 1

Instructions

Please follow the rules below as you work through this exam.

- Please leave all notebooks and electronics (including cell phones and smart watches) at the side of the room.
- This is a closed book/closed notes exam.
- Do not spend too much time on any one problem. You have 50 minutes to complete this exam.
- Partial credit is awarded.
- Please write legibly. If I cannot read your answers, I cannot give you credit.
- Please write your answers in the order specified. If you need additional paper, please raise your hand to ask your instructor for additional paper.
- Your code must be written to behave as specified.
- You must properly use all identifiers that are explicitly stated.
- Please use proper and consistent coding conventions (indentation, naming identifiers, etc.).
- Please stay in your seat until you are ready to hand in your exam. You may leave when you are finished.
- Once you leave the testing room you cannot return until the exam is over. If you need to use the restroom, please use it now.

Assume the code you are writing for this exam is placed in a file named Exam1v2.java. Write a *complete program* that will run when compiled and that satisfies the Program Requirements shown below.

1. Write a statement that creates a Scanner that can be used to read data from the keyboard.

2. Ask the user to enter 2 integers and read them into variables named **num1** and **num2**.

3. Print to the screen "**not equal**" if the values in **num1** and **num2** are not equal; otherwise print "**equal**".

4. Print to the screen "**equal to 5 or odd**" if the value in **num1** is equal to 5 or odd.

5. Print to the screen "**both odd**" if **num1** and **num2** are both odd.

6. Use a **while-loop** to print to the screen, on a single line with spaces between them, the numbers between 1 and 50 (inclusively) from largest to smallest.

7. Declare an array named **arr1** that can hold 15 integers.

8. Ask the user to enter 15 integers. Read the values from the keyboard and store them in the array named **arr1**.

9. Declare a variable named **second** and set it equal to the second element in **arr1**.

10. Declare a variable named **third** and set it equal to the third element in **arr1**.

11. Count how many integers in **arr1** are *greater than 5* and print the count to the screen.

12. Determine the value of the smallest integers in **arr1** and print the value to the screen.

13. Count how many integers in **arr1** are divisible by both 2 and 3 and print the count to the screen.

14. Declare an array named **arr2** that can hold 15 integers.

15. Set all the integers in **arr2** to the value 1.

```
import java.util.Scanner;

class Exam1v2 {
	public static void main(String[] args) {

		Scanner kb = new Scanner(System.in);

		System.out.println("Please enter 2 integers");
		int num1 = kb.nextInt();
		int num2 = kb.nextInt();

		if (num1 != num2) {
			System.out.println("not equal");
		}
		else {
			System.out.println("equal");
		}

		if (num1 == 5 || (num1 % 2 == 1)) {
			System.out.println("equal to 5 or odd");
		}

		if((num1 % 2 == 1) && (num2 % 2 == 1)) {
			System.out.println("both odd");
		}

		int j = 50;
		while(j >= 1) {
			System.out.println(j + " ");
			j--;
		}

		int[] arr1 = new int[15];

		System.out.println("Please enter 15 integers");
		for(int i = 0; i < 15; i++) {
			arr1[i] = kb.nextInt();
		}

		int second = arr1[1];

		int third = arr1[2];

		int count = 0;
		for(int i = 0; i < arr1.length; i++) {
			if (arr1[i] > 5) {
				count++;
			}
		}
		System.out.println("count: " + count);

		int min = Integer.MAX_VALUE;
		for(int i = 0; i < arr1.length; i++) {
			if (arr1[i] < min) {
				min = arr1[i];
			}
		}
		System.out.println("min: " + min);

		count = 0;
		for(int i = 0; i < arr1.length; i++) {
			if (arr1[i] % 2 == 0 && arr1[i] % 3 == 0) {
				count++;
			}
		}
		System.out.println("count: " + count);

		int[] arr2 = new int[15];

		for(int i = 0; i < arr1.length; i++) {
			arr2[i] = 1;
		}
	}
```

```
}
```