Homework Assignment #3

Due: Friday, November 28, 2022

Submit to zhaoth@nwpu.edu.cn

1. Please read the Chapter 4 of An Introduction to Parallel Programming.

2. We assumed the matrix-vector multiplication program(*mat_vect_pthread.c*) where *m*, the number of rows were evenly divisible by *t*, the number of threads. Please read, compile and run *mat_vect_pthread*, and then modify the code with following requirements:
   1) How do the formulas for the assignments change if *m* cannot evenly divisible by *t*? give your strategy and modify the code.
   2) make tests and timing the execution time when you increase the *n* with different *t*, and analyze the results.

3. Modify the mutex version of the π calculation program(*pth_pi_mutex.c*) so that it uses a semaphore instead of a mutex. How does the performance of this version compare with the mutex version?