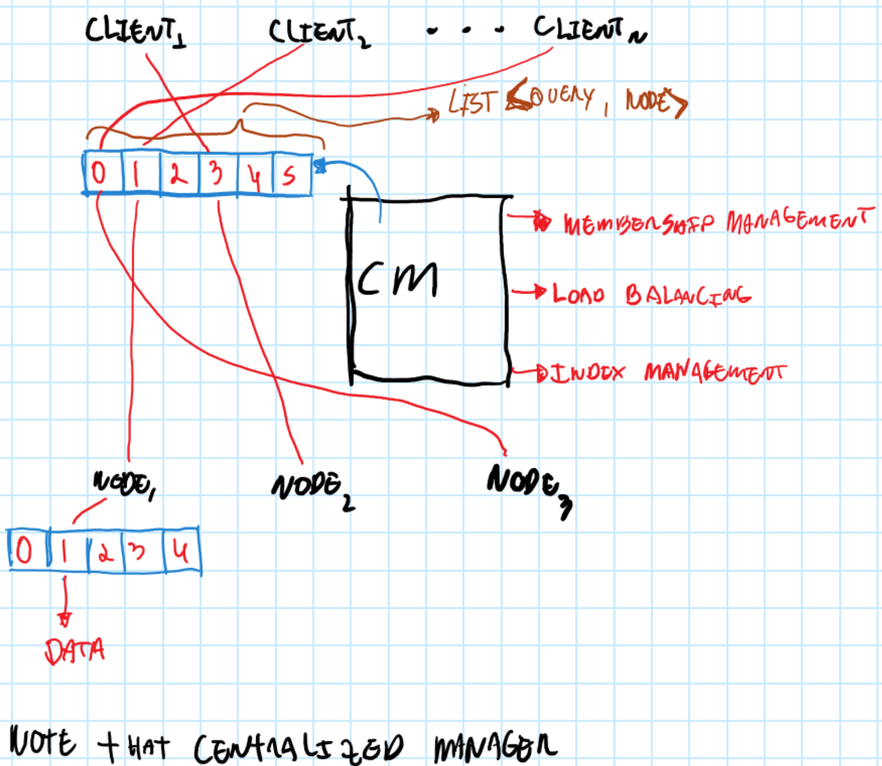
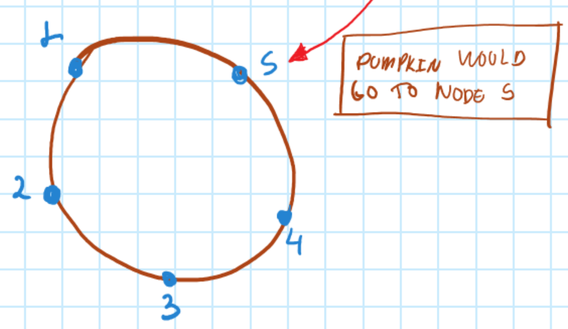
Project 4

Thursday, April 12, 2018 5:36 PM



HOW TO MAP KEYS TO NODES? HASH TABLE

KEY = 4 "PUMPKIN" → 772 ASCII
INDEX = 772 % 13 // 5



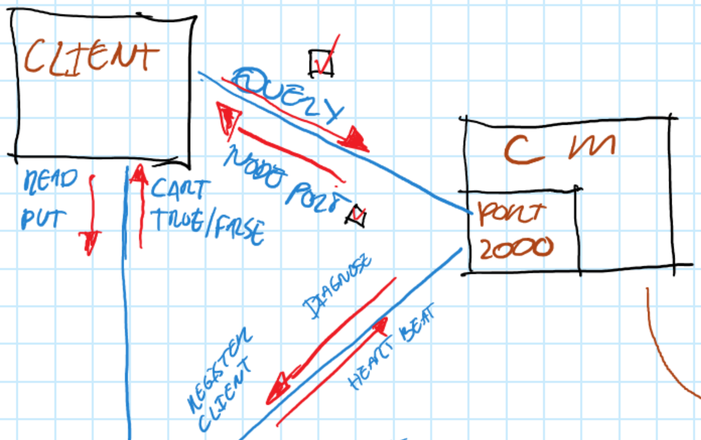
NOTE THAT CENTRALIZED MANAGER IS RESPONSIBLE FOR HASHING

CENTRALIZED MANAGER CHARACTERISTICS AND TODOs

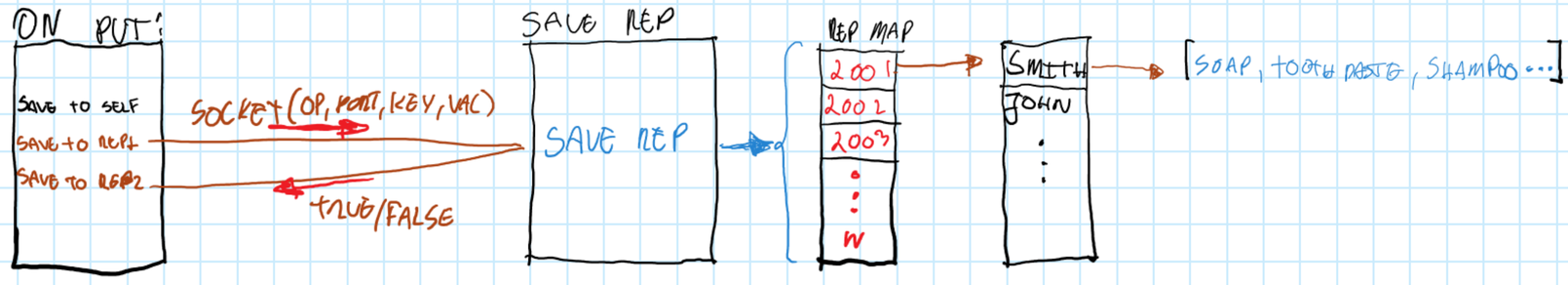
* MULTITHREADED ☑
* ALL CONNECTIONS MUST GO THROUGH IT ☑
* MANAGES CLIENT-TO-NODE LIST ☑
* PERFORMS CHECKS TO SEE IF NODES ARE ALIVE
* SOCKET BASED COMMUNICATION → TCP PORT 2000 ☑

SERVICES MAP
1 → QUERY RETURNS: NODE PORT

* CREATE HASH FUNCTION ☑
* ADD SEND MESSAGE CAPABILITY ☑
* SPLIT BUFFER INTO SRVC_REQUST AND ARGUMENT ☑



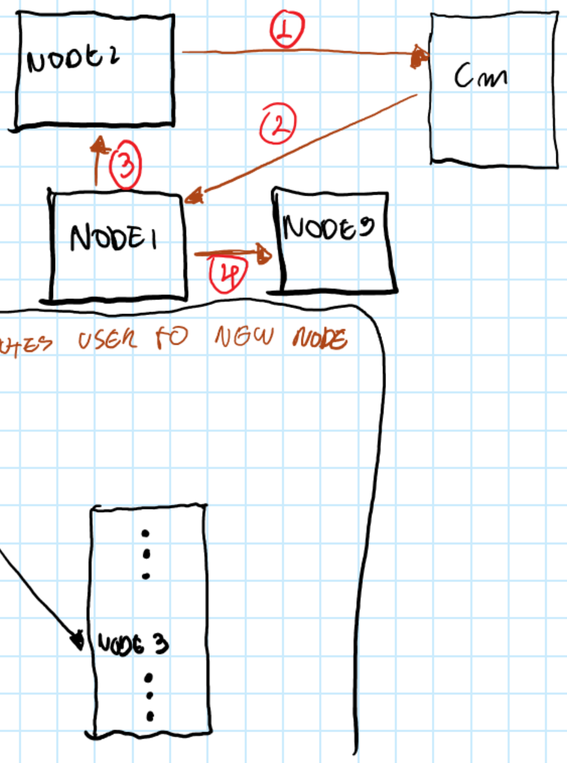
REPLICAS



SMITH, SOAP, COLGATE, PHONE. JOSH, SOAP, LIPSTICK, BROOM;

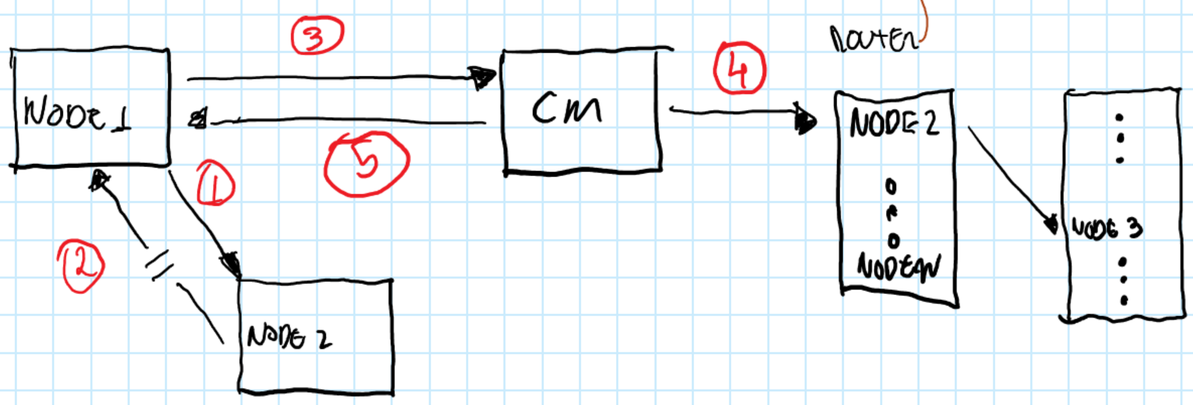
PERFORMANCE

NODE REJOIN



1. NODE2 SENDS JOIN TO CM
2. CM SENDS SET_REP TO NODE1
3. NODE1 SENDS REP TO NODE2
4. NODE1 SENDS DELETEP REP TO NODE3

RECOVERING FROM FAILURE



1. NODE1 SENDS PUT TO NODE2
2. NODE2 IS DEAD ☹
3. NODE1 TELLS CM ABOUT NODE2
4. CM REMAPS THE ROUTE
5. CM RETURNS NEW NODE PORT TO NODE1