CS146-Lab3 Due: Feb-24-2016 at 11:59PM Name:

Reading assignments:

Read chapter-3 and class lecture notes.

Answer the following questions in one word document. Then email it to me to [sjsumortezaie@gmail.com](mailto:sjsumortezaie@gmail.com)

The subject of your email must be CS146Lab3Section#. Please read the Format of the lab.

If you have any questions about the lab please send the question to [answerneededsoon@gmail.com](mailto:answerneededsoon@gmail.com)

*Note that you should have java programs for problems 1 to 5 and have a main to test your code. A copy and paste of all source codes and screen shot of results are needed for these problems. Last problem, you may write it on a paper but you include the picture or scan as part of the word document (you may use snipping tool to do that).*

1. Given two sorted lists, L1 and L2, write a procedure to compute intersection of L1 and L2 using only the basic list operations. Test your code!
2. Given two sorted, L1 and L2, write a procedure to compute union of L1 and L2 using only the basic list operations. Test your code!
3. Write a program to evaluate a postfix expression. Assume the function evaluates a postfix expression, using + ,–, \* and /ending in =. Test your code!
4. Write routines to implement two stacks using only one array. Your stack routines should not declare an overflow unless every slot in the array is used.
5. You are given a list, L and another list P, containing integers sorted in ascending order. The operation printLosts(L, P) will print the elements in L that are in positions specified by P. For instance, if P = 1, 3, 4, 6, the elements in positions 1, 3, 4, and 6 in L are printed. Write the procedure printLots(L, P). You may use only the public Collection API container operations. What is the running time of your procedure?
6. Using the algorithm convertToPostfix given in lecture, convert each of the following infix expressions to postfix expressions. Use the stack technique but check your work using pencil and paper technique.

