

# Assignment 2

**Objective:** Implement a multi client chat application.

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**Class:** BCSE - III

**Group:** A1

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## Purpose

Write a multi-client chat application consisting of both client and server programs. In this chat application simultaneously several clients can communicate with each other. For this you need a single server (or multiple servers) program that clients connect to. The client programs send the chat text or image (input) to the server and then the server distributes that message (text or image) to all the other clients. Each client then displays the message sent to it by the server. The server should be able to handle several clients concurrently. It should work fine as clients come and go. Clients should be able to send messages in any **two** modes out of the following.

- Unicast;
- Multicast;
- Broadcast;

Develop the application using a framework based on Node.JS.

## Web application frameworks

### Backend

Express.js

### Frontend

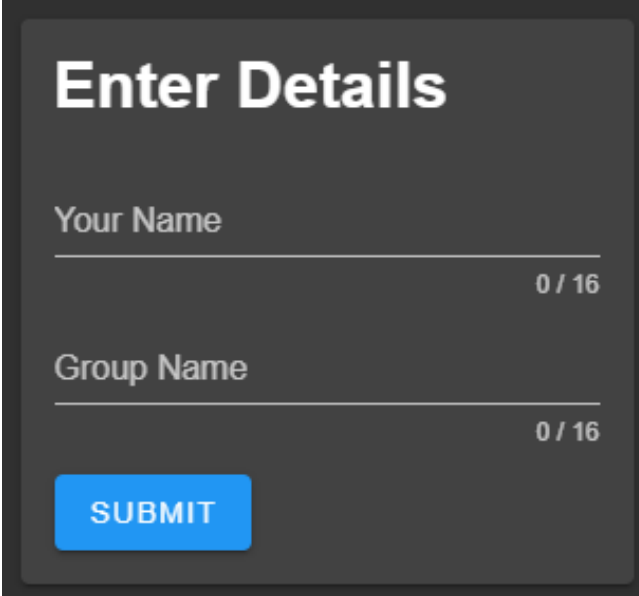
NuxtJS - based on Vue.js, Node.js, Webpack and Babel.js.

### Communication method

Websockets/HTTP long-polling implemented by Socket.IO. It is a JavaScript library for realtime web applications. It enables realtime, bi-directional communication between web clients and servers. It has two parts: a client-side library that runs in the browser, and a server-side library for Node.js. Both components have a nearly identical API.

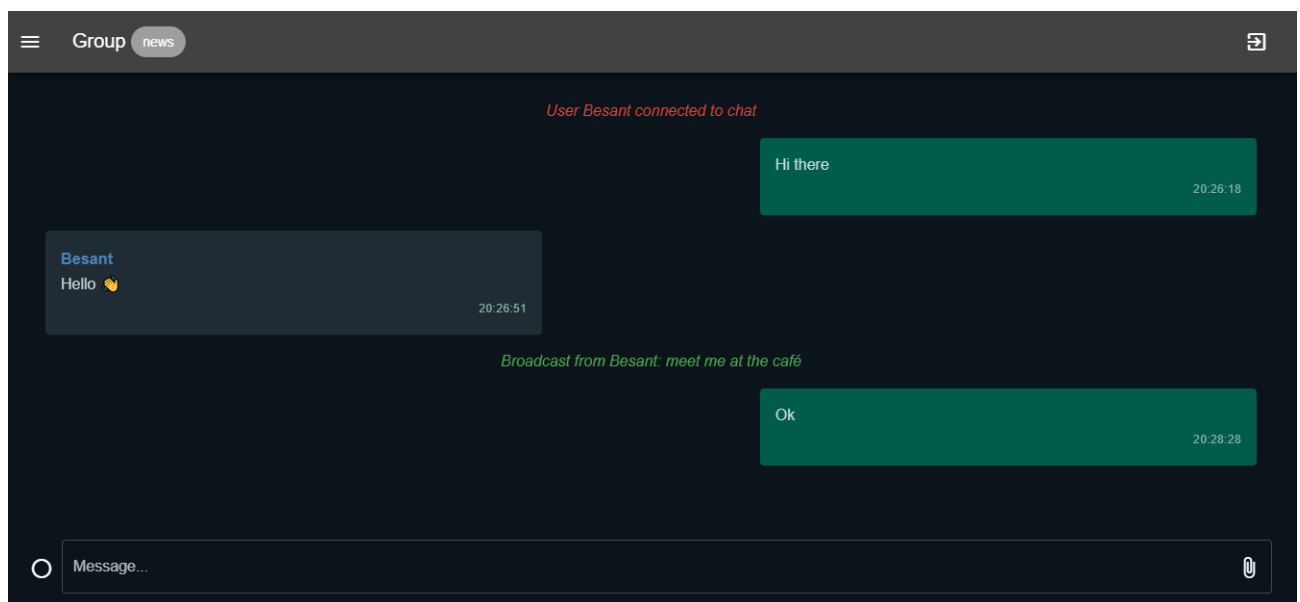
## Client Screenshots

### Login Screen



The screenshot shows a dark-themed login form titled "Enter Details". It contains two text input fields: "Your Name" and "Group Name". Each field has a character count "0 / 16" to its right. Below the fields is a blue "SUBMIT" button.

### User Rwitick in Group "news"



User Besant in Group "news"

Group

news

Rwitick

Hi there

20:26:18

Hello 🍌

20:26:51

Broadcast from Besant: meet me at the café

Rwitick

Ok

20:28:28


Message...

User Ghanshyam in Group "discussion"

Group

discussion

Hello, Ghanshyam

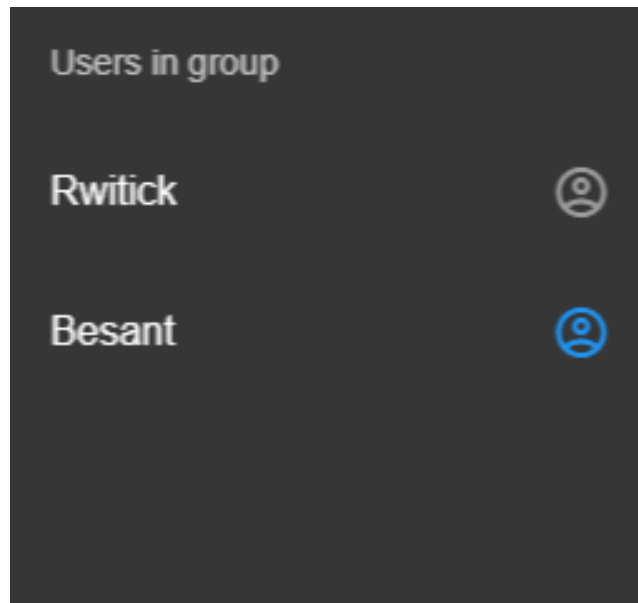


20:27:13

Broadcast from Besant: meet me at the café

Message...

### User list view in Group "news"



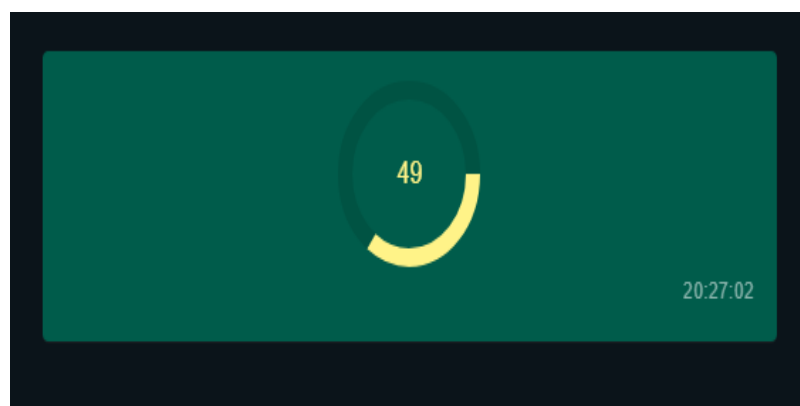
### Message type field



### Message type field with mode set to broadcast



### Progress of image upload



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## Project BY

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