Assignment 4

(Please work in pairs and submit one answer sheet for the pair.)

1. Do the exercise from the notes on skip lists.

2. Code up a simple skip list with support for the insert operation. Provide a printout of just the insert method.

3. Consider inserting the integers from 1 up to \(n\) into a skip list. Let \(c(n)\) be the average of the product of the minimum and maximum element in the top level.
   
   (a) Give data for \(c(n)\) for \(n = 10^i\) for \(i = 1, 2, \ldots\)
   
   (b) Estimate the order of \(c(n)\).

Due: Tuesday February 26