Chord Code Design

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Chord Code File Layout

1 Packages

Code Consists of the following packages :
1. implementation
2. utilities
3. images
4. tests

2 Description

Each Package files is summarised below :

2.1 Package implementation

It has all the files which implements the chord overlay network.
a. Node.java – Has the node structures and Node operation methods.
b. Chord.java – Has the global list and sorted tree map structures.
c. Finger.java – Defines the finger structure for finger table.
d. FingerTable.java – Defines the operations on fingers and array of fingers.
e. Message.java – Defines message structure and message enum to pass message between different nodes for communication.
f. DHTKey.java – Defines the Chord Key structure for hashed nodes and files identifiers.Also set of methods that can be performed on hash key.

2.2 Package utilities

It defines the utility files for hashing , message coomunication and for creating the input/output console.
a. HashFunc.java – Calculates the CRC32 hash on string identifier.
b. MessageQueue.java – Defines Queue size and set of operations on the queue.
c. Console.java – Defines the console for taking input from the user and for

performing custom operations like add, delete, lookup, list etc.
d. Drawing.java-Defines the functions for creating the Chord Ring Network

2.3 Package tests

a. Main1.java - For Simulating Chord Network
b. Main2.java - For Calculating Avg Lookups per Operation
b. Main3.java - For drawing Chord Ring