

15-440: Distributed Systems

Rubrics of Project 2

School of Computer Science
Carnegie Mellon University, Qatar
Fall 2015

1. Common (Points: 1%)

- CompareTo is implemented

2. Naming Server (Points: 85%)

- Lock Test (Points: 30%)
 - Lock rejects null arguments and bad paths (3%)
 - Two readers can simultaneously lock the same file (3%)
 - Two writers can simultaneously lock different files under the same directory (3%)
 - A reader and a writer can simultaneously lock a directory and its child respectively (3%)
 - A writer cannot lock a file currently locked by another reader (3%)
 - A reader cannot lock a file currently locked by another writer (3%)
 - A writer cannot lock a file currently locked by another writer (3%)
 - A reader cannot lock a file whose parent is currently locked by a writer (3%)
 - A writer cannot lock a directory whose child is currently locked by a reader (3%)
 - A writer cannot lock a directory whose child is currently locked by a writer (3%)
- Queue Test (Points: 20%)
 - Two readers simultaneously lock a file (4%)
 - A writer is queued until first two readers unlock (8%)
 - Two readers are queued until writer unlocks and then simultaneously (8%)
- Replication Test (Points: 27%)
 - File is replicated after a large number of read lock requests (3%)
 - File is not invalidated due to read lock requests (3%)
 - All (but one) replicas are invalidated after a write lock request (3%)
 - Copy rejects null arguments (3%)
 - Copy is provided with the up-to-date storage server (3%)
 - Copy rejects duplicate copy requests (3%)
 - Delete rejects null arguments (3%)
 - Delete rejects wrong path (3%)
 - Delete rejects duplicate delete requests (3%)
- Deletion Test (Points: 8%)
 - Delete deletes all replicas of a file (4%)
 - Delete deletes all replicas of a directory (4%)

3. Storage Server (Points: 9%)

- Replication Test (9%)
 - Copy rejects null arguments and bad paths (3%)
 - Copy creates new destination files and their parent directories (if non-existent) (3%)
 - Copy correctly replaces existing destination files (3%)

4. Code Style (Points: 5%)

- Method Comments, Block comments, Readability, Dead code, Code design