

Instructor Guide

The examples provided in this lesson provide some preparation by the instructor prior to doing the examples in class. Example #1 in the presentation slides requires that the instructor bring in 7 pieces of paper, each with a number on it from 1 to 7. So, paper one would have a 1 on it, paper two would have a 2 on it, and so on. In Iteration 1 of the example, these are all going to be placed in the same area of the room. In the rest of the iterations, though, the papers need to be spread out across the room. Students will also need paper and pens to write down their results or, if available, they can each be given a designated section of a whiteboard or chalkboard.

It is important to note that, as this is a very difficult topic to grasp, especially for students that have never programmed before, it might be necessary for the instructor to plan out a few different ways to explain the topic being covered.

There is no programming exercise with this lesson, so there is no need for students to have access to a supercomputer for this lesson specifically.

Common Pitfalls for Students and Instructors

It is likely that students, especially those with no programming experience, may have some difficulty understanding the concept of shared memory parallelism, or even parallelism in general. Parallelism is a very different way of thinking than we normally think in our day to day lives, so it may take some students longer than expected to grasp the concept. Similarly, finding new and innovative ways for instructors to teach the same ideas might be difficult as well. This module attempts to provide several different examples to show different ways of teaching the same concept.