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­­Ajay Ramesh & Chandra Kumar

Illinois Tech

File Sharing System Design Doc-1.0

CS550AOS-Programming Assignment 1

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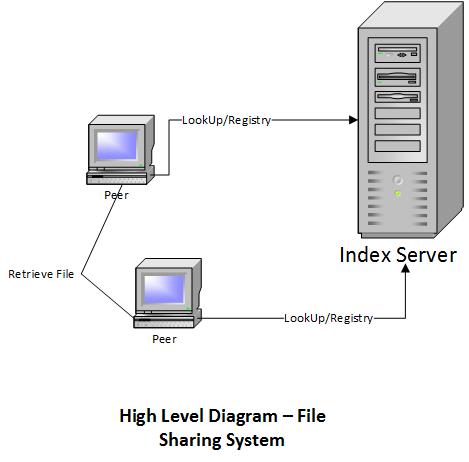
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# Introduction



## Requirement

### Central indexing server.

This server indexes the contents of all of the peers that register with it. It also provides search facility to peers.

* *registry(peer id, file name, ...)* -- invoked by a peer to register all its files with the indexing server. The server then builds the index for the peer.
* *lookup(file name)* -- this procedure should search the index and return all the matching peers to the requestor.

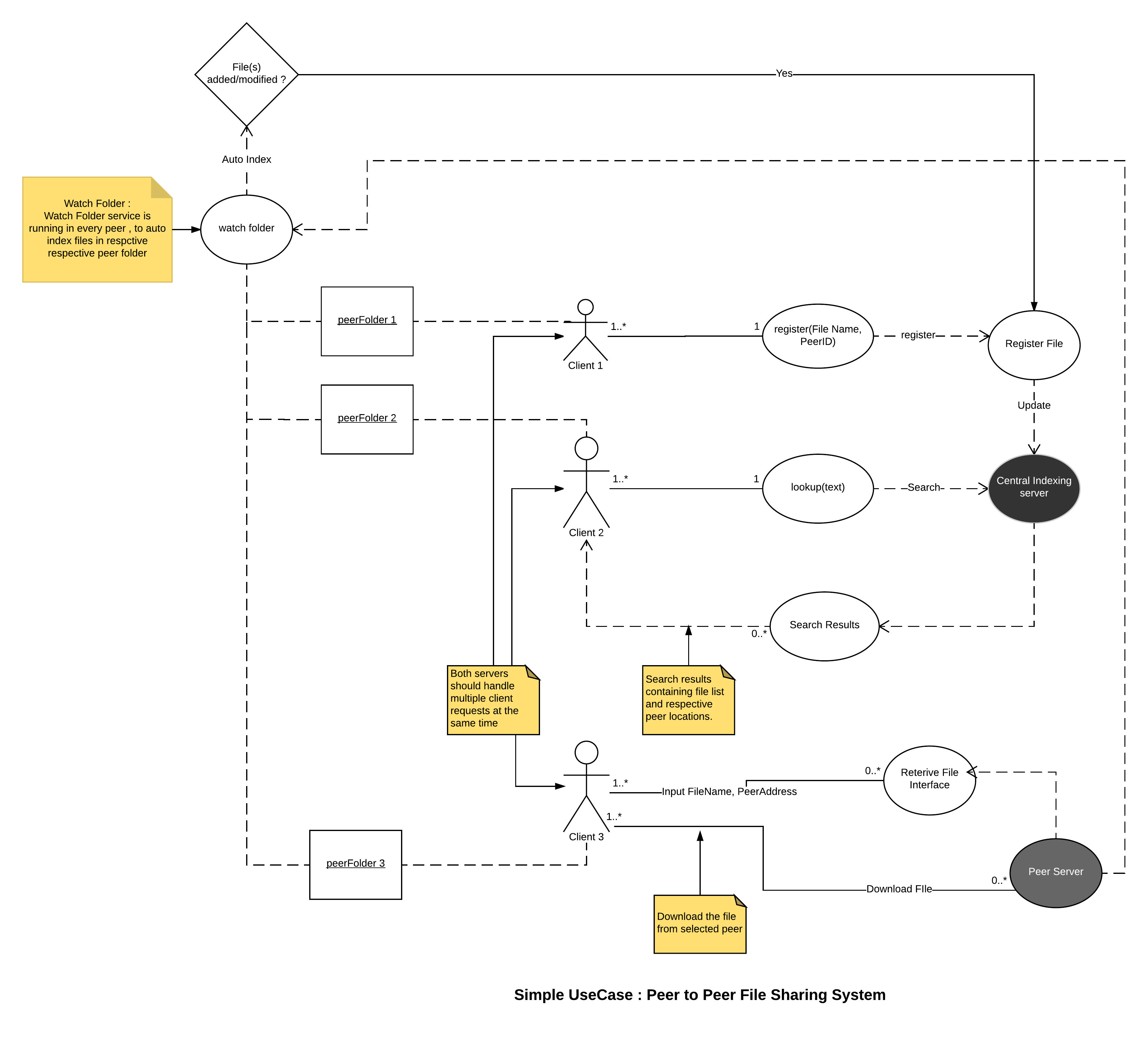
### Peer.

A peer is both a client and a server. As a client, the user specifies a file name with the indexing server using "lookup". The indexing server returns a list of all other peers that hold the file. The user can pick one such peer and the client then connects to this peer and downloads the file. As a server, the peer waits for requests from other peers and sends the requested file when receiving a request. Minimally, the peer server should provide the following interface to the peer client:

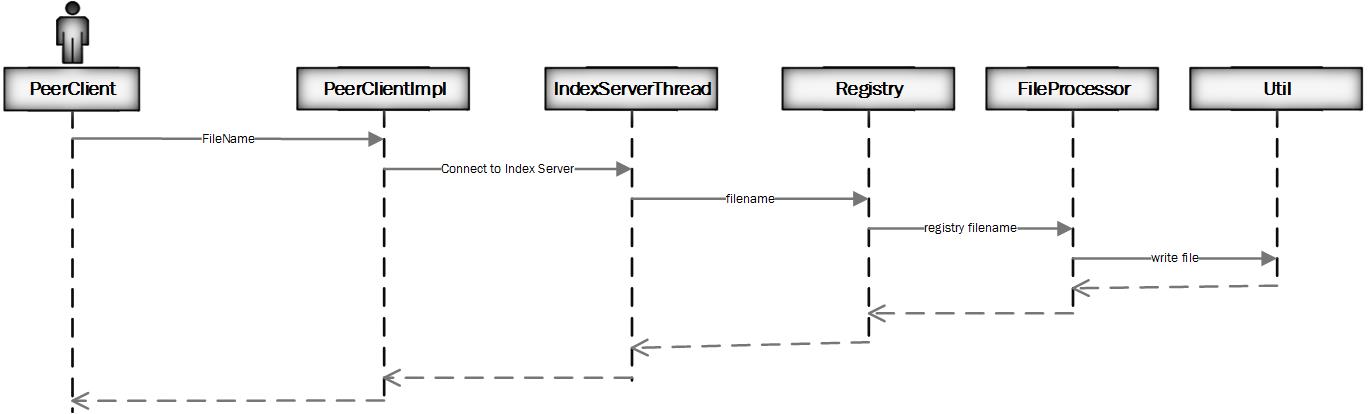
* retrieve(file name) -- invoked by a peer to download a file from another peer.

# Over all Program Design

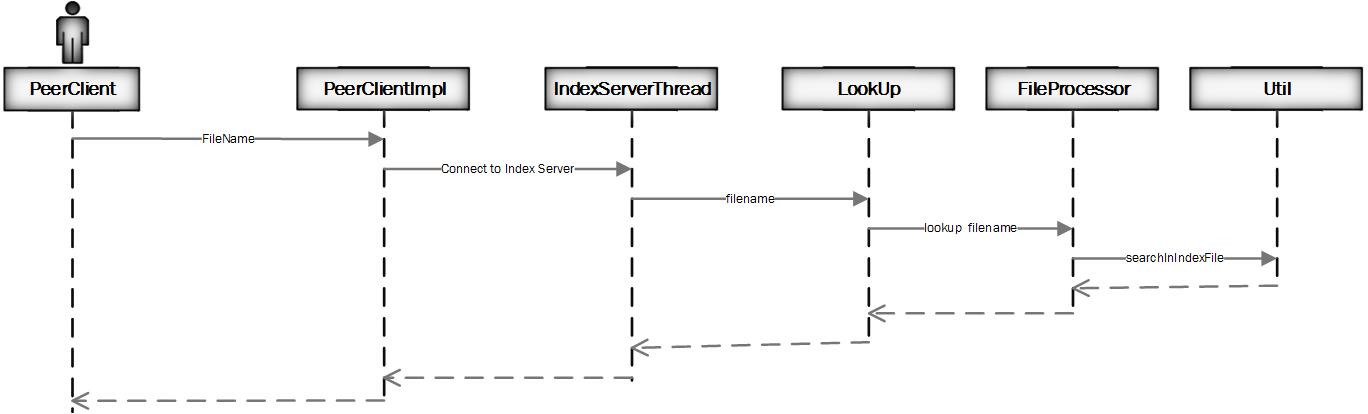
We have used the Java Sockets . The overall design overview is blow:



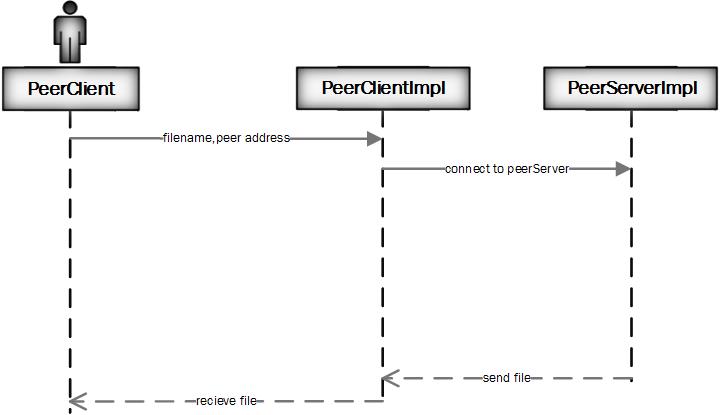
## File Registry Sequence Diagram –



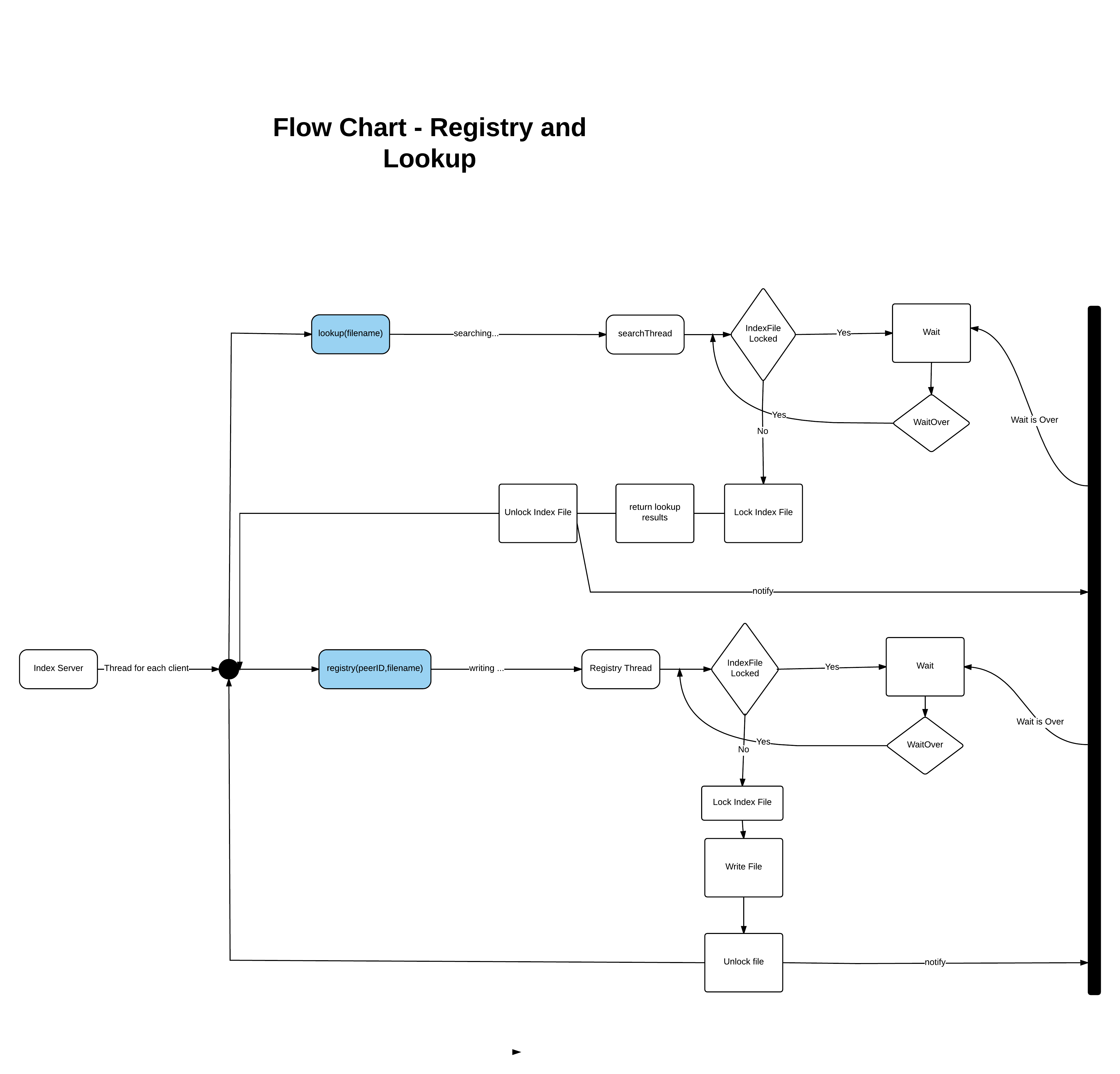
## File Lookup Sequence Diagram –



## File Download Sequence Diagram –

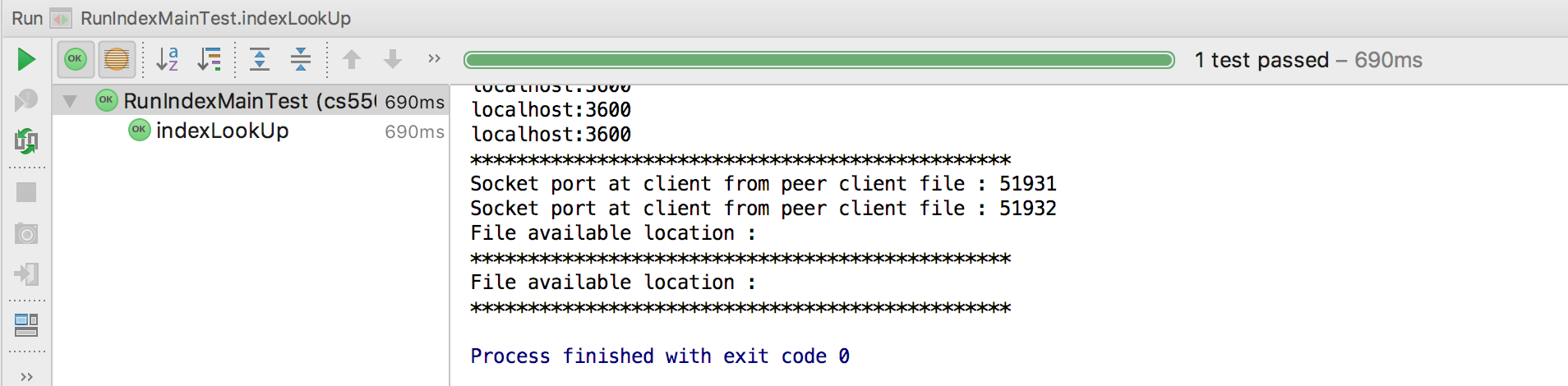


## Registry and Lookup Concurrency Flow chart



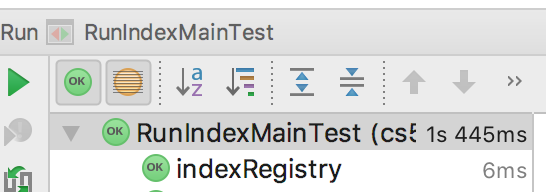
# Evaluation and measurement :

## Lookup



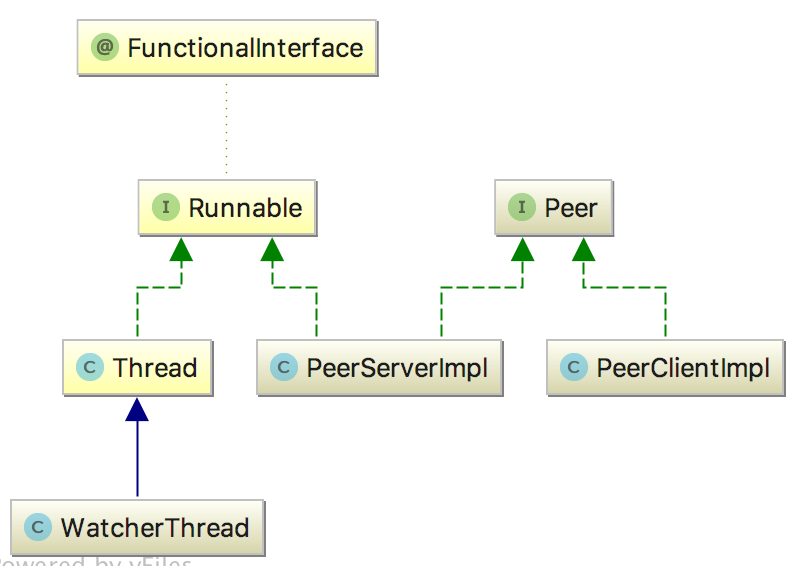
## Registry

Adding 1000 entries from 3 peers simultaneously



# Class Diagram and its dependency -

## Peer Server



## Index Server

