Inf-2202 Sample exam

1) Equation Kernel

Read section 2.3.1 in Parallel Computer Architecture: A Hardware/Software Approach.

a) Describe how the kernel can be decomposed

b) Describe how the decomposed kernel can be assigned

c) What is the major performance goal for decomposition? What is the major goal for assignment?

d) Implement a parallel version of the kernel using Go

2) Performance evaluation

a) What are the major steps to consider when designing a performance evaluation study?

b) What are the advantages and disadvantages of using respectively measurement, simulation and modeling for performance evaluation.

3) MapReduce

a) Implement WordCount in MapReduce

b) What characterizes applications for which Hbase is a better choice for data storage than MapReduce.

c) Design a performance evaluation study for measuring the parallel performance of your WordCount MapReduce program.