

Project Report: Real-Time Chatbox using Socket.IO (CHATup)

Introduction

This project is a real-time chat application that allows multiple users to communicate privately. It uses Socket.IO for real-time bidirectional communication, Node.js as the server runtime, and Express.js for serving static files. The application is built to distinguish between sender and receiver, with styled UI messages based on who is sending or receiving.

Technologies Used

Technology	Purpose
Node.js	Backend server runtime
Express.js	Serving static files (HTML, CSS, JS)
Socket.IO	Real-time WebSocket communication
HTML/CSS/JS	Frontend UI
Visual Studio Code	Development environment

Features Implemented

- Real-time messaging using WebSockets
- User registration with unique usernames
- Private messaging between registered users
- Sender/Receiver distinction in UI
- User-friendly interface
- Responsive chatbox layout

Project Outcome

This chatbox successfully demonstrates:

- Real-time socket communication
- User-based message routing
- Styled chat interface
- Practical use of Socket.IO for live applications

Screenshot of CHATup:

