

Android Developer Interview Assignment

Overview: You can develop the application using any language or framework you prefer; however, React Native is strongly preferred due to cross-platform consistency.

You are tasked with creating an Android application replicating the seamless functionality demonstrated in our iOS application. Your Android app should emphasize efficient phone storage streaming, reliable real-time transcription (with robust offline capabilities), and deliver a user interface closely aligned with the intuitive design of our existing iOS app.

Requirements:

User Authentication:

- Implement user login functionality.
- Support OAuth-based authentication (Google Sign-In recommended, via Firebase Auth).

Google Calendar Integration:

- Allow users to connect and sync with their Google Calendar.
- Display upcoming events clearly within the app.

Real-time Meeting Transcription:

- Provide a simple and intuitive interface enabling users to start audio transcription as meetings begin.
- Capture continuous audio input from the device's microphone.
- Transcribe audio into periodic segments (recommended: every 30 seconds).
- Implement a robust offline-first transcription mechanism to handle intermittent network connectivity:
 - Utilize phone storage for temporary buffering of audio chunks.
 - Develop reliable syncing strategies to ensure no transcription data is lost, even when connectivity drops.
 - Implement intelligent retry and re-syncing mechanisms when reconnecting.
- Use OpenAI Speech-to-Text API or Google Gemini 2.0 Flash for transcription services.

Interactive Transcript Chat:

- Allow users to chat interactively with the full meeting transcript both during and after meetings.
- Use OpenAI or Google Gemini APIs, taking transcript segments and user queries as input.
- Implement streaming responses for interactive, real-time chat.

Automatic Summary Generation:

- After meetings, automatically generate concise and structured summaries.
- Present clearly segmented meeting notes.

Local and Online Storage:

- Implement efficient storage and synchronization between local device storage (SQLite/Room or Jetpack DataStore recommended) and cloud storage.
- Ensure seamless synchronization of transcripts and summaries across sessions and devices.

Backend Development:

- Create a robust backend capable of:
 - Managing OAuth authentication and session handling.
 - Processing and temporarily storing audio data and transcripts (use dummy endpoints acceptable for ASR).
 - Storing and retrieving meeting data securely for authenticated users.

Error Handling:

- Implement comprehensive error management strategies for:
 - Authentication failures and OAuth token expiration.
 - Audio processing errors and recording interruptions.
 - Connectivity issues with Google Calendar and transcription APIs.
 - Handling and recovering lost or corrupted audio chunks.
 - Ensure robust transition with bluetooth devices route changes, and audio interruptions

Testing:

- Write comprehensive unit tests covering authentication, calendar integration, audio transcription, and summary generation.
- Provide a basic load testing outline to showcase backend scalability and reliability.

Design Guidelines:

- Design your Android app to closely resemble the intuitive user experience of our existing iOS application.
- Ensure clear navigation, minimal user friction, and responsive interactions.
- Optimize UI for various Android devices and screen sizes.

Evaluation Criteria:

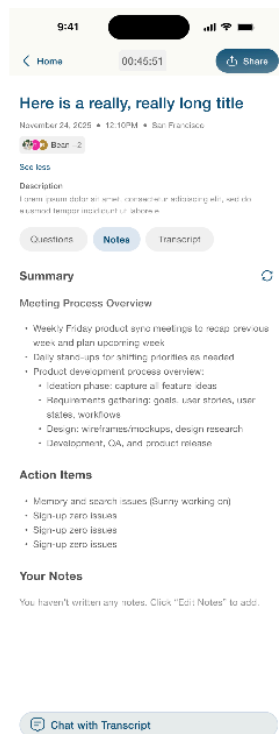
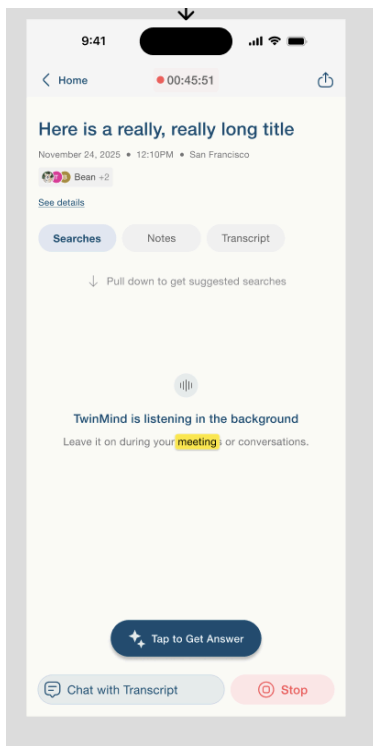
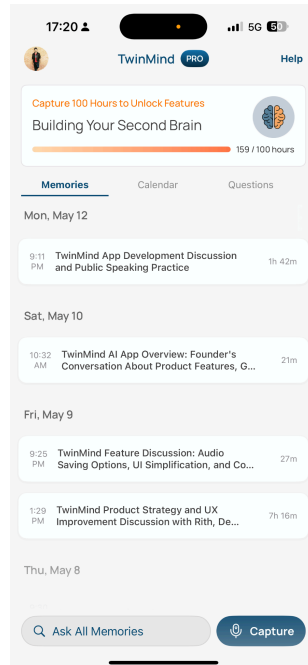
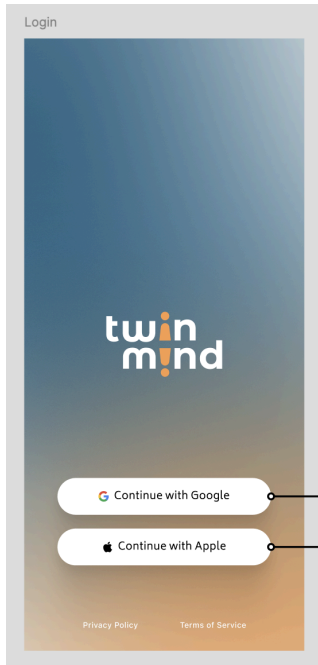
- Seamless and reliable user authentication experience.
- Accuracy, readability, and reliability of periodic audio transcriptions.
- Quality and practicality of auto-generated meeting summaries.

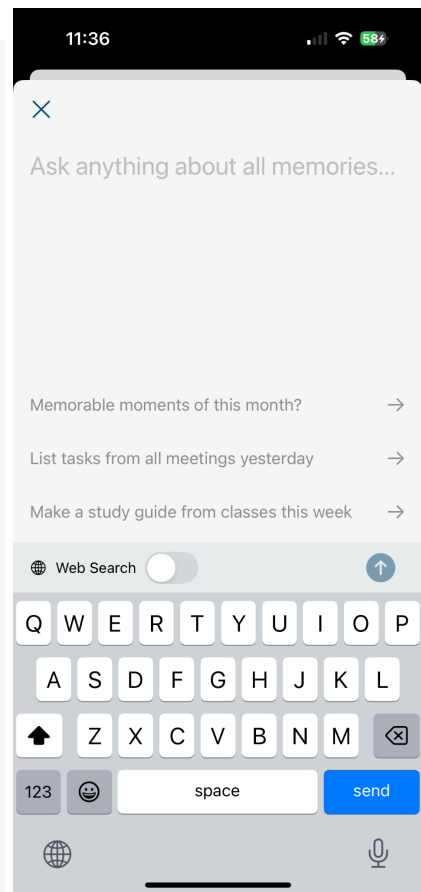
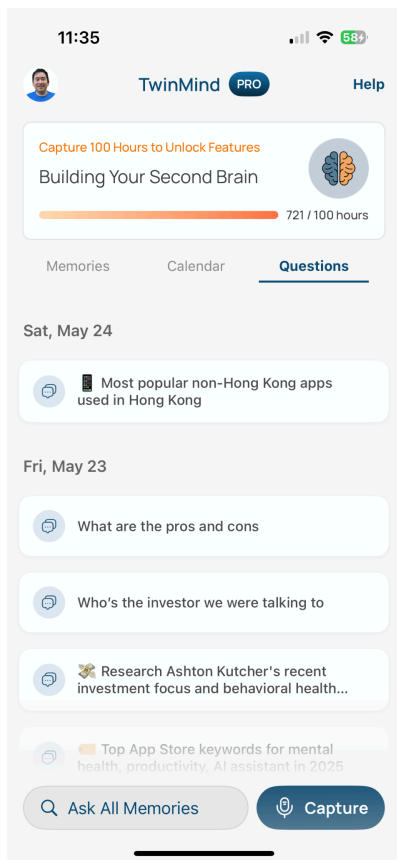
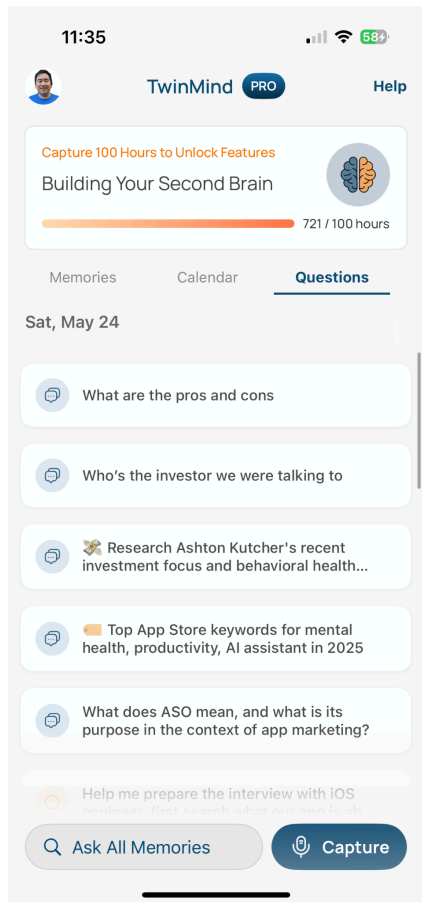
- Robustness of offline transcription and error-handling solutions.
 - Scalability, maintainability, and overall quality of backend architecture.
 - UI/UX fidelity to the provided iOS app reference.
-

Video walkthrough of the app:

[TwinMind Tutorial Video - YouTube](#)

App Screenshots





11:35

Back

01:11:32

Deep Philosophical Discussions on Life, Technology, and Society at Dinner

May 24, 2025 • 9:07 PM • Sunnyvale, CA

Questions

Notes

Transcript

21:07

And on the couch, uh, and then you're getting all these feelings.

So, even then, I never, I am.

21:08

because like obviously labor is cheap in India so you you just like give give that post to my watchman the security guard in the apartment. He himself like generally like watches the apartment and also like I did that he never uses this electric iron right because it is not viable for him. Otherwise they have to spend spend a lot on electricity. Right instead he will use that coal coal operated iron. Have you ever seen that? So there is a big like iron like some coal inside that iron and you have to burn it to the iron. So like they will have to like Have you ever seen anything here?

Chat with Transcript

11:35

Back

01:11:32

Deep Philosophical Discussions on Life, Technology, and Society at Dinner

May 24, 2025 • 9:07 PM • Sunnyvale, CA

Questions

Notes

Transcript

- Group dining at a restaurant with multiple dishes
 - Ordered Mysore masala among other items
 - Discussion about food preferences and sharing dishes
- Conversation about cooking practices in India
 - Labor is cheap in India - security guards/ watchmen in apartments
 - Traditional coal-operated irons vs. electric irons in India
 - Coal irons preferred due to electricity costs
 - Discussion about water and energy conservation
 - Questioning the value of small conservation efforts (turning off lights, saving water)
 - Argument that individual conservation efforts have minimal impact compared to institutional waste

Chat with Transcript

11:34

TwinMind

PRO

Help

Capture 100 Hours to Unlock Features

Building Your Second Brain

721 / 100 hours

Memories

Calendar

Questions

Sun, May 25

Everyone share something on social media (when TwinMind was useful, user testimonial, etc)
2:45 - 3:00 PM

Everyone share something on social media (when TwinMind was useful, user testimonial, etc)
2:45 - 3:00 PM

Mon, May 26

Nishant/ Sunny
9:00 - 10:00 AM

Clear all emails from previous days
10:15 - 10:30 AM

Ask All Memories

Capture