WebSocket Protocol Assignment

Developed a basic chat system with one server and capable of handling multiple clients using websocket concepts along with node.js.

GitHub Link: https://github.com/mohitjaiin/websocket

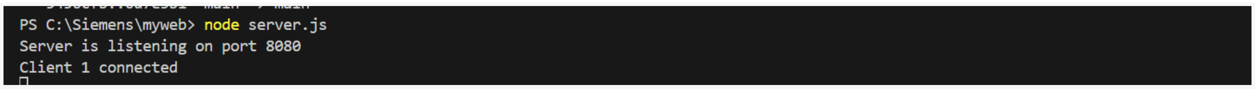
STEPS

1. Once GitHub repo is cloned, we can install the ws module from node.js to utilize the websocket objects

```
npm install ws
```

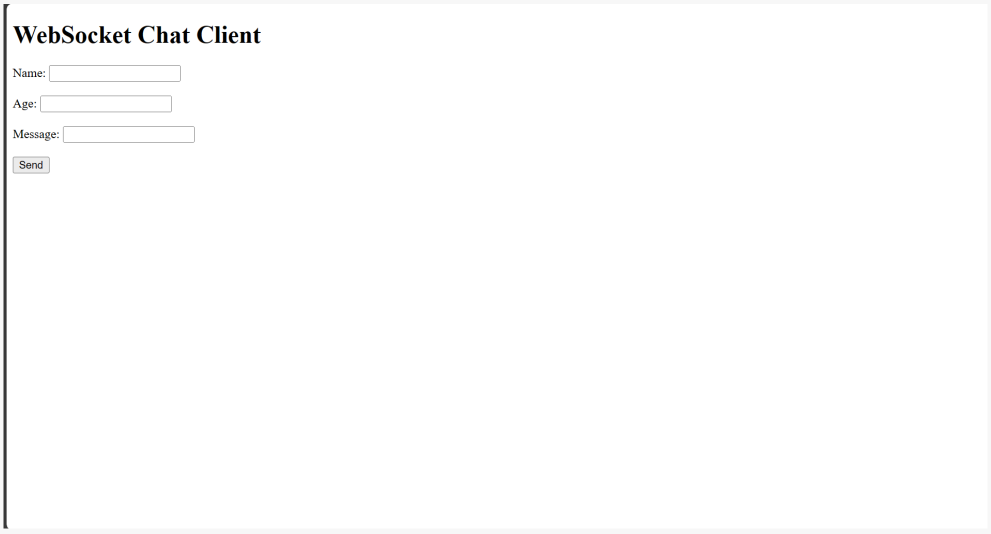
2.After this we can save the files and run the server.js file using the command

```
node server.js
```



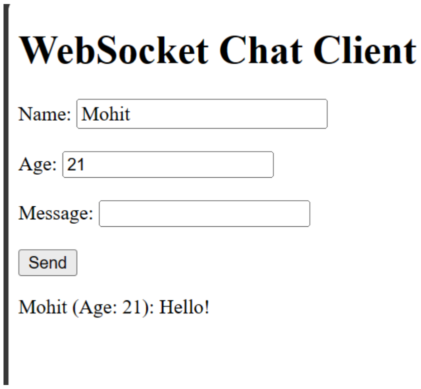
```
PS C:\Siemens\myweb> node server.js
Server is listening on port 8080
Client 1 connected
```

3.Later, we can open the client.html file on a live server to setup the client on port 8080,



4.We can now feed in the values on the form, Name, Age etc.

On Client 1 side:



WebSocket Chat Client

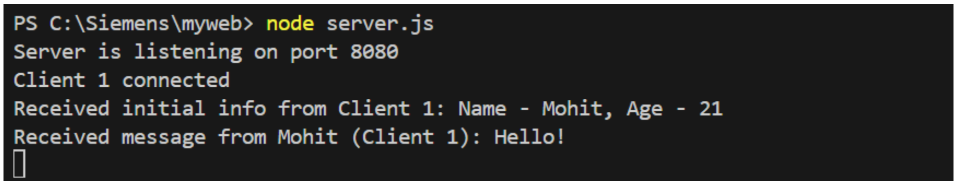
Name: Mohit

Age: 21

Message:

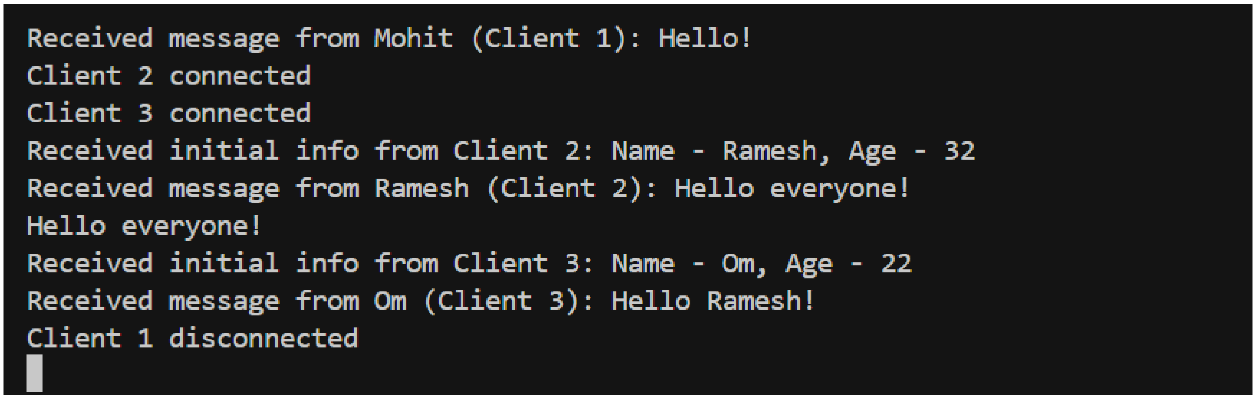
Mohit (Age: 21): Hello!

5.On server side: (Information is passed as JSON data and retrieved on the server side along with the message typed by the client.)



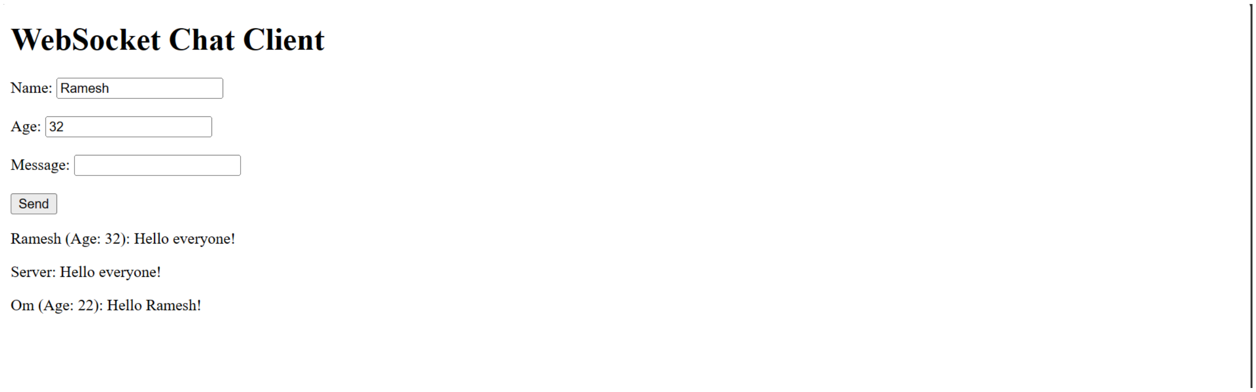
```
PS C:\Siemens\myweb> node server.js
Server is listening on port 8080
Client 1 connected
Received initial info from Client 1: Name - Mohit, Age - 21
Received message from Mohit (Client 1): Hello!
```

6.Various scenarios on server side:



```
Received message from Mohit (Client 1): Hello!
Client 2 connected
Client 3 connected
Received initial info from Client 2: Name - Ramesh, Age - 32
Received message from Ramesh (Client 2): Hello everyone!
Hello everyone!
Received initial info from Client 3: Name - Om, Age - 22
Received message from Om (Client 3): Hello Ramesh!
Client 1 disconnected
```

7.Client 2 Side:



WebSocket Chat Client

Name: Ramesh

Age: 32

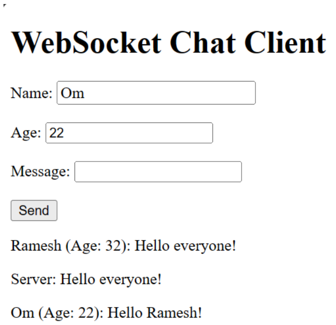
Message:

Ramesh (Age: 32): Hello everyone!

Server: Hello everyone!

Om (Age: 22): Hello Ramesh!

8.Client 3 side:



WebSocket Chat Client

Name: Om

Age: 22

Message:

Ramesh (Age: 32): Hello everyone!

Server: Hello everyone!

Om (Age: 22): Hello Ramesh!

9.Important points:

1. *Anything typed from server side on terminal i broadcasted to all clients.*
2. *Multiple clients can be connected to a single server with all records of connection and disconnection on the server side shown.*
3. *On the client side, we receive the messages from the other clients along with the server messages also mimicking an individual chat system.*