

CS 5220 – 2015-10-08 Preclass Questions

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0. I spent one to two hours the day before class.
1. The lecture slides and narration were pretty clear! I do have one suggestion though. The lecture slides introduced a lot of different functions, and there were plenty of pictures and code snippets to explain them, but it's hard to understand the operations without sitting down and experimenting with them. It would be nice to have a collection of minimal MPI programs that we could study, and a set of programming exercises to make sure we understand how to use them.
2. I provided feedback in the CMS survey.
3. (a) `ring.c` involves a set of n processes organized in a virtual ring topology. Each member of the ring has a local portion of some set of data. It computes locally, then sends its data to the next node in the ring while simultaneously receiving data from the node before it. This continues for a number of steps.
(b) Each thread copies the data it is handling into a third buffer. It then initiates an asynchronous send. While the messages are being sent, it computes local interactions. Once it's done, it waits to receive the next batch of data, copies the data, and repeats the process.