

Problem Set 8: Streams

Out: Tuesday, 14 November 2006

Due: Tuesday, 21 November 2006

Compatibility: For this problem set, you'll need to use the `stream.ss` file (available on the web site) with DrScheme to have the stream commands. Use the language "Textual (MzScheme, includes R5RS)."

Problem 1: Use `stream-map` (p. 320 of textbook) to define a procedure called `convert-currency` that takes a stream of currency values and returns a stream of converted currencies, based upon the conversion rate passed as a parameter to `convert-currency`.

Problem 2: Use `stream-filter` (p. 322 of textbook) to define the stream of all integers that are evenly divisible by 2, 3 or 5.

Problem 3: Complete the following alternative definition of the integers stream:
`(define integers (cons-stream 1 (stream-map <??> integers)))`

Problem 4: Exercise 3.51 on p. 325.

Problem 5: Exercise 3.52 on p. 325-326.

Problem 6: Exercise 3.54 on p. 331.

Problem 7: Exercise 3.57 on p. 332.