A black background with text and a picture of a person

AI-generated content may be incorrect. A black and white logo

AI-generated content may be incorrect.

**9530**

**St.MOTHER THERESA ENGINEERING COLLEGE**

COMPUTER SCIENCE ENGINEERING

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**REG NO**: 953023104136

**DATE**:13-09-2025

**Completed the project named as**

**Phase 2**

FRONT END TECHNOLOGY

**CHAT APPLICATION UI**

**SUBMITTED BY,**

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**Phase 2 — Solution Design & Architecture**

* **Tech Stack Selection:**
  + **Frontend**: ReactJS, TailwindCSS / CSS Modules
  + **State Management**: React Hooks (useState, useEffect), Context API
  + **Backend (Future)**: Node.js + Express (for REST APIs)
  + **Database (Future)**: MongoDB / Firebase

**UI Structure / API Schema Design:**

* **UI Components**:
  + ChatApp (root)
  + Sidebar (users list)
  + ChatWindow (messages area)
  + MessageInput (text input + send button)
  + MessageBubble (individual message)

**API Schema (future)**:

{

"messageId": "123",

"sender": "User1",

"text": "Hello!",

"timestamp": "2025-09-13T12:00:00Z"

}

**Data Handling Approach:**

* Store messages in local React state (array of objects).
* On new message → update state → re-render chat window.
* Future: integrate with backend API.

**Component / Module Diagram:**

**ChatApp**

**ChatWindow**

**Sidebar(Users)**

**MessageBubble**

**Messageinput**

**Basic Flow Diagram:**

User types text

Clicks send

Message added to state

UI updates

Message displayed in ChatWindow