

CMSC131, UMCP, Array Concepts I Exercise

The goal of this exercise is to gain a better understanding of array concepts discussed in class. In a group of at least 3 students answer the questions below. To answer the questions follow this approach:

- a. One of your group members should be designed as the leader. This student will read the questions and keep moving from one question to the next. The leader will provide some reasonable amount of time for each question before moving to the next.
- b. Before moving to the next question the group will discuss their answers.
- c. Although you do not need to submit yours answer for a grade, keep in mind that these questions can be part of midterms and quizzes.

1. How many objects are associated with the following declaration?

```
double[] b;
```

2. Draw a diagram that illustrates how the array can be represented in the heap.

```
char[] a = new char[4];
```

3. Write a Java program that reads an array of characters and determines whether the array is a palindrome. To determine whether it is palindrome check the first element with the last one, the second element with the second to last, and so on.
4. Write a Java program that computes the prefix sum of values that have been placed in an array. Information about the suffix sum can be found at:

https://en.wikipedia.org/wiki/Prefix_sum

You can modify the original array.

5. Using the Eclipse debugger step thru the prefix sum program you defined above. How can you see the array values by using the debugger?