Node

acceptor: Acceptor
proposer: Proposer
server: Server
node_id: unique_int

listen(Acceptor): send()
listen(Proposer): send()
send(message_type([arguements]), node_id): null

The Node class has a server that listens for incoming messages from other node. These messages correspond to specific methods in Acceptor and Proposer, Node parses the message and give it to the appropriate contained class.

send(prepare(m))
send(accept(m))

send(promise(accNum, accVal))
send(ack(accNum,accVal))

send(promise(accNum, accVal))
send(ack(accNum,accVal))

send(prepare(m), node_id)
send(accept(m), node_id)

Proposer

m (proposal_number):unique_int
v (proposal_value):any_object

receive(promise(accNum,accVal)):null
receive(ack(accNum,accVal)):null

send(prepare(m)):null
send(accept(m)):null
send(commit(v)):null

Acceptor

maxPrepare: unique_int
accNum: unique_int
accValue: any_object
log: ordered_set

receive(prepare(m))   :null
recieve(accept(m))   :null

send(promise(accNum, accVal))   :null
send(ack(accNum,accVal))   :null

m: proposal_number, a unique integer to correspond with the current proposal's identification number

v: proposal_value, an object that the proposer is proposing for value v

maxPrepare: largest proposal number for which it has responded to a prepare message (initially 0)

accNum: largest proposal number of proposal it has accepted (initially null)

accVal: value of proposal numbered accNum (initially null)