FDA125 Advanced Parallel Programming March 2007

Exercises for Topic IX (Skeleton Programming)

Exercise IX.1

Figure out an example loop nest where runtime dependence testing is appropriate.

Exercise IX.2

Read Section 7.2 in *Practical PRAM Programming*.

Explain the difference between the skeleton-oriented style of parallel programming adopted in Chapter 7, and parallel programming in a skeleton language.

Discuss the advantages and disadvantages of the skeleton-oriented style of parallel programming in Fork.

Exercise IX.3

Write a nestable variant `Reduce` of the `reduce` skeleton function for generic reductions.

Exercise IX.4

Give a

(a) data-parallel routine in Fork

(b) divide-and-conquer algorithm

that transposes a matrix (in place).