

Distributed file sharing system

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Commands Implemented:

1. Help

- Displays a list of available commands, and which type of mode can use which one.

2. Creator

- Displays the name, UBIT name and email ID of the writer of the program

3. Display

- Displays the IP address and port number the instance of the program is listening on

4. Register <hostname> <port>

- Registers the client on the server-IP-list, so that it can participate in the file sharing program

5. List

- Command that shows what clients are connected to the server along with its connection id, hostname, IP address and port number.

6. Quit

- Command that quits the program and leaves the file sharing system.

Workflow of server

1. Server starts listening on the port specified by argument for connections.
2. It gets its own public IP and hostname using methods written for it.
3. It builds a server-IP-List and adds its own entry to it.
4. It waits for connections.
5. When a client connects to it, it will update the server-IP-List and send the same to all connected clients.
6. When a server leaves the system, it'll take out its entry from the list and update all other remaining clients
7. If help command is typed, the help page is displayed.
8. Similarly for 'display' and 'creator' command.

Workflow of client

1. A client will first start listening on the specified port. It can register to a server using the 'register' command
2. The client will also maintain a server-IP-List.
3. It can connect to any client on the server-IP-List except server.
4. All the clients on the system can be viewed using 'list' command.
5. A client can quit the system using 'quit' command.
6. 'help', 'creator' and 'display' perform the same functions as server.