CMSC 131 Quiz 4 Worksheet

The next quiz for the course will be on Wed, Nov 1. The following list provides additional information about the quiz.

- The quiz will be a written quiz (no computer).
- The quiz will be in lab session.
- Closed book, closed notes quiz.
- Answers must be neat and legible.
- Quiz instructions can be found at http://www.cs.umd.edu/~nelson/classes/utilities/examRules.html.
- Make sure you know your section number and your TA’s name.
- You must take your quiz in your assigned lab/discussion session and not show up to a random discussion session. We will not grade quizzes taken in the incorrect session.

The following exercises cover the material to be included in this quiz. Solutions to these exercises will not be provided, but you are welcome to discuss your solutions with the TAs or instructor during office hours. It is recommended that you try these exercises on paper first (without using the computer).

Exercises

1. How many objects are associated with the following declaration?
   ```java
cchar[] a;
```

2. Can you create an array with 0 elements?

3. Write a Java program that reads integer values from the user and places them into an array. Your program will then create a new array with the values provided but in reversed order.

4. Write a Java program that:
   a. Reads double values and places them into an array.
   b. Replaces each value with the square root of each value.

5. Write a Java program that reads a string and creates an array with a palindrome of the string. For example, if the string entered is “car” the array will have the characters carrac.

6. Write a Java program that determines whether two arrays have the same elements and in the same order.

7. Write a Java program that determines whether two arrays have the same elements even if they are not in the same order.

8. Write a Java program that:
   a. Reads integer values and places them into an array named `src`.
   b. Reads integer values and places them into array named `find`.
   c. Prints “Yes” if `find` is a subset of `src`, that is, all elements in `find` appear in `src` (duplicates are fine).

9. Finish the implementation of the program below. The program will read values from the user, place them in an array, and initialize the second half of the array with values that are double of each of the values provided in the first half. For example, if the user provides the values 10, 40, 25, your program will create an array with the values 10, 40, 25, 20, 80, 50. Use the message “Enter number of elements:” to read the number of values provided by the user (e.g., 3 in the previous example) and “Enter values:” to read each of the values provided by the user (e.g., 10, 40, 25, in the previous example). Notice you do not need to print the array; you just need to initialize it with the expected values.

```java
public class Initialization {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
```