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1005549  
50.041 Distributed Systems and Computing

**Project Individual Report**

In this project, I implemented and suggested various features and improvements along the way.

A list of what I contributed to and implemented are:

1. Server.go (In collaboration with Jon)
   1. Core locking service
      1. Handling of requests and logic on the messages to be passed around
      2. Handling of different scenarios
   2. Failover procedure
      1. Backup & Recovery mechanism
      2. Health checks
   3. Consistency
      1. Data replication methods
      2. Implementation of data replication calls
2. Simulations
   1. Improvements to initial draft of simulation scenarios from Wang Lin
   2. Coverage of simulations to ensure robustness
   3. Implementation of all simulations
   4. Verification of correctness
3. Report
   1. Drafting & vetting of all checkpoints & reports

An additional list of ideas and tasks that I suggested and conceptualized are:

1. Project Idea & direction
   1. Led discussion to decide on project to take on
   2. Communicating team’s expectations and efforts
2. Client.go (In collaboration with Shaun & Wang Lin)
   1. Retry mechanism
      1. Retry attempts and flows upon failure to get a response from the server
      2. Communication sync & discussion to reach common ground