Problem Set 8
Mutation, State, Environment Model and Streams

Out: Tuesday, 1 November 2011
Due: Thursday, 10 November 2011

Exercises

Problem 1: Exercise 3.2 on p. 224-225. After writing and testing the code, draw the environment diagram that would result from evaluating the three statements in the exercise.

Problem 2: Exercise 3.3 on p. 225.

Problem 3: Exercise 3.4 on p. 225.

Problem 4: Exercise 3.8 on p. 236.


Problem 6: Use stream-filter (p. 322 of textbook) to define the stream of all integers that are evenly divisible by 3, 5, or 7.

Problem 7: Complete the following alternative definition of the integers stream:
   (define integers (cons-stream 1 (stream-map <??> integers)))

Problem 8: Exercise 3.54 on p. 331.

Problem 9: Use your mul-streams solution from the prior problem to define a stream of factorials.

Problem 10: Exercise 3.57 on p. 332.