# 🔴 Let's Build a WhatsApp Chat App with React JS, Node JS and Socket.IO

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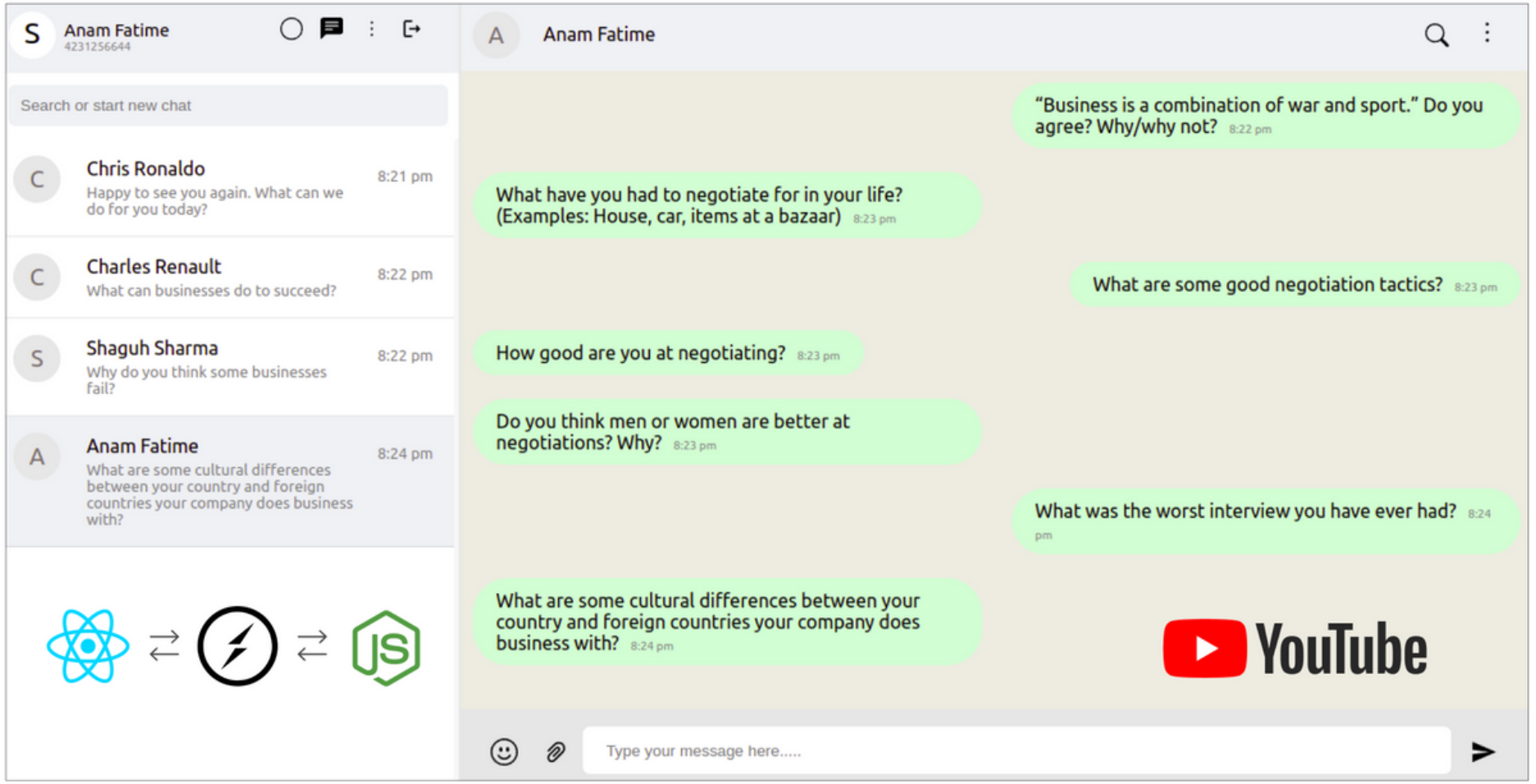
# Realtime output



# Basics of Communication Protocols

- Http protocol
- Websocket protocol

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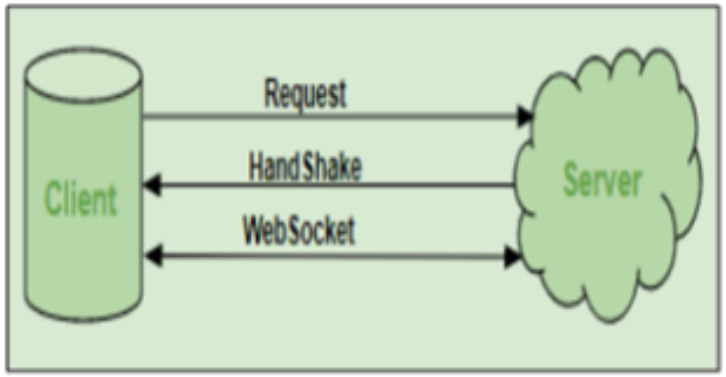
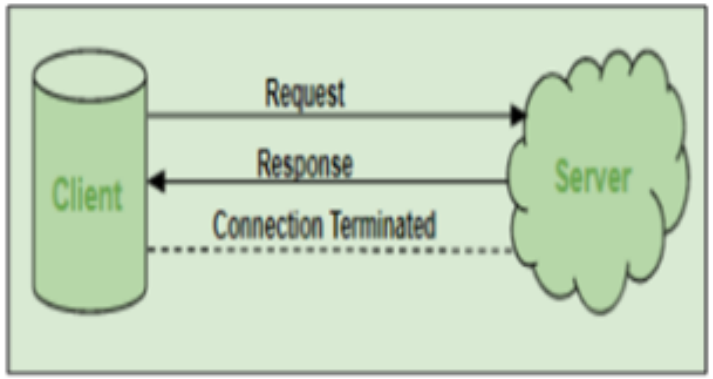
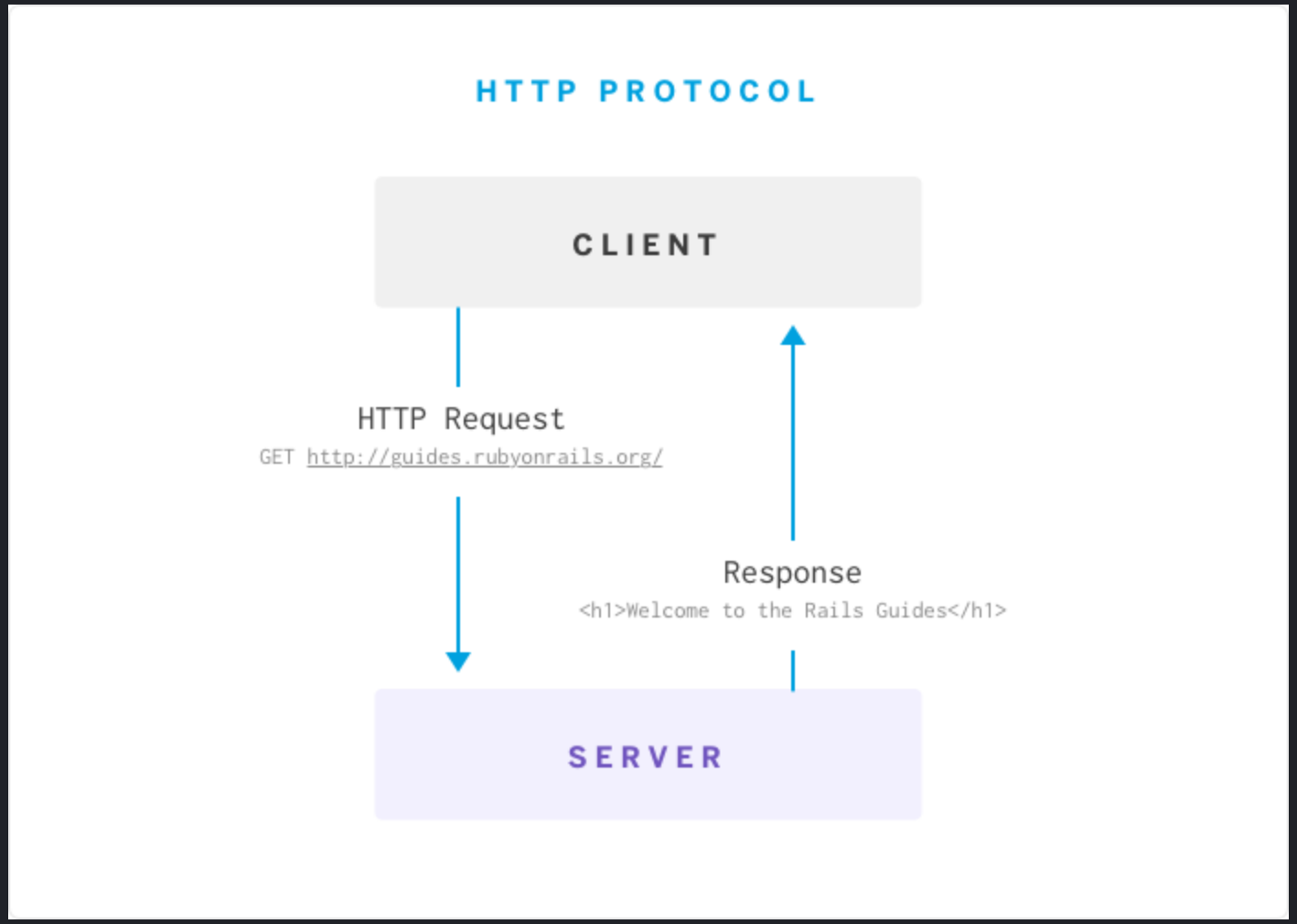
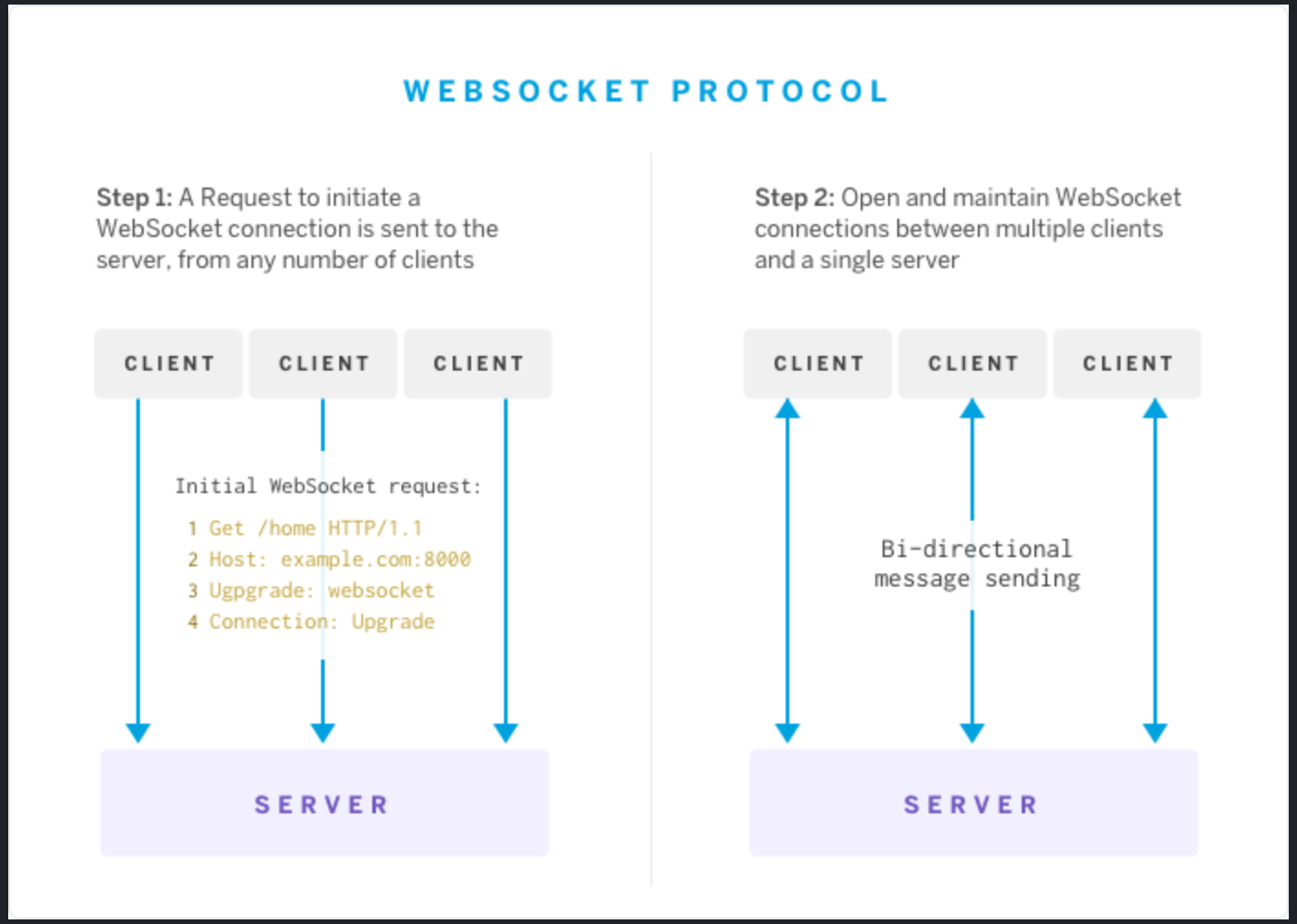
# Http vs Websocket Protocol

| Sr. No. | WebSocket | HTTP |
|---|---|---|
| 1 | Bidirectional<br>WebSockets can send data from the client to the server or vice versa. | Unidirectional<br>The user request will be sent in the form of HTTP request to the client and after receiving this request only the server will respond. |
| 2 | Full-duplex<br>Client and server can talk to each other independently at the same time. | Half-duplex<br>Traffic flows only in one direction at a time |
| 3 |  <br>Fig 1.1 WebSocket Connection |  <br>Fig 1.2 HTTP Connection |

# Http Protocol



# Websocket Protocol



# Realtime Http Use cases

1. CRUD Operation
    - Create, Read, Update and Delete

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# Realtime Websocket Use cases

1. Financial data streaming
    - *Trading apps like Zerodha, bitmex etc...*
2. Chat services
    - *Messaging apps like Whatsapp,Messenger etc...*
3. Multiplayer games
    - *Gaming apps like Pubg, Free fire etc...*

*Now you know the clear idea about which protocol is used to build this whatsapp chat app*

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*Now you have a question which stack(programming language) is used to build this application very quickly, easily and efficiently.*

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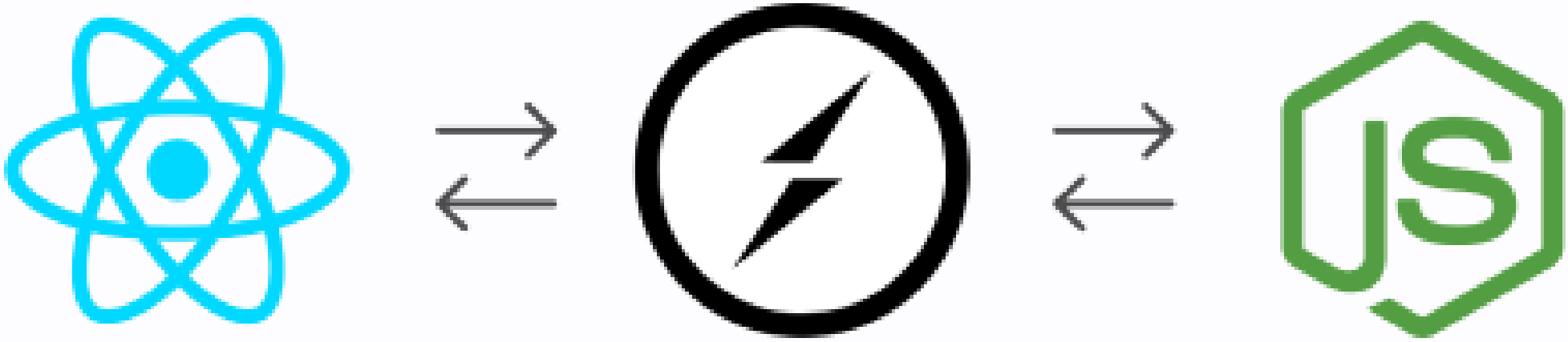
# Stacks used in this application



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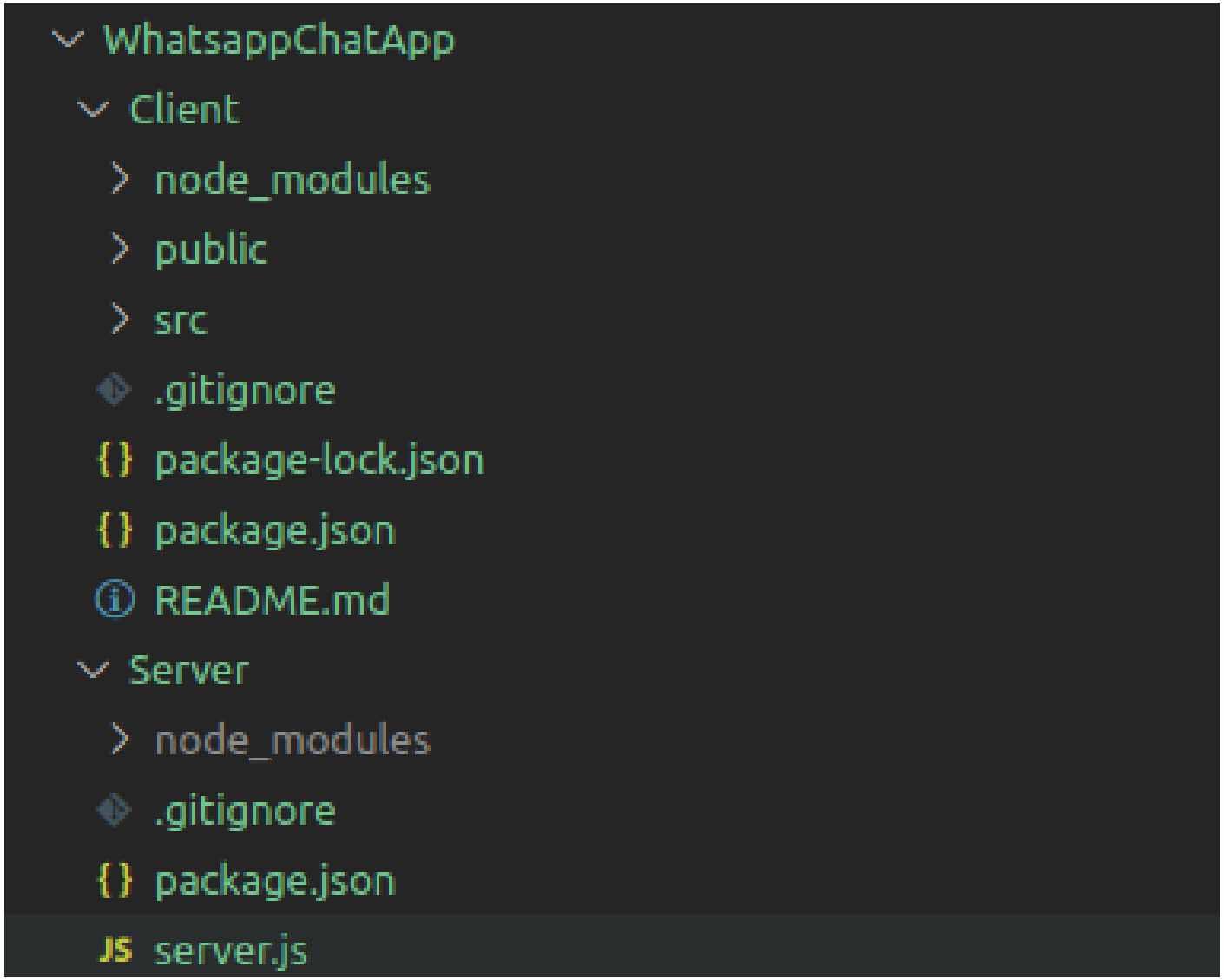
# Prerequisite software

- Install Node Js
- Install NPX - NPM Package Runner (x probably stands for eXecute)
- Install NPM - Node Package Manager

# Prerequisite language

- Basics of HTML, CSS and Javascript
- Basics of React Js setup
  - ***npx create-react-app whatsapp-chat-app***
- Basics of Node Js
  - ***npm init***

# Folder Structure



1. Client / Frontend
   - *React UI Components*

2. Server / Backend
   - *Node Js Business Logics*

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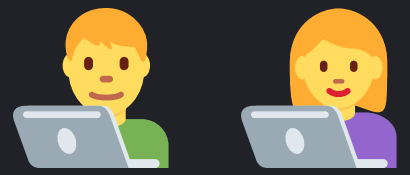
# Interview Questions

- Websocket, http
- Full duplex, Half duplex
- NPM, NPX
- Node Js, React Js, Socket.IO
- Bidirectional, Unidirectional

*Let's move to live coding.....*



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