

CS 172 – Spring 2017
Lab Assignment # 6
Arrays

Programs that do not compile will receive a grade of zero.

Total: 30 points

Comments: At the top of the program include header comments with your name, CS 172, the date, and the assignment number. Header comments should also include a brief description of what the program does. Use inline comments throughout the code to document what your program is doing.

General Instructions:

Both problems go in the same Java application, Lab6.java. Place the code for the problems into the main method IN ORDER.

Do:

- indent properly, 3 spaces each indentation level
- comment moderately
- test thoroughly

Problem 1: (12 points)

- Print the message “Problem 1”.
- Create an array of 20 String references and initialize the array to contain lowercase words with the names of the first 20 counting numbers: “one”, “two”, “three”, etc.
- Input a letter from the user. You’ll need to use a loop to ensure that the user enters a letter and not some other type of character. Convert the letter to lowercase if necessary.
- Print the elements of the array that contain that letter. If no elements contain the letter, print “No elements contain that letter.”

For example, assume we are working with an array of 3 Strings that contain “one”, “two”, and “three”, then we read ‘n’ from the user. The program should print

one

Problem 2: (18 points)

- Print the message “Problem 2”.
- Create an array of 100 integer values.
- Fill the elements of the array with random numbers between 1 and 1000.
- Print the array, 10 elements on each line. The elements should be neatly aligned in columns.
- Calculate and print the average of the values (remember to cast total to a float).
- Determine and print the minimum value in the array.
- Determine and print the maximum value in the array.