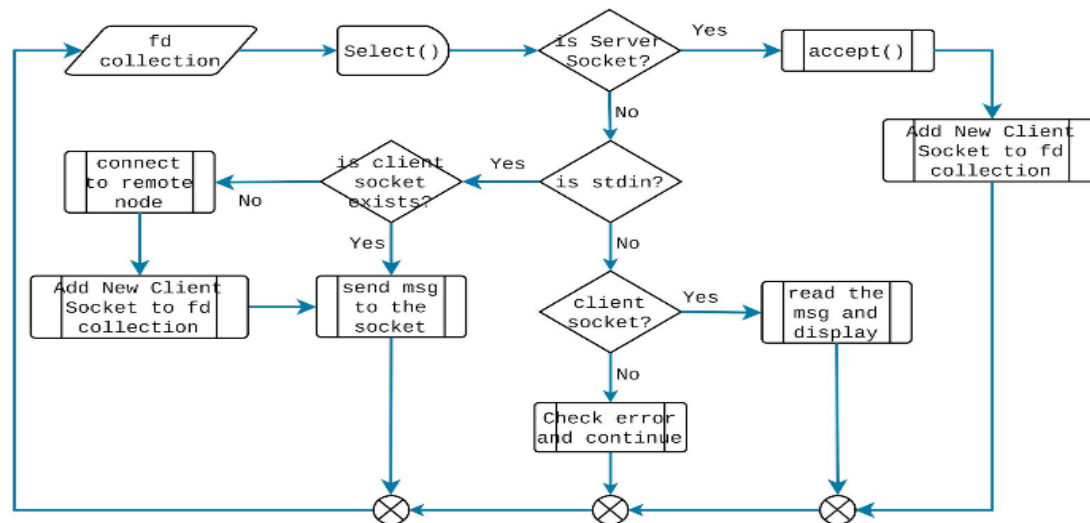


## Assignment 8: Implement a Peer-to-Peer Chat Application

- Instructions given in the following flow chart are followed strictly during the Implementation of the Peer-to-Peer Chat Application.



- Struct peer\_info is used to store data from user\_info table, client socket(if it exists) and last\_interaction\_time for each friend of the user. And in that we will store also for each friend
- If there is no activity over the client socket for a timeout duration, then the client socket for the corresponding socket will be closed(stored in struct peer\_info).

-----Current User Info Table-----

ajay 127.0.0.1 4141  
vijay 127.0.0.1 9191  
anmol 127.0.0.1 8080  
naman 127.0.0.1 8181  
kushal 127.0.0.1 5959

- The User\_Info table can be easily updated by modifying users\_info.txt file.

### compilation and running procedure:

1. make clean
2. make
3. ./p2p portno1
4. ./p2p portno2 (In new terminal tab)
5. ./p2p portno3 (In new terminal tab)

Similarly for portno4 and portno5

### Send Hi message from ajay to kushal :-

sample input:

```
ajay03@ajay03-Inspiron-7572:~/Desktop/Assignment_8_18CS30006_18CS10035$ ./p2p 4141
Welcome ajay!

-----Friends List-----
anmol (127.0.0.1 : 8080 )
kushal (127.0.0.1 : 5959 )
naman (127.0.0.1 : 8181 )
vijay (127.0.0.1 : 9191 )
-----
Chat Application Running ....
message format: friendname/<msg>
-----
kushal/Hi
```

```
ajay03@ajay03-Inspiron-7572:~/Desktop/Assignment_8_18CS30006_18CS10035$ ./p2p 5959
Welcome kushal!

-----Friends List-----
ajay (127.0.0.1 : 4141 )
anmol (127.0.0.1 : 8080 )
naman (127.0.0.1 : 8181 )
vijay (127.0.0.1 : 9191 )
-----
Chat Application Running ....
message format: friendname/<msg>
-----

```

sample output:

```
ajay03@ajay03-Inspiron-7572:~/Desktop/Assignment_8_18CS30006_18CS10035$ ./p2p 4141
Welcome ajay!

-----Friends List-----
anmol (127.0.0.1 : 8080 )
kushal (127.0.0.1 : 5959 )
naman (127.0.0.1 : 8181 )
vijay (127.0.0.1 : 9191 )
-----
Chat Application Running ....
message format: friendname/<msg>
-----
kushal/Hi
[+]connection established with kushal
-----
```

```
ajay03@ajay03-Inspiron-7572:~/Desktop/Assignment_8_18CS30006_18CS10035$ ./p2p 5959
Welcome kushal!

-----Friends List-----
ajay (127.0.0.1 : 4141 )
anmol (127.0.0.1 : 8080 )
naman (127.0.0.1 : 8181 )
vijay (127.0.0.1 : 9191 )
-----
Chat Application Running ....
message format: friendname/<msg>
-----
[+]connection established with ajay
ajay : Hi
-----
```

After Timeout,

```
ajay03@ajay03-Inspiron-7572:~/Desktop/Assignment_8_18CS30006_18CS10035$ ./p2p 5959
Welcome kushal!

-----Friends List-----
ajay (127.0.0.1 : 4141 )
anmol (127.0.0.1 : 8080 )
naman (127.0.0.1 : 8181 )
vijay (127.0.0.1 : 9191 )
-----
Chat Application Running ....
message format: friendname/<msg>
-----
[+]connection established with ajay
ajay : Hi
-----
[-]ajay timed-out. Closing connection ...
-----
```

```
ajay03@ajay03-Inspiron-7572:~/Desktop/Assignment_8_18CS30006_18CS10035$ ./p2p 4141
Welcome ajay!

-----Friends List-----
anmol (127.0.0.1 : 8080 )
kushal (127.0.0.1 : 5959 )
naman (127.0.0.1 : 8181 )
vijay (127.0.0.1 : 9191 )
-----
Chat Application Running ....
message format: friendname/<msg>
-----
kushal/Hi
[+]connection established with kushal
-----
kushal timed-out. Closing connection ...
-----
```