OPENMP: Homework 5

Write, in parallel, using OpenMP

1. A "hello world"
2. Parallelize your trapezoidal integration code trap.f90 from Fortran HW2
3. A program that initializes two matrices A and B with some values, calculates the product C = AB and finds the minimum value in the C matrix and where it is in the matrix. Make two versions:

   (a) Use do loops to do the matrix multiply and OpenMP `PARALLEL DO`

   (b) Use Fortran `MATMUL` and OpenMP `WORKSHARE`

   Run some tests for LARGE matrices to see which one works best.

Submit a tar file *named with your name <name.tar>* that contains

- the .f90 files for your program
- A README of instructions on how to compile and run
- Sample output that shows that the programs work
- An analysis which shows which one works best for question 2