## Lab 4

Submit either .scm files (for code) or text files (for written answers to questions) for each of the following. All code files for this lab must contain proper tests that run when the file is loaded.

## Programs

- 1. AS&S 2.2 (hint: read pages 79-89 to understand what this question is asking. This is *crucial* stuff for this course.)
- 2. AS&S 2.20 (At last! So many cool things can be done with this.)
- 3. AS&S 1.26
- 4. Write flatten, which takes a nested list as argument and produces a nonnested list with elements in the same order. Report and justify big O for time and stack space.
- 5. Write deep-reverse, s.t. (deep-reverse '(1 (2 3 (4 5)) 6))  $\rightarrow$  (6 ((5 4) 3 2) 1). Report and justify big O for time and stack space.
- 6. Write **sort** as an accumulation. Report and justify big O for time and stack space.
- 7. AS&S 2.29
- 8. AS&S 2.35
- 9. AS&S 2.37
- 10. AS&S 2.61
- 11. AS&S 2.62
- 12. AS&S 2.63

Submit your code file and a script (or interactions) showing files being loaded (and tested) via Sakai (due Sunday midnight) and on paper (to your TA at the START of **Monday** lab) to receive full credit.

When you use Sakai, remember that you can "upload" files multiple times, but you only click "submit" once.