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St. MOTHER THERESA ENGINEERING COLLEGE

COMPUTER SCIENCE ENGINEERING

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Completed the project named as

Phase 2

FRONT END TECHNOLOGY

CHAT APPLICATION UI

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Phase2 — Solution Design & Architecture

- **Tech Stack Selection:**
 - **Frontend:** ReactJS, TailwindCSS / CSSModules
 - **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):

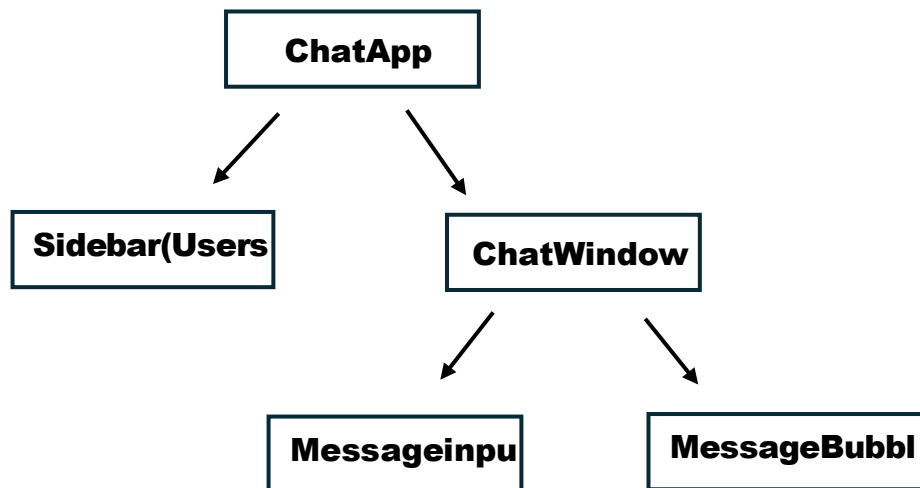
```
{  
  "messageId": "123",  
  "sender": "User1",  
  "text": "Hello!",  
  "timestamp": "2025-09-13T12:00:00Z"  
}
```

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:



Basic Flow Diagram:

