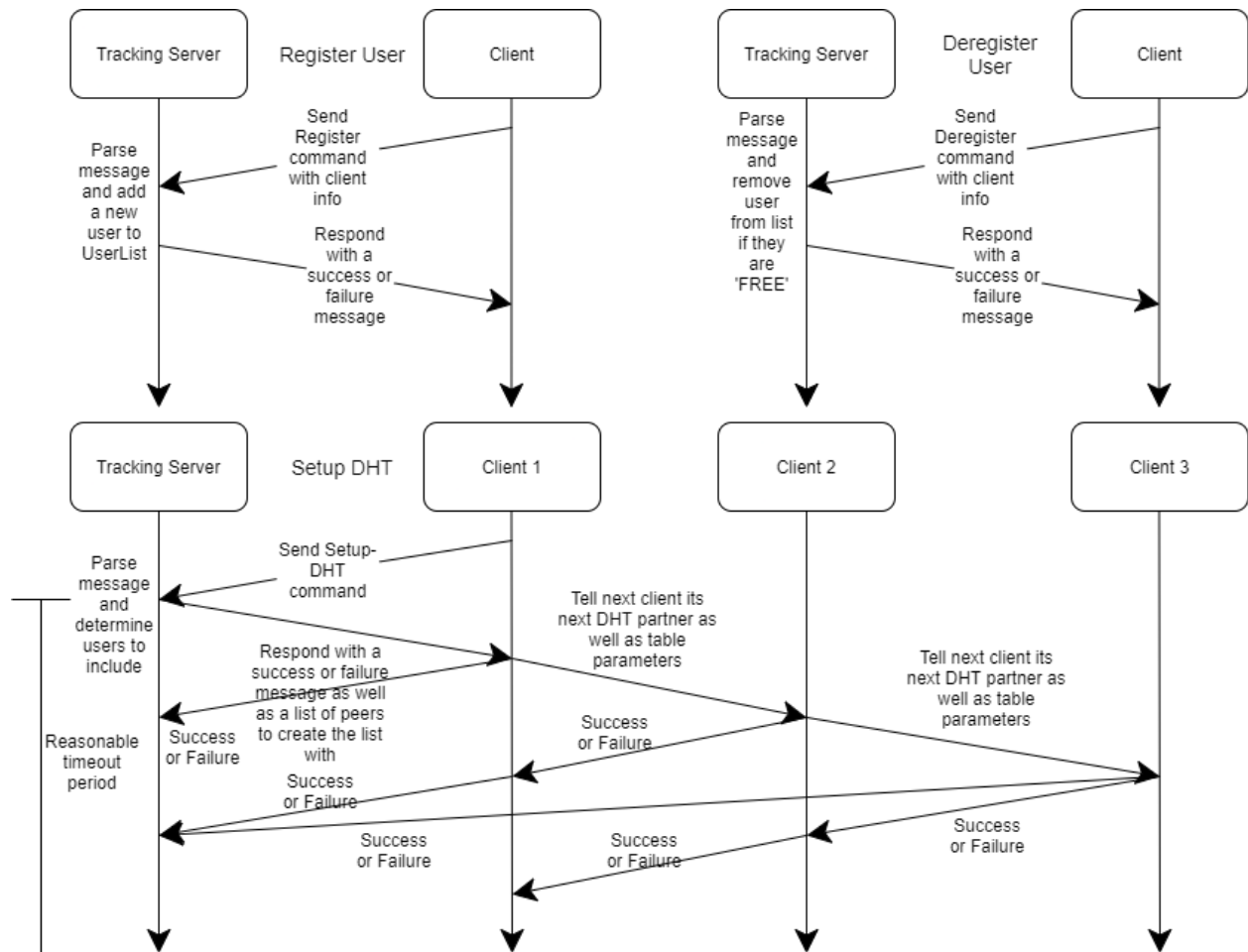


Socket Project Milestone  
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(a). The message format of my client to server messages are COMMAND#INPUT. An example of this would be the Register-User message which would be sent as a Byte Array as RegisterUser#Username#127.0.0.1#38000 which would be delimited by the pound signs and interpreted as

Command: RegisterUser  
Username: Username  
IP Address: 127.0.0.1  
Port: 38000

(b).



(c). There are only a few different data structures I have implemented within my project. As it currently stands I used a convenient and sufficient method for organizing registered server members, that being a linked list. This structure does not scale very well with larger scale user bases but for the milestone I think it will be sufficient. For the contents of the list I created my

own custom class to represent UserData, this structure allows you to instantiate new list members quickly and simply and then edit later using setter and getter functions. The last data structure I used is Java's dictionary structure which behaves in the same way as a typical Hash Table without having to design my own structure like I would have to in C.

(d).

The screenshot shows the GitHub Desktop interface. The top bar includes the menu (File, Edit, View, Repository, Branch, Help), the current repository (CSE434-DHT-Socket-Project), the current branch (main), and a 'Fetch origin' button. Below this, a message states: 'An updated version of GitHub Desktop is available and will be installed at the next launch. See [what's new](#) or [restart GitHub Desktop](#).' The main area is divided into three panes. The left pane shows the 'Changes' tab with a list of commits: 'Client Command work' (ncberman • 17m), 'Updated Server / Added Client base' (ncberman • 52m), 'Organized and Separated Client/Server' (ncberman • 1h), 'Update DHTServer.java' (ncberman • 2h), 'Basic Server Implementation' (ncberman • 2h), and 'Initial commit' (ncberman • 11h). The middle pane shows the 'Updated Server / Added Client base' commit with 3 changed files: 'Client\DHTClient.java', 'Server\DHTServer.java' (selected), and 'Server\UserData.java'. The right pane displays the code for 'Server\DHTServer.java', showing a diff from the previous commit. The code includes package declarations, imports for List, net, and io, and the implementation of the DHTServer class, which extends Thread and contains private fields for serverSocket, serverPort, and userList, along with methods for GetServerState and stopServer.

```
@@ -1,22 +1,42 @@
1  +package Server;
2  import java.util.List;
3  +
4  import java.net.*;
5  import java.io.*;
6
7  -public class DHTServer
8  +public class DHTServer extends Thread
9  {
10     private ServerSocket serverSocket;
11     private int serverPort = 38500; // Socket Group 75 is al
12     lowed to use ports 38500 - 38999
13     private List<UserData> userList;
14     + private boolean runServer = false;
15     + public boolean GetServerState()
16     + {
17     +     return runServer;
18     + }
19     + public void stopServer()
20     + {
```

(e). No Video