**Abstract**

**Let’s-Chat**

**What we have made?**

• This is a websocket based chat application which provides realtime communication using SocketIO implementation using Javascript.

* We have used plain javascript(Vanilla JS) for frontend client side operations of the websocket.
* While the backend is on express which uses socketio library to implement websocket communication.

**Project Description:**

• What is websocket?

1. WebSocket is a computer communications protocol, providing full-duplex communication channels over a single TCP connection. The WebSocket protocol was standardized by the IETF as RFC 6455 in 2011. The current API specification allowing web applications to use this protocol is known as WebSockets.
2. To establish a WebSocket connection, a specific HTTP-based handshake is exchanged between the client and the server. If successful, the application-layer protocol is "upgraded" from HTTP to WebSockets, using the previously established TCP connection. Once this occurs, HTTP is completely out of the picture; data can be sent or received using the WebSocket protocol by both endpoints, until the WebSocket connection is closed.
3. **Socket.IO** is a library that enables **low-latency, bidirectional** and **event-based communication** between a client and a server. It is built on top of the **WebSocket** protocol and provides additional guarantees like fallback to HTTP long-polling or automatic reconnection.

• Javascript stack details?

1. For frontend we have used vanilla javascript file to handle the socketio events using the socketio cdn files.
2. The UI designed using HTML and CSS.
3. The UI is being served on a simple express static files server.
4. Backend server is backed by expressJS which is a Nodejs based framework.