**Blue Waters Petascale Semester Curriculum v1.0**

**Unit 6: Hybrid MPI + OpenMP**

**Lesson 1: Introduction to Hybrid**

**Exercise Instructions for Students**

*Developed by Roman Voronov for the Shodor Education Foundation, Inc.*

1. Describe a problem/situation in which case it makes more sense to use MPI code.
2. Describe a problem/situation in which case it makes more sense to use OpenMP code.
3. Describe a problem/situation in which case it makes more sense to use Hybrid MPI/OpenMP code.
4. Describe how you would approach (i.e., which strategy would you use) writing Hybrid MPI/OpenMP code.
5. Describe a scenario which you should try to avoid when writing Hybrid MPI/OpenMP code.



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*We welcome your improvements! You can submit your proposed changes to this material and the rest of the curriculum in our GitHub repository at*[*https://github.com/shodor-education/petascale-semester-curriculum*](https://github.com/shodor-education/petascale-semester-curriculum)

*We want to hear from you! Please let us know your experiences using this material by sending email to* [*petascale@shodor.org*](mailto:petascale@shodor.org)