**UI Components (React)**

**• Login/Register Page**

**• Dashboard**

◦ View upcoming sessions

◦ Join/Start session buttons

**• Mentor Listing Page**

◦ Filters, profiles, book session

**• Video Call Room**

◦ Video stream (self + remote)

◦ Chat panel

◦ Timer

◦ End Call button

**• Post-session Feedback Modal**

**Backend Architecture (Spring Boot)**

**• UserController**: Signup, Login, Role-based auth (JWT)

**• SessionController**: Bookings, scheduling, history

**• WebSocketController**: Signaling for WebRTC (offer/answer/ICE exchange)

**• FeedbackController**: Store ratings/comments

**• SecurityConfig**: JWT filters + CORS config

**Database Schema (PostgreSQL)**

**users**

• id, name, email, password, role (MENTOR / MENTEE), bio, skills, etc.

**sessions**

• id, mentor\_id, mentee\_id, start\_time, end\_time, status

**feedback**

• id, session\_id, rating, comments

**WebRTC Signaling Flow**

1 Mentee clicks “Join Call”

2 WebSocket connection opens with Spring Boot

3 Mentee sends offer SDP

4 Server relays to Mentor

5 Mentor sends answer SDP

6 ICE candidates exchanged via WebSocket

7 Media flows peer-to-peer over WebRTC