Homework Assignment #4

Try on your computer, and don’t need report.

1. Please read the Chapter 5 of An Introduction to Parallel Programming.
2. Read and compile the OpenMP examples (if you use gcc, remember add -fopenmp flag.), and observe the output.

The following example programs introduce the main concepts of OpenMP step by step.

1. hello-world-parallel.c (the most basic hello world executed in parallel)
2. hello-world-parallel-id.c (similar to 1. but the id of each thread and the total number of threads are also printed)
3. hello-world-parallel-id-func.c (same result as 2. but a function is called to print inside the parallel region)
4. hello-world-parallel-id-scope.c (same result as 2. but data scope is used in the parallel region)
5. table-add1-manual.c (add a number to each element of a table, using manual parallelization)
6. table-add1.c (same result as 5. but with automatic work scheduling)
7. table-add1-combined.c (same result as 6. but with combined parallel region and for construct)
8. table-add1-wrong.c (similar to 6. and 7. but giving wrong answer - find the error in the code!)
9. table-implicit-notpar.c (parallel execution gives wrong answer - find out why!)
10. table-sum.c (computing the sum of all elements in a table)
11. table-sum-wrong.c (similar to 10. but gives wrong answer - find the error in the code!)