

Round 2 Task Submission

3W Real-Time Chat Website (Web + Optional Mobile App)

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Project Overview

3W Real-Time Chat is a full-stack application built using **Node.js**, **React**, **Socket.io**, and **MongoDB** that supports:

- User registration/login with JWT authentication
- Guest access without registration
- Multiple chat rooms creation and joining
- Real-time messaging using Socket.io
- Display of online users per room
- Typing indicators
- Persistent message history stored in MongoDB
- Optional React Native mobile application (Android)

Project Links

- Website: [Live Demo](#)
- Mobile APK: [3W Chat APK](#)
- Github Repository: [GitHub Link](#)
- Backend URL: [Backend API](#)

Tech Stack & Features

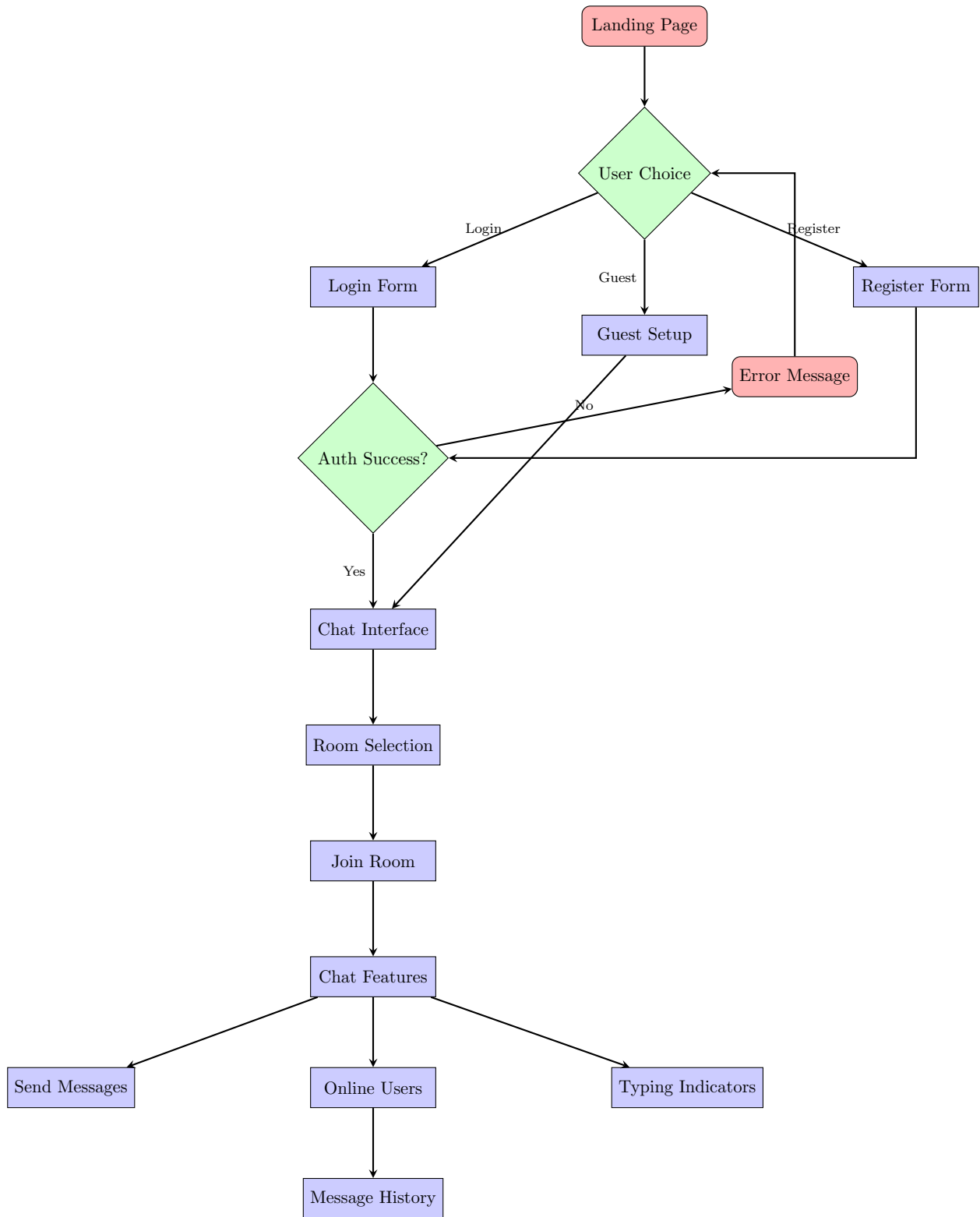
Technologies:

- Backend: Node.js + Express
- Frontend: React.js
- Real-time: Socket.io
- Database: MongoDB
- Mobile: React Native CLI

Key Features:

- User Authentication/Guest mode
- Multiple chat rooms
- Real-time messaging
- Online users tracking
- Typing indicators
- Persistent chat history

System Flow Diagram



API Reference (Base URL: <http://localhost:5000/api>)

Authentication Endpoints

- POST /auth/register
Body: { "username": "user1", "password": "pass123" }
Registers a new user.
- POST /auth/login
Body: { "username": "user1", "password": "pass123" }
Returns: { "token": "eyJJWT_TOKEN", "username": "user1" }

Room Endpoints

- GET /rooms - List all chat rooms
- POST /rooms { "name": "General" } - Create a new room
- GET /rooms/:id - Get room details including participants

Messages Endpoints

- GET /messages/:roomId - Get message history for a room
- POST /messages { "roomId": "123", "text": "Hello" } - Send message to a room

Socket.io Events

- joinRoom { username, room, token? } - Join room
- leaveRoom { username, room } - Leave room
- chatMessage { username, room, message, timestamp } - Send message
- typing { username, room, isTyping } - Toggle typing indicator
- onlineUsers { room, users[], count } - Live users in room

Submitted to 3W Business Private Limited for Round 2 Evaluation