Parallel Programming

This assignment is designed to give you some practice writing and debugging multithreaded C pthreads programs, using synchronization primitives, and experience designing and running scalability experiments.

Use any two numerical methods to calculate the value of π. Some of the popular methods are described in this reference:

https://ieeexplore.ieee.org/document/6298658

This link (https://www.csee.umbc.edu/~tsimo1/CMSC483/cs220/code/pi/pth_pi_sem.c) contains a sample implementation of one of the methods.

In the first instance write a serial version of the implementation and then use the pthreads library to implement a parallel version. You should present the speedup and accuracy numbers for the different algorithms.

Resources:

Pthreads Tutorial (https://hpc-tutorials.llnl.gov/posix/) and This one (https://www.eecs.umich.edu/courses/eecs570/discussions/w20/pthreads.html)