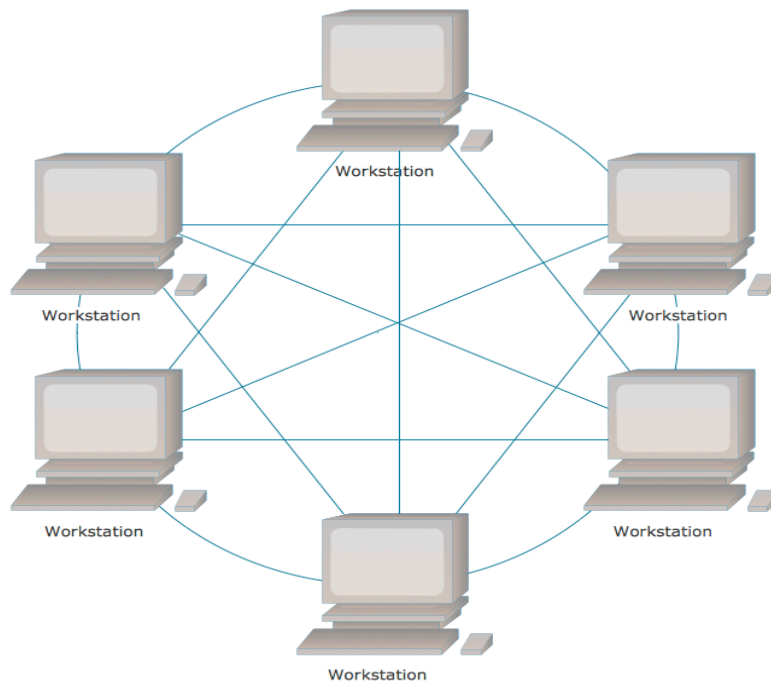


Design Document
CS-550 Advance Operation System
Fall-2015
Programming Assignmane-2
Chintankumar Patel
A20329245

This project has 2 java class packages p2pClient(Client) and p2pClientAsServer (Server). And one more config.properties file.



Class: p2pClientAsServer (Directory Server)

It is simple socket server class with multithreading using Runnable.

p2pClientAsServer class has a HashMap named *keyValueStore* which maintain list of all keys and values stored in client(peer). That hashmap is shared between peers on same network.

When any peer appears into network , first it will connect to it's own server and then connect to other servers(peers) which are already in servers.

Main features of p2pClientAsServer:

- Store key-values into HashMap
- Provide value for to peer whenever requested for given key
- Delete key-value pair from hashmap for given key.

Class: p2pClient

It is multithread class which can appear as a client in network on specified port. Also it will connect to its own server and other servers present on server.

Main features of p2pClient:

- Connect with its own server
- Connect with all other peers which are listed in config.properties .
- Using key range store key-value pair to specific peer.
- Get value from another peer for specific key
- Delete key-value from any peer present on network

config.properties

It contains whole configuration for network. It has list of all peers its address and port number on it.

Every time when peer connects to network it will read config.properties to connect with other network.

Possible Improvements can be made in above Peer-to-Peer System

- Implement grouping P2P network system to eliminate flooding in extreme peer network.
 - In this system there is one Super peer in one small group of peers which only is connected with another Super peer in network.
 - So it will minimize complexity of network..
 - This system may have better performance and scalability than our system.
 -

