COMP 5113 Programming Languages
Fall 2015
Homework 3

The third homework includes:

1. Using CLISP and recursion, implement a merge sort algorithm (recursion) to sort an array or a list. First, define an array and assign the array elements with random numbers; then print the array before and after applying the sorting algorithm. Compare the difference between sorting array and sorting list in Lisp.
2. a. Using Prolog, complete the slide example for **food** and **eat** relationship.

   b. Using Prolog, redefine a prolog function **sublist** which does same job as 1.a. For example,

      sublist([c, d, e], [a, b, c, d, e, f, g], X) return true and index 2.

   c. Chapter 11, exercise 14 (write a list-based insertion sort using prolog).

Turn in both the softcopy and hardcopy of your documents. If you have more than one file, create a folder and put all files in, including subfolders. Your **name**, **your ID number** and **homework number** should be written on the upper right-hand corner of the top sheet of the hardcopy.

Date Due: CLISP programs are due on Nov. 9th; Prolog programs are due on Nov. 16th, Monday, 2015.