Assignment 1

January 24, 2013

Due Date: 04/02/13

Define a new data type called very very long int and represent a long int by a doubly linked set of boxes where each box contains, say 4 decimal digits of the number. Thus a 100 digit number would be represented by a chain of 25 boxes. Use this representation for carrying out basic operations such as +, -, /, mod, div, *. Show how to calculate and output 50!,100! etc.
Math fun: What is the largest k such that $2^k|100!$ and $5^k|100!$. From this conclude the number of trailing zeroes in 100!. Check with your output.