Group Members:

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Description:

The topic of interest is the IBM Summit: the world's fastest supercomputer. This **report** will include a brief overview of the IBM Summit, including its history, an look at its architecture, strengths, weaknesses, and overall analysis of the system. Following the detailed description of the supercomputer, the report will begin to conduct a comparative analysis of other "Top 500 Supercomputers" (https://www.top500.org/list/2018/11/) in relation to Summit. Since the IBM Summit is also the fastest supercomputer in the U.S., the report will select the top supercomputers from other countries (e.g., Switzerland, China, Italy, Japan, etc.) and compare technical specifications, types of applications, optimizations and shortcomings.

The report will be kept within the context of the course, and work will be evenly split between the four members of the group. Specifications, architecture schematics, and other information will need to be gathered by each group member. Each member will write their own section of the report. Once all the sections of the report have been completed, the group will need to synthesize those sections into a coherent paper.

The report will be approximately 20 pages long. Jory will write on the IBM Summit itself: its architecture, strengths, weaknesses, and an overall analysis of the system. Justin will perform an comparative analysis of Switzerland's Piz Daint and Japan's AI Bridging Cloud Infrastructure (ABCI) machine against the Summit. Micheal will take a look at China's Sunway TaihuLight and South Korea's Nurion computer. Finally, Parm will compare Germany's SuperMUC-NG to the Summit, as well as Italy's HPC4. The list of selected supercomputers is tentative, and is subject to change depending on the amount of resources available.