BRAC University
Department of Computer Science and Engineering
CSE110 (Programming Language-I)
Lab 9

This week we will not be starting any new topics. Instead, we will continue working on the array problems from last week, and a few additional problems.

Task 1
Write a program which reads 5 numbers into an array and prints the largest number.
If the user enters 7, 13, 2, 10, 6 then your program should print 13.

Task 2
Write a program which reads 5 numbers into an array and prints the largest number and its location in the array.
If the user enters 7, 13, 2, 10, 6 then your program should print "largest number 13 was found at location 1".

Task 3
Write a program which reads 5 numbers into an array and prints the smallest and largest number and their location in the array.
If the user enters 7, 13, -5, 10, 6 then your program should print
"Smallest number -5 was found at location 2".
"Largest number 13 was found at location 1".

Task 4
Write a program which reads 5 numbers into an array, sorts/arranges the numbers from low to high and prints all numbers in the array.
If the user enters 7, 13, 2, 10, 6 then your program should print 2, 6, 7, 10, and 13.

Task 5
Write a program which reads 5 numbers into an array, sorts/arranges the numbers from high to low and prints all numbers in the array.
If the user enters 7, 13, 2, 10, 6 then your program should print 13, 10, 7, 6, 2.

Task 6
Write a program which asks the user how many numbers to take. Then takes that many numbers and prints the median value. Read http://www.mathsisfun.com/median.html
If the user gives 10, 50, 40, 20, 30. Then the median is 30 (because 30 falls in middle 10, 20, **30**, 40, 50)
If the user gives 30, 10, 40, 20. Then the median is 25 because, (20+30)/2=25(average of two middle values from 10, **20**, **30**, 40)

Task 7
Write a java program that reads 10 numbers from the user. Write the program in such a way so that
If the user enters 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, then the output should be 10, 30, 50, 70, 90, 20, 40, 60, 80, 100.
if the user enters 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, then the output should be 1, 3, 5, 7, 9, 2, 4, 6, 8, 10.
If the user enters 2, 5, 6, 9, 12, 13, 14, 15, 16, 17 then the output should be 2, 6, 12, 14, 16, 5, 9, 13, 15, 17.

Task 8

Create a String array (size 10) consisting of the words “zero”, “one”, “two”……, “nine”. Then take a number (between 0 and 9) from the user and print that number in words from the array. If the user enters 5, you should print a[5] and output should be “five”.

Task 9

Write a java program that reads 15 numbers from the user, all the numbers within the range 0-9. Then print the number of times each number has been entered by the user. You can try this problem in at least 3 ways:

Task 9a) Using nested loop to search within array for each number between 0-9

Task 9b) using ten variables as counter/tally: zerCount, oneCount …., nineCount to count during input

Task 9c) Modify task 9b and use a 2nd array as the counter instead of ten variables

Task 10

Read from the following link and try to use printf () for all variable types you know
http://web.cerritos.edu/jwilson/SitePages/java_language_resources/Java_printf_method_quick_reference.pdf

Change the following System.out.println() to a System.out.printf() method.
Current output:5.984807753012208
Desired output after the change: 5.9848

```
double z;
z = 5+ Math.sin(80*Math.PI/180);
System.out.println(z);
```