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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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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):

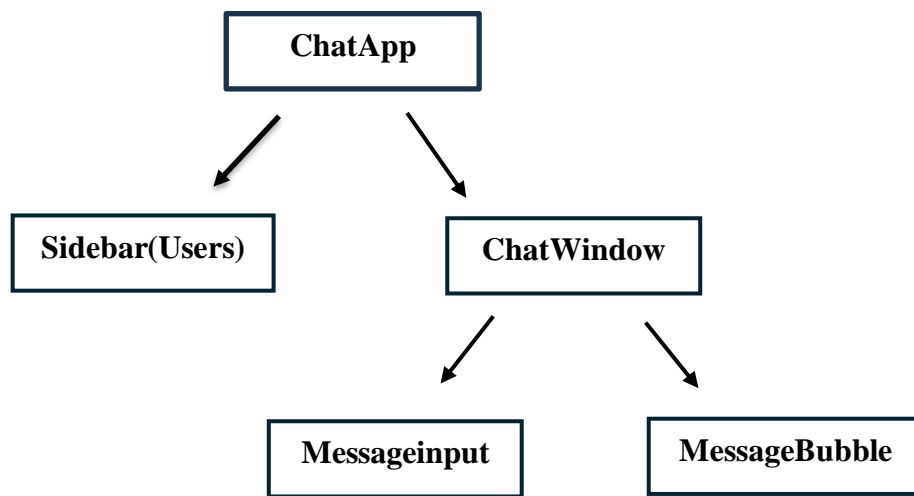
```
{  
  "messageId": "123",  
  "sender": "User1",  
  "text": "Hello!",  
  "timestamp": "2025-09-13T12:00:00Z"  
}
```

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:



Basic Flow Diagram:

