

1 MPI

Application: Implement a parallel algorithm using MPI (must show good scalability)

Sparse matrix matrix multiplication

2 Distributed hash-tables (Chord-like)

Application: Build a decentralized application that relies on DHTs

Decentralized Key-Value NOSQL database

3 Stream processing

Application: Implement a distributed stream processing application (should work with a real-time source)

Stream realtime Tweets to detect *racism* (Racism can be changed, we can detect something else.)

4 BSP-style graph processing (GoldenORB)

Application: Implement graph algorithms on BSP middleware, using vertex-based programming

Dijkstra's shortest-path can be done in this topic.