 Parallel and Distributed Computing

12/4/2014

Daniel Arrais, 69675 Miguel Nobre da Costa, 73359 Ricardo Amendoeira, 73373

Professor josé costa

Longest Common Subsequence

2nd part

12/4/2014

Daniel Arrais, 69675 Miguel Nobre da Costa, 73359 Ricardo Amendoeira, 73373

Professor josé costa

Longest Common Subsequence

2nd part

# Introduction

In the first part of this project we used OpenMP to parallelize our serial solution to the Longest Common Subsequence (LCS) problem on one machine with multiple cores.  
The aim of the second part is to use the Message Passing Interface, MPI, method of parallelization: use a cluster of multiple machines (although it can run on a single machine with multiple or even a single processor) running independent processes with no shared data on each of their processors and achieve parallelization by passing messages between them with the required data. OpenMP can be integrated with MPI to make use of the multiple cores of each processor and further improving the performance of the parallel implementation.

# Serial Implementation

The serial implementation used was the one delivered in the 1st part of the project, as the problem to be solved is the same. As a summary, the complexity of the algorithm used is and uses a little over bytes of memory (M and N are the lengths of the two provided strings).