

Teacher instructions

Solved code is provided.

When working with the students to parallelize their code, it can be useful to discuss a few key issues.

- Asking for more resources, either in total or in certain manners (e.g. too many threads per block) will not only not produce an error, it will likely run with great speed (though erroneous results) fooling the students into thinking they have sped up their problem. Focus on the need for always checking the accuracy of results and checking for errors, especially when debugging CUDA code.
- Depending on machine, you may need specific compile options. Students may investigate setting the compute level and architecture at compile time to see if it speeds up, slows down, or breaks their code.
- Have the students investigate pairing up the rapidly changing variable in the flattened array with either the x or y dimension in thread space for the 2D problem, to see if there is a performance difference.