

SenseAI

An AI-Powered Mental Health Companion

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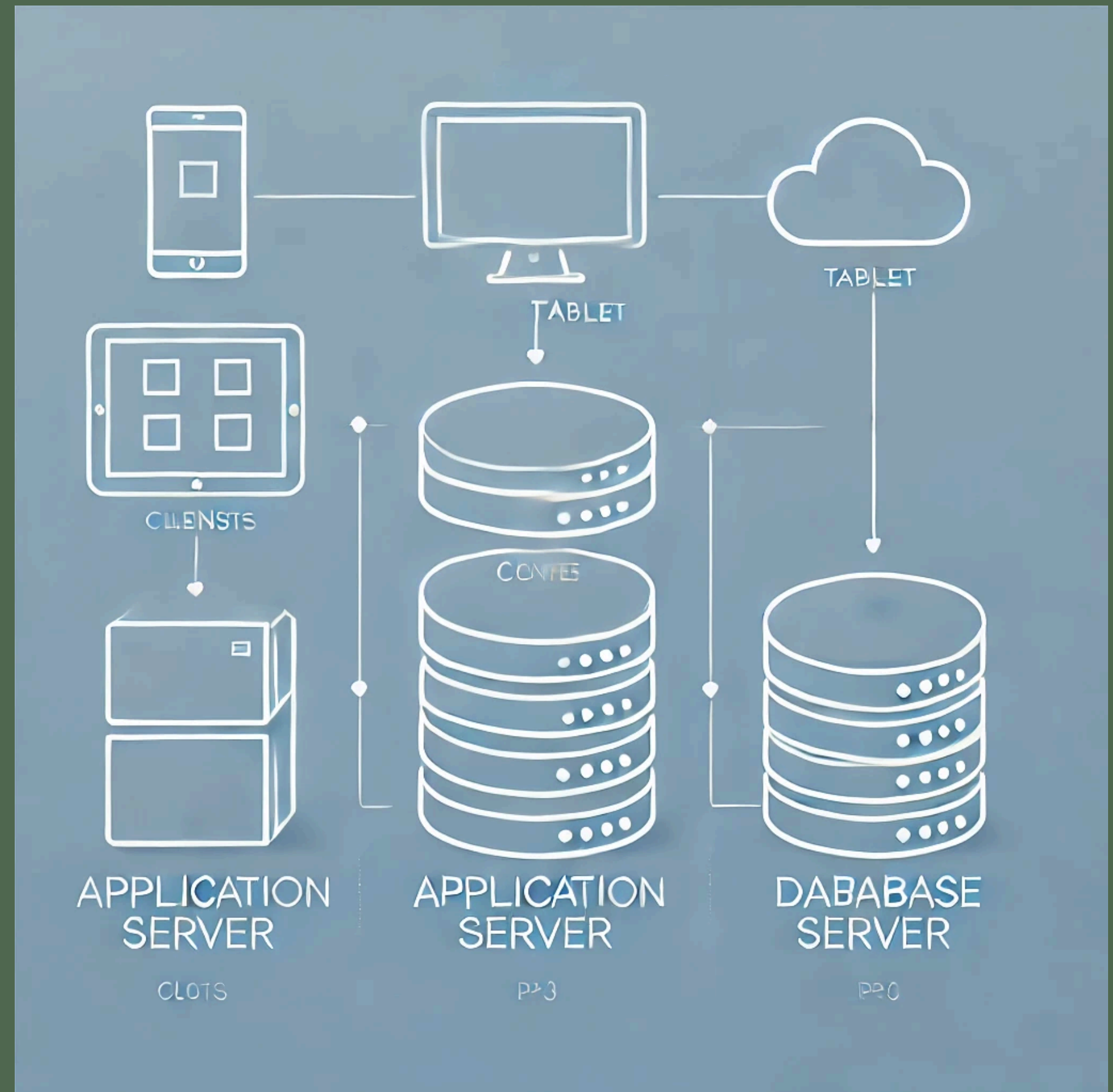
University & Department: Çankaya University, Software Engineering Department

Introduction

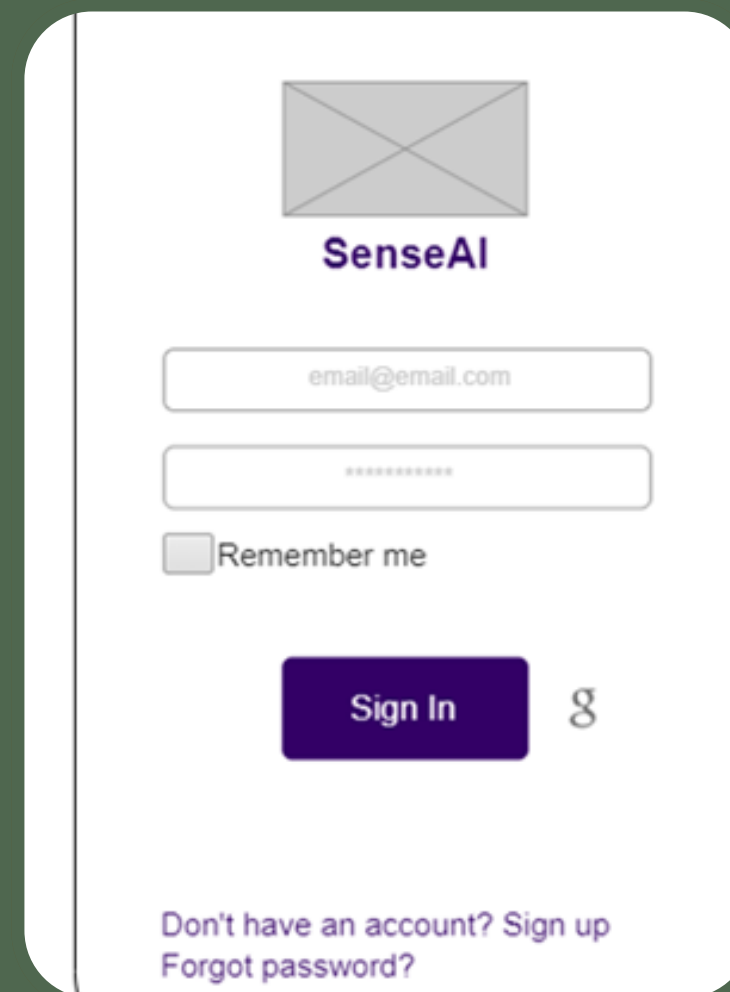
- Overview:
 - Mental health challenges are on the rise globally, and access to affordable, effective support is limited.
 - SenseAI bridges this gap by leveraging artificial intelligence to provide accessible, innovative, and personalized mental health support.
- Purpose:
 - Empower users to understand and manage their emotional well-being.
 - Enhance mental health accessibility through AI-driven solutions.
- Scope:
 - Analyze emotional states via facial expressions.
 - Provide real-time conversational support through a chatbot.
 - Integrate biometric data like heart rate to offer more precise insights.
- Agenda:
 - Overview of the project features, architecture, design, innovation, and future plans.

Architecture

- System Components:
 - Clients: Mobile, Tablet, PC.
 - Application Server: Handles AI and processing tasks.
 - Database Server: Stores user data securely.
- Technology Stack:
 - Mobile: Android/iOS.
 - Backend: Ubuntu/Windows Server.
 - Database: MySQL/NoSQL.
- Communication: Efficient data flow between client, server, and database ensures real-time responses.

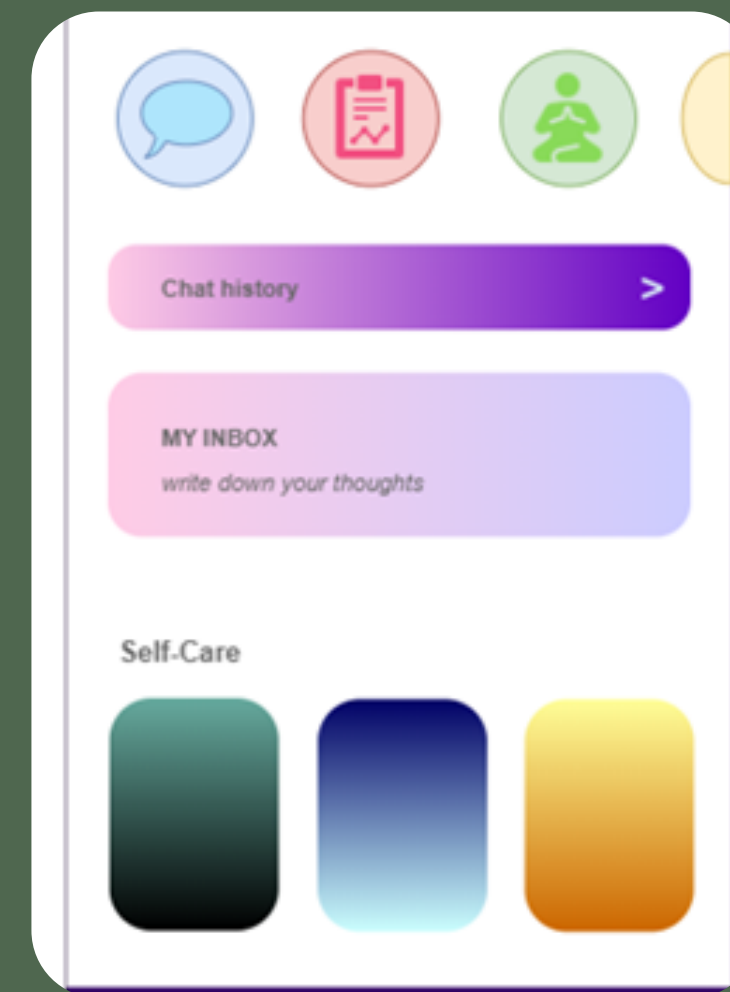


User Interface (UI) Design



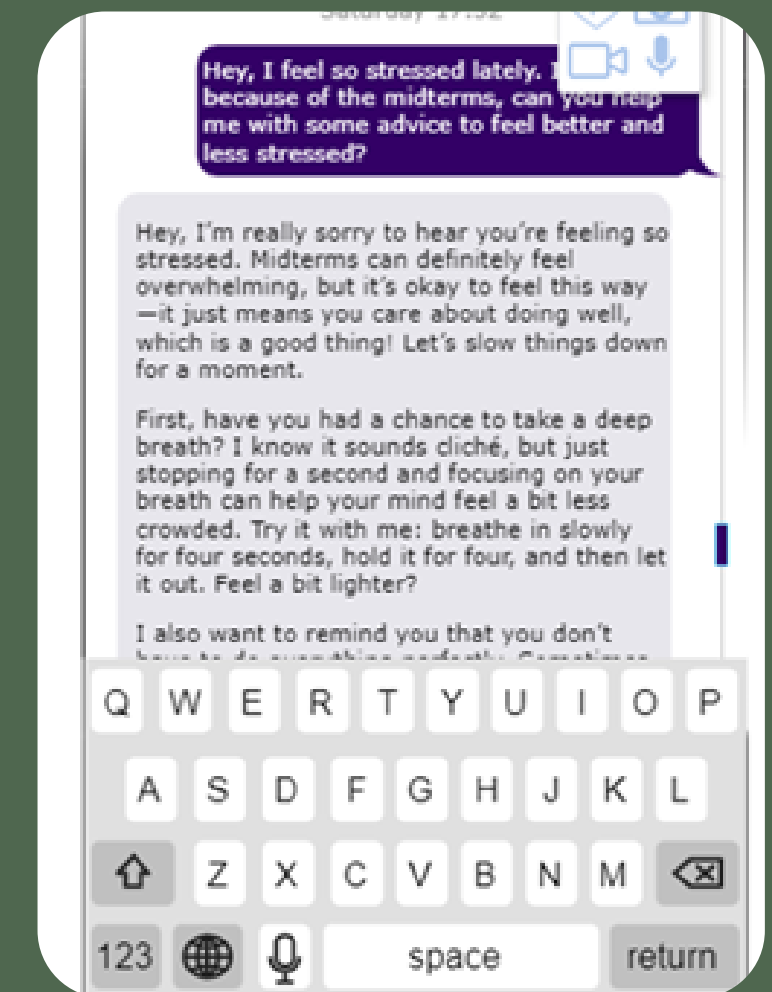
Login & Signup:

Secure access with options for Google login.



Main Page:

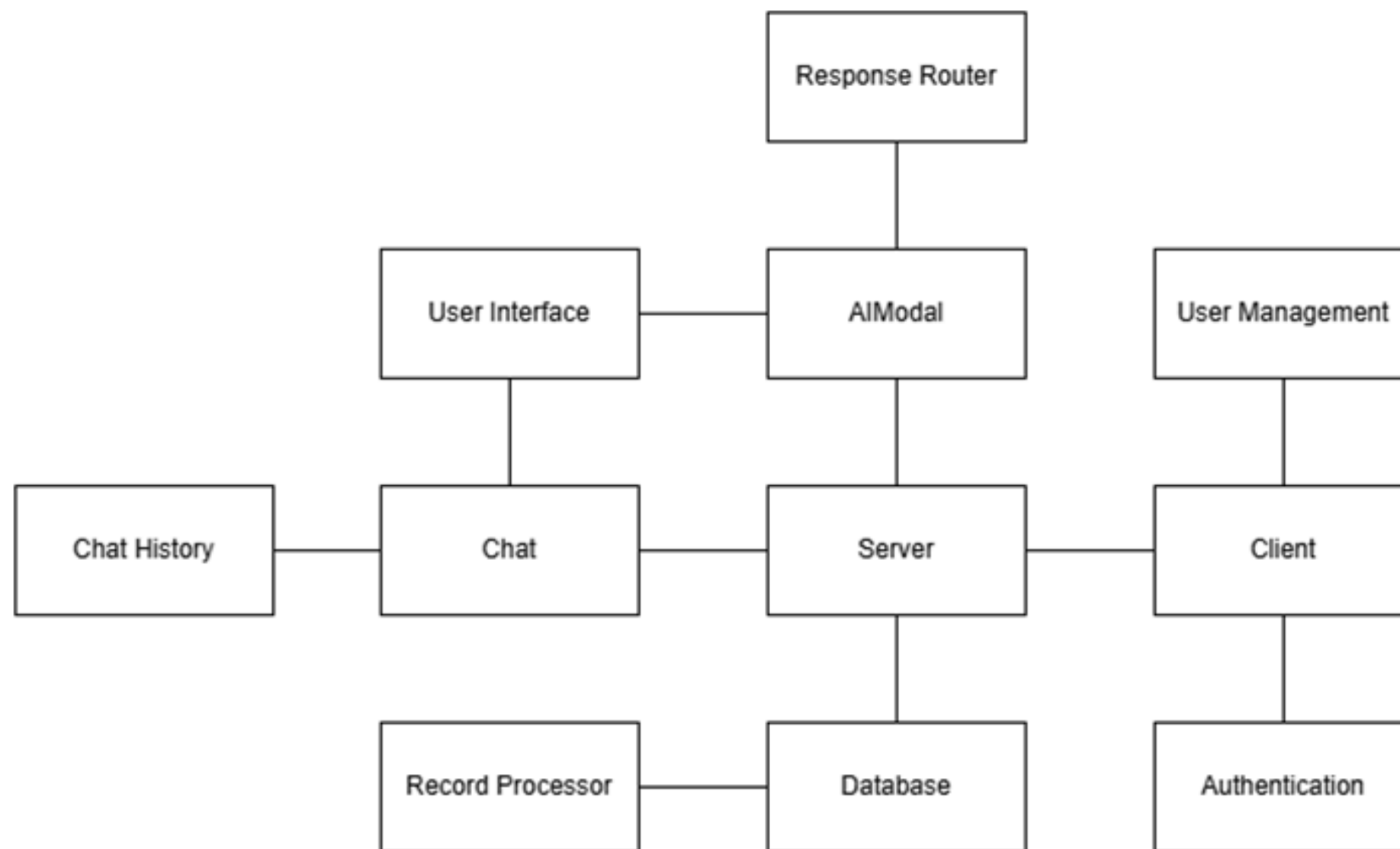
Features chat history, inbox, and self-care tools.



Chatbot Screen

- Real-time chat.
- Data input options: text, voice, video.

High-Level Design



Modules:

- Module 1: Emotion Analysis Module.
- Module 2: Chatbot Module.
- Module 3: Biometric Data Integration Module.

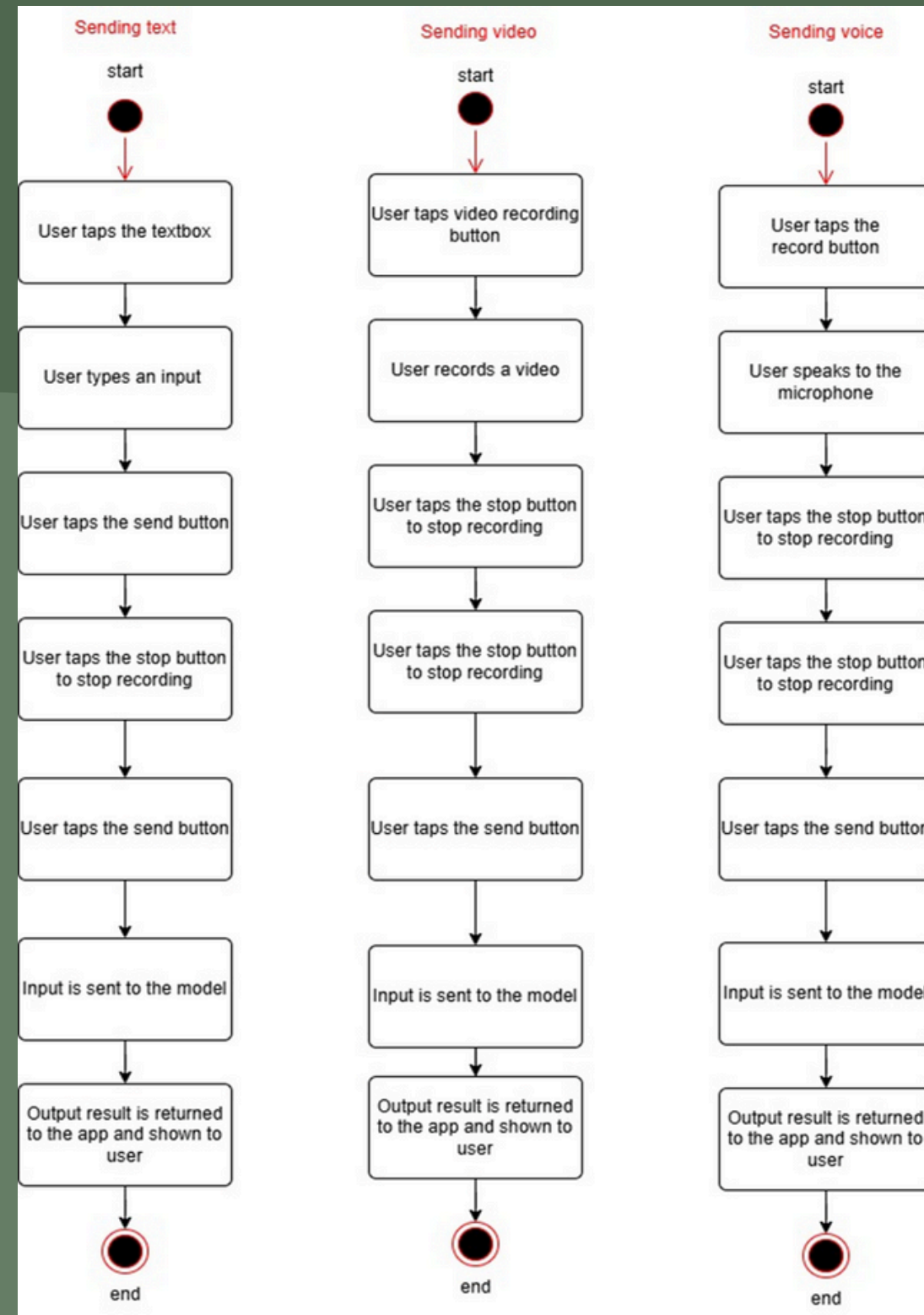
Module Relationships:

- Interaction and data flow among modules are designed to be modular and scalable.

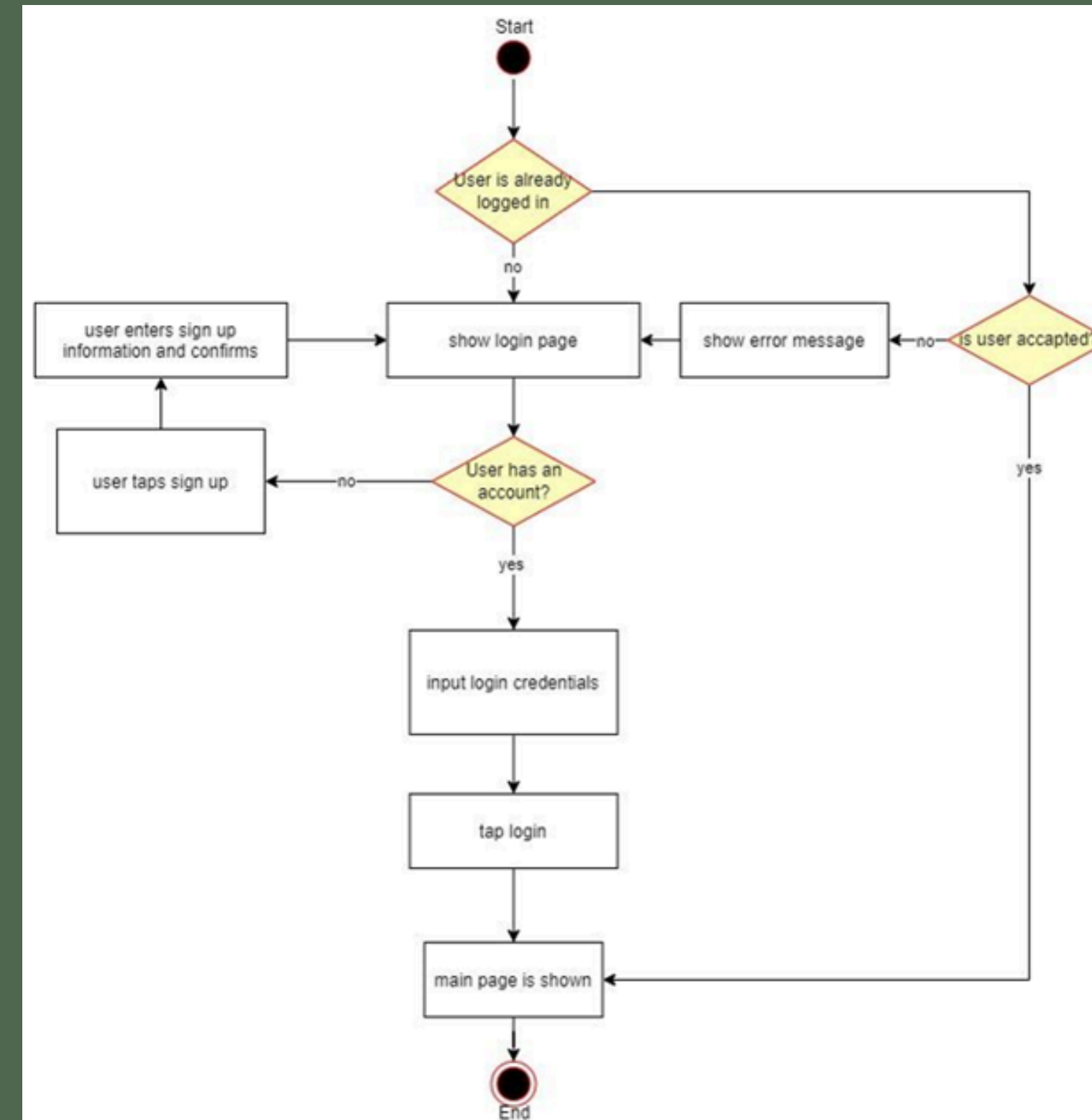
Processing Flow: User inputs (e.g., speech, video) are processed through modules, generating personalized outputs.

Low-Level Design

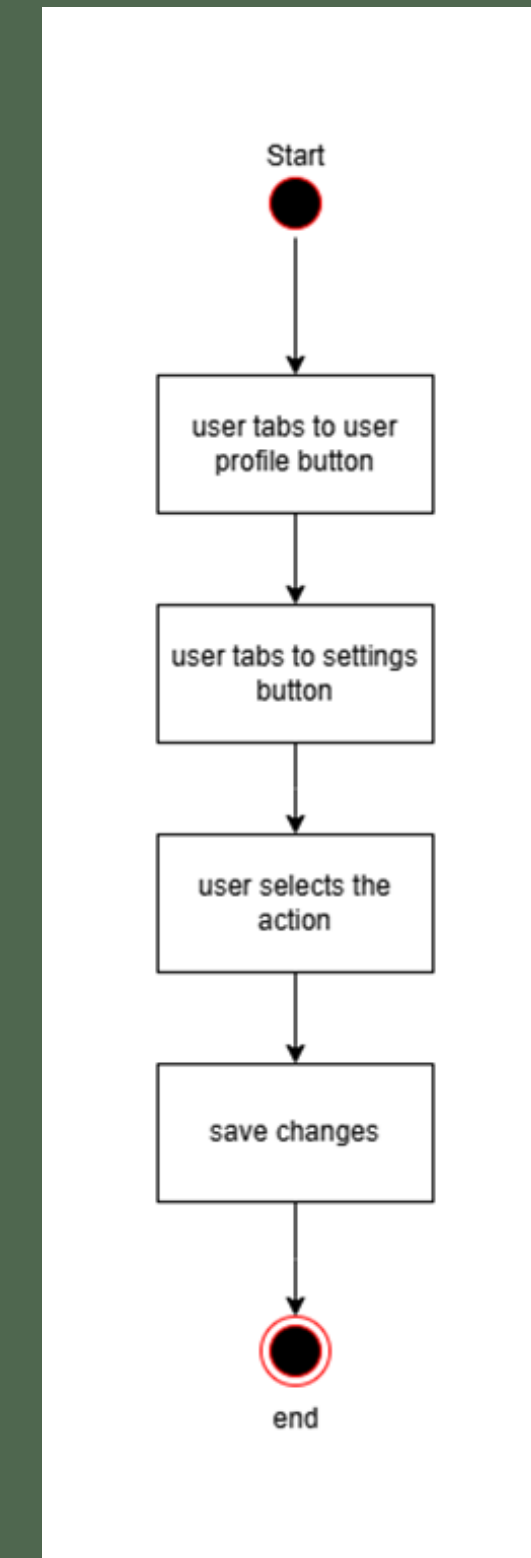
Chat Manager Module



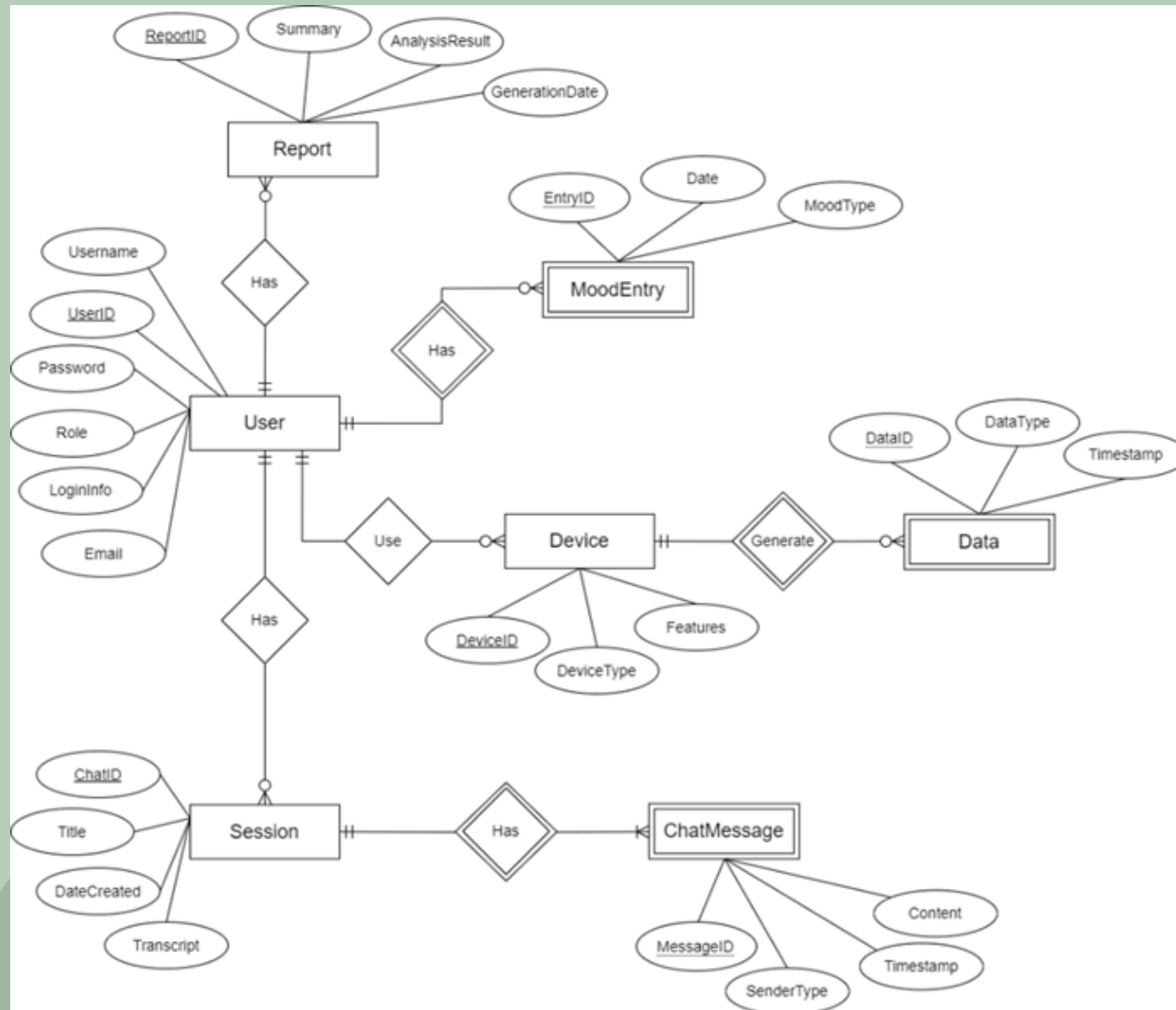
Authentication Module



Profile Management Module



Database Design



- Minimum Specs:
 - OS: Ubuntu 20.04 LTS or Windows Server 2019.
 - CPU: Quad-core processor.
 - RAM: Minimum 16 GB.
 - Storage: At least 1 TB SSD.
- Security Measures:
 - Data encryption at rest and in transit.
 - Role-based access control (RBAC).
- E-R Diagram:
 - Entities:
 - Users: Stores user information securely.
 - Chats: Records user interactions.
 - Biometric Data: Logs heart rate and mood states.
- Key Tables:
 - Users Table: UserID, Name, Email.
 - ChatLogs Table: ChatID, UserID, Timestamp, ChatContent.
 - BiometricData Table: RecordID, UserID, HeartRate, MoodState.

Innovation and Impact



Multi-modal input processing (voice, text, video).



Integration of biometric data for enhanced insights.



Scalable architecture for widespread adoption.



Improved mental health accessibility and user engagement. Promotes awareness and proactive mental well-being.



Conclusion and Future Plans

SenseAI integrates AI and biometric analysis to deliver a user-friendly mental health tool.

Offers personalized support with innovative technology.

Future Plans:

- Expand wearable device compatibility.
- Enhance multilingual and cultural adaptability.

Q&A

WE ARE HAPPY TO ANSWER YOUR QUESTIONS.