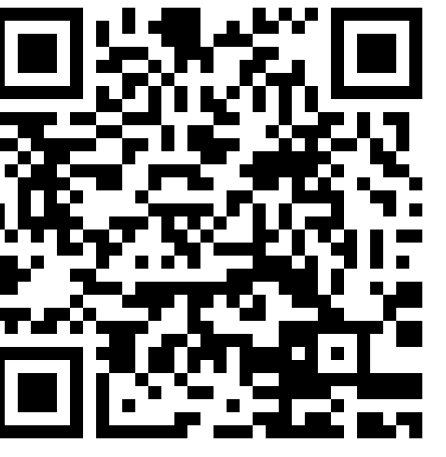


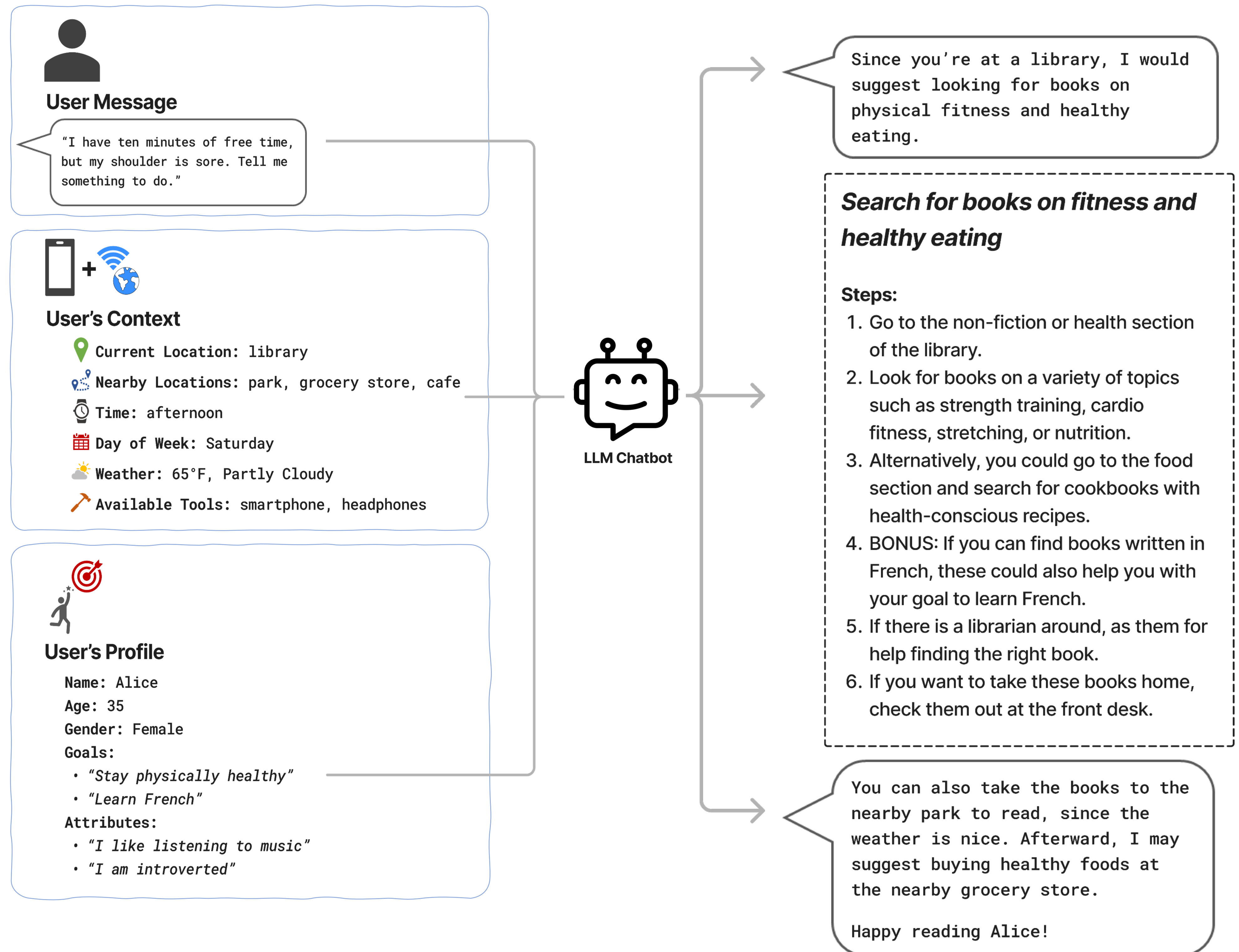
DESIGNING A PROACTIVE CONTEXT-AWARE AI CHATBOT FOR PEOPLE'S LONG-TERM GOALS

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MOTIVATION

- When people pursue new **complex goals** (e.g., lose weight, learn a new language), they may not know where to start or what to do. Seeking advice can be time consuming, and others may not always be aware of the **specific daily contexts** that the individual experiences, making it harder to tailor the advice to them.
- Language models have emerged as popular sources for information seeking and goal planning. However, **they are not adaptive to the user's individual attributes or real-time contexts**, and are merely reactive to the user's prompts rather than **proactively guiding the user at opportune moments**.
- We designed an LLM-based chatbot app that **proactively recommends actions to the user for their long-term goals** as they go about their day, based on **context factors that can be detected or inferred by the user's phone**, the user's profile, and the explicit questions and feedback that the user gives.

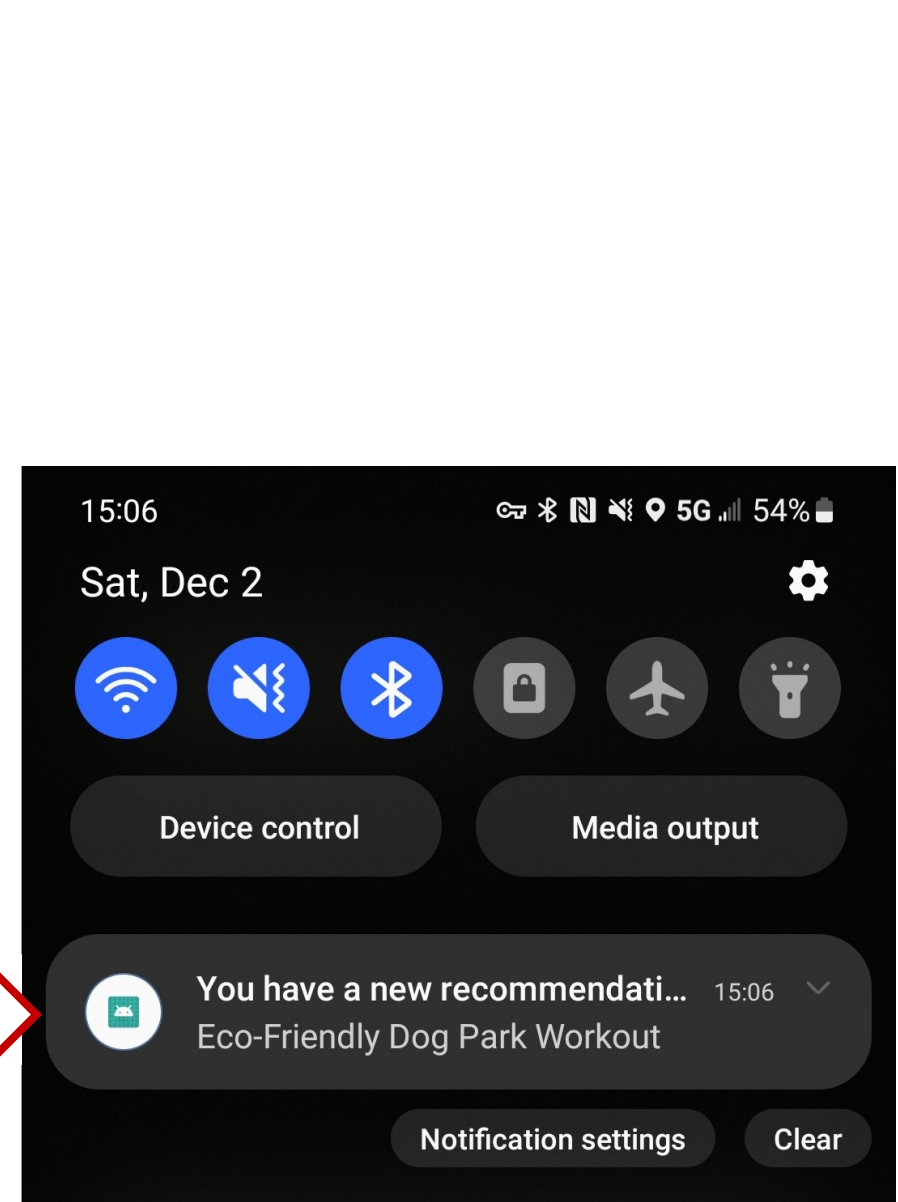


DESIGN OBJECTIVES (from early internal design feedback)

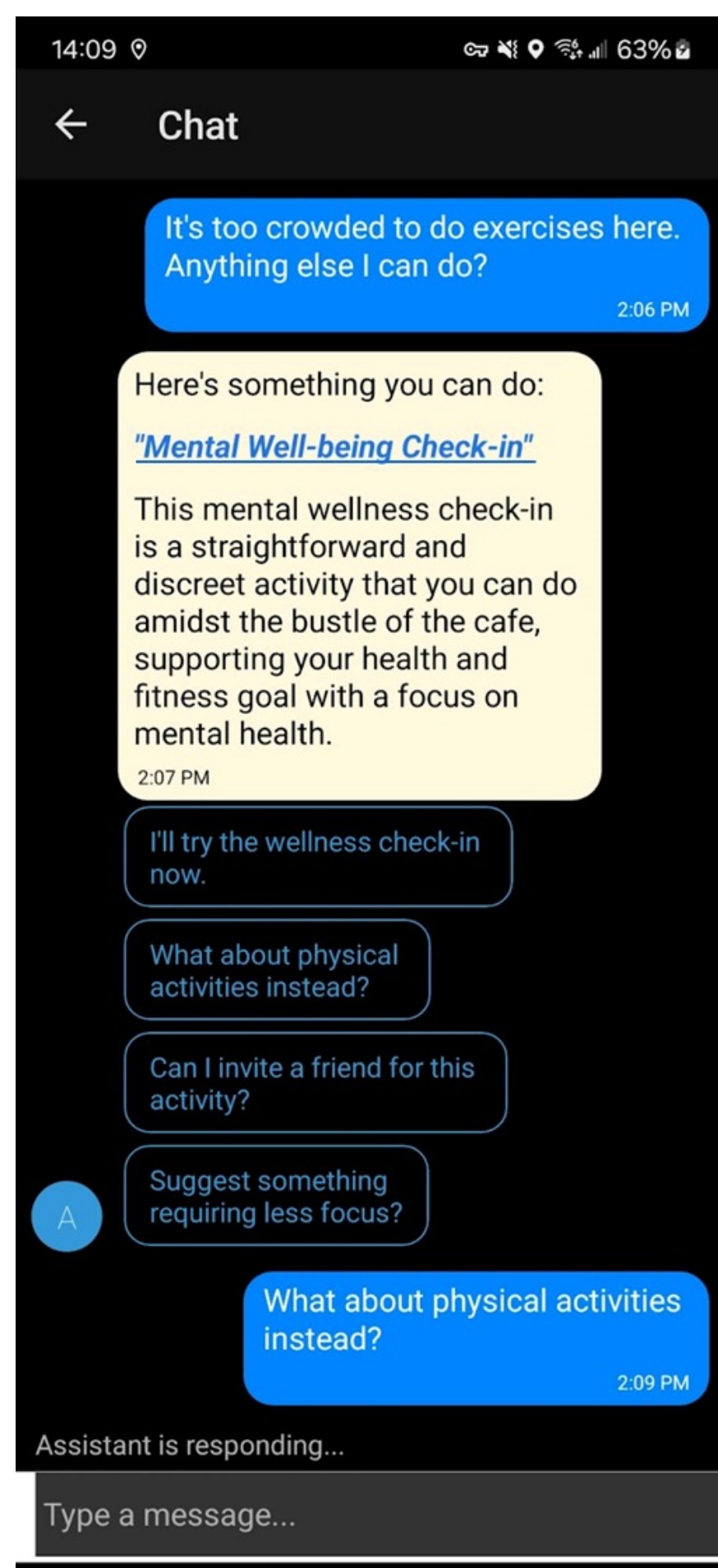
- Personalization:** Adapt to users' goals and attributes and remember all past interactions with the user.
- Contextualization:** Adapt to users' real-time and changing contexts.
- Shared Agency:** Provide assistance both reactively (user-initiated) and proactively (system-initiated).
- Flexible Interaction:** Adapt to a variety of user queries.

KEY FEATURES

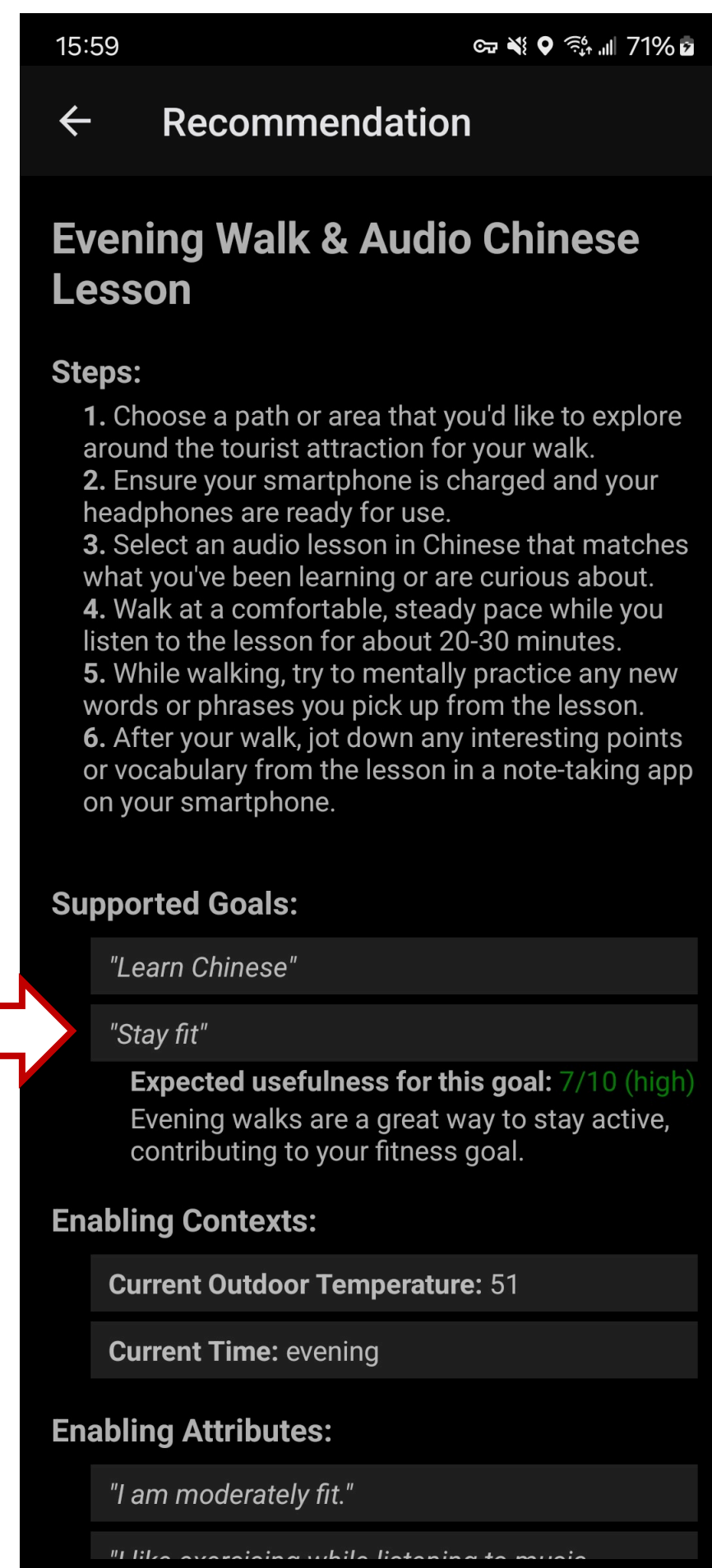
- '**Always-on**' app that can be used in the foreground (through the chat interface) and in the background (through periodic push notifications) as the user goes about their day.
- Tracks and considers the user's context when delivering recommendations.



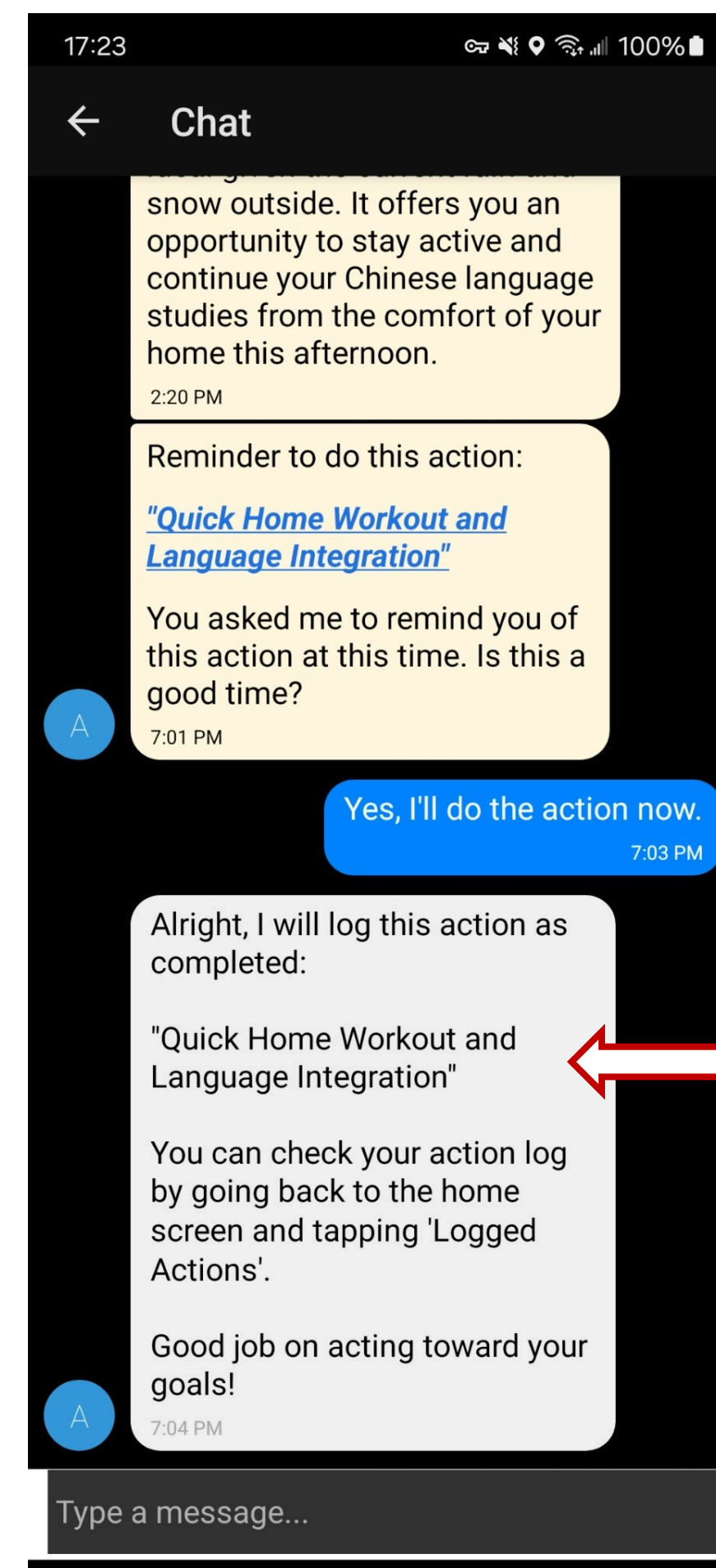
The user receives a push notification about a new action recommendation from the chatbot.



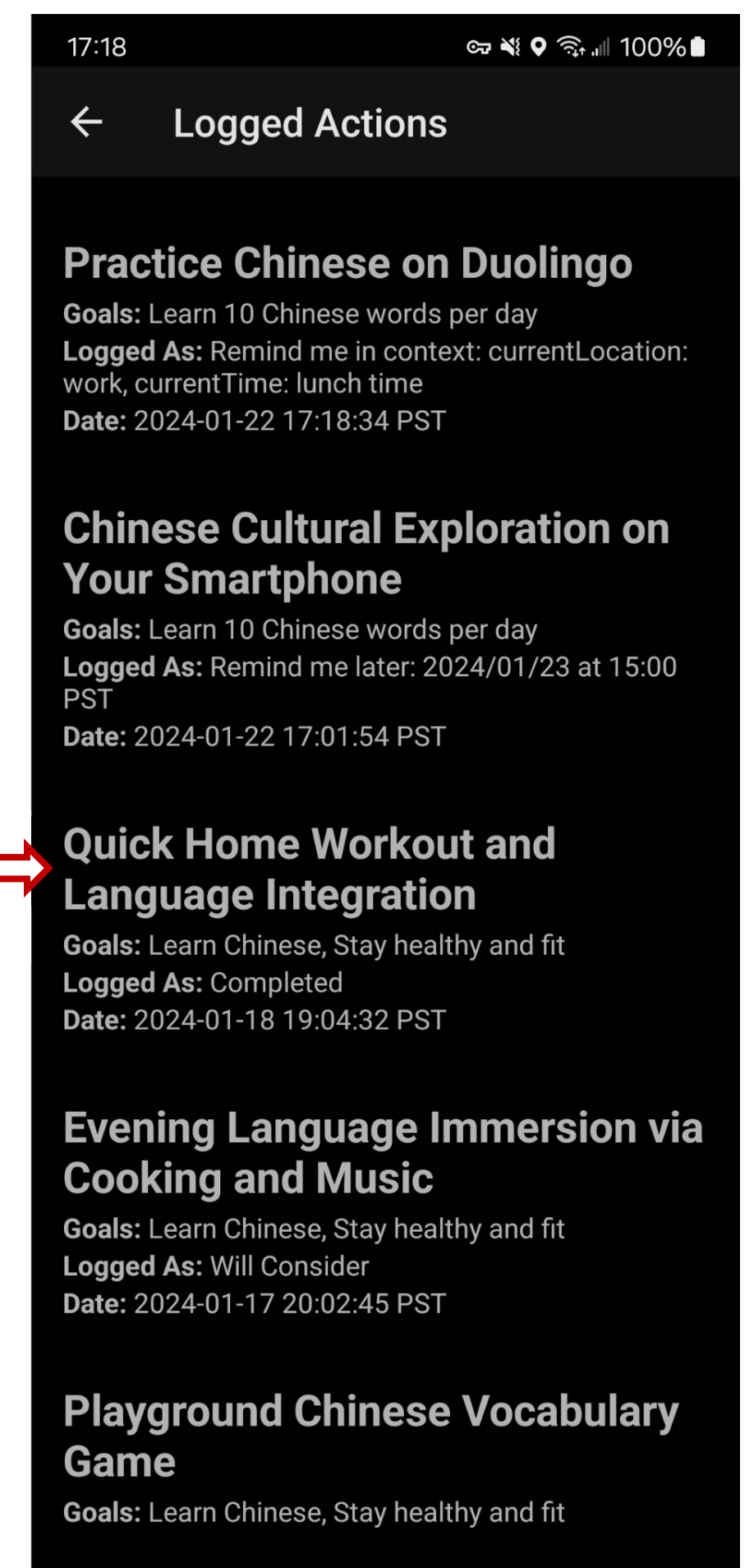
The 'chat' view, where the user converses with the chatbot.



The 'action details' view, where the user can view 'structured details' about a recommended action.



The chatbot lets the user log and keep track of the actions they have completed.



PILOT FIELD STUDY

- Two participants used the chatbot for 2.5 weeks for their real goals and in their real daily contexts.
- Participants found the chatbot useful for **action discovery**, its **proactiveness**, and its ability to **adapt and personalize its suggestions with low effort**.

FUTURE WORK

- Explore the types of **roles** that these types of chatbot agents can play in individuals' goal pursuits, including for:
 - Long-term** goal planning
 - Progress** tracking
 - Providing **motivation** and **accountability**
- Improve the chatbot's outputs through **more effective prompting** and **context inputs**.
- Explore ways to improve and balance **user agency**.