Proposal:

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Main goal: The project is about using the gpu to parallelize the jacobi iteration.

Plan:

1. Research, I need to learn which api is best for the project, then learn that api. This could be OpenMP,Cuda, or OpenCL.
2. Coding, Write a GPU version of jacobi, possibly will have one or two smaller codes in order to learn the api.
3. Comparing the different versions of jacobi.

Extra ideas(depending on how hard the jacobi is)

- Create a dynamic load balancer/optimizer. This would do less work in areas of the grid where it is not as changing as much
- Doing gpu jacobi with another api to see if one is faster.

Milestones:

1. Learned how to use the api I want to use.(Mon 22)
2. Get a basic code working on the gpu.(Fri 26)
3. Get jacobi working on the gpu.(Fri 3)
4. Optimize the jacobi code(if needed)(Mon 6)
5. Do testing on different versions(Mon 6)
6. Do some of the extra ideas depending on time left

Most Important Milestones: 1, 3, 5

Software: may need openMP, openCL, or cuda