Low-fi prototype

CS 147 Fall 2025

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INTRODUCTION

VALUE PROPOSITION

Simmr - **"the voice that turns every recipe into a story."**

Simmr transforms everyday cooking into a story-driven experience that makes the kitchen creative, social, and enjoyable.

PROBLEM AND SOLUTION OVERVIEW

Cooking, for many home cooks, has become repetitive and isolating. Most recipe apps emphasize efficiency and output, neglecting the emotional and social dimensions that make cooking meaningful. As a result, users often lose interest, feeling disconnected from the creative and communal joy of preparing a meal.

Simmr reimagines cooking as an interactive, story-driven journey. Through voice-guided narration, ambient music, and embedded mini-lessons, Simmr turns ordinary recipes into immersive experiences. Whether it's following a tropical adventure while making dinner or collaborating on a story-themed meal with friends, Simmr transforms cooking from a chore into an engaging, social, and memorable experience.

CONCEPT SKETCHES

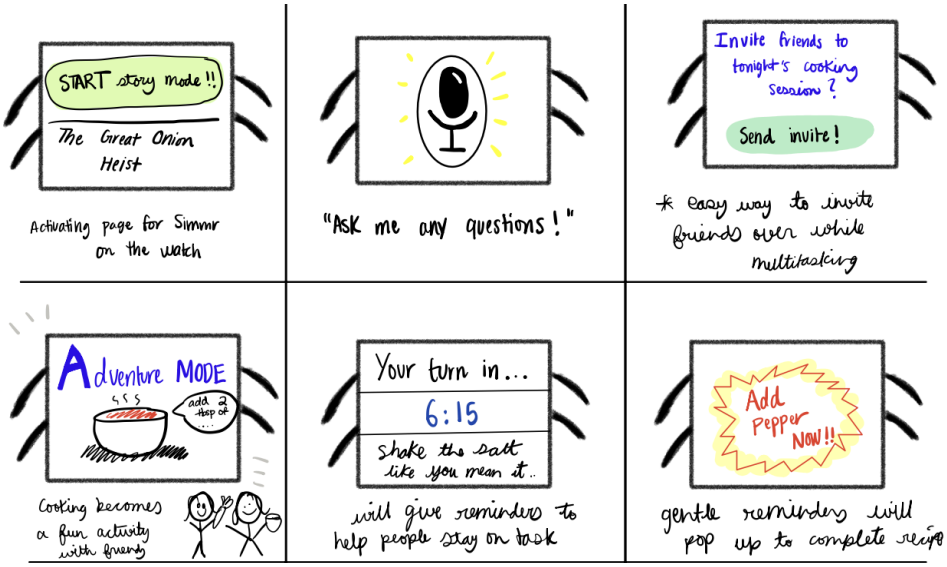

Figure 1a. Digital Wearable App Concept Sketches

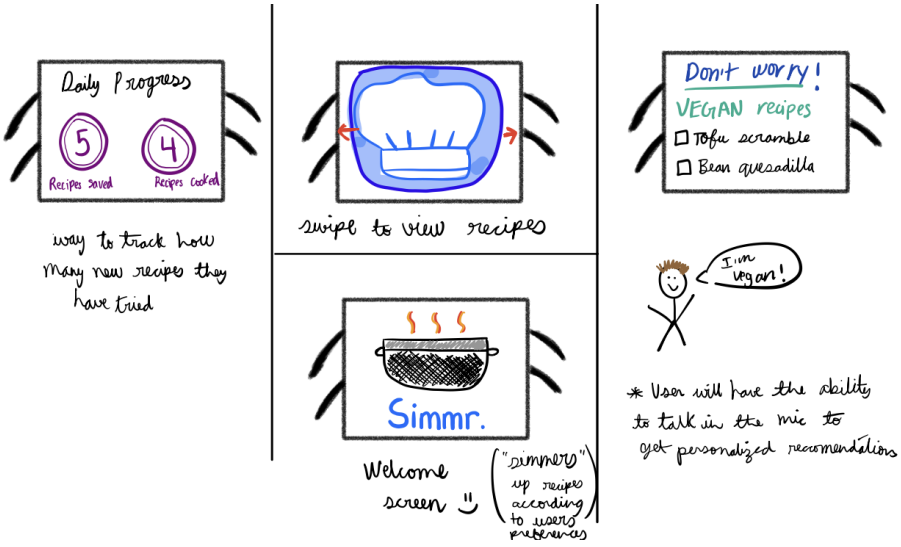

Figure 1b. Digital Wearable App Concept Sketches

Figure 2a. Native Mobile App Concept Sketches

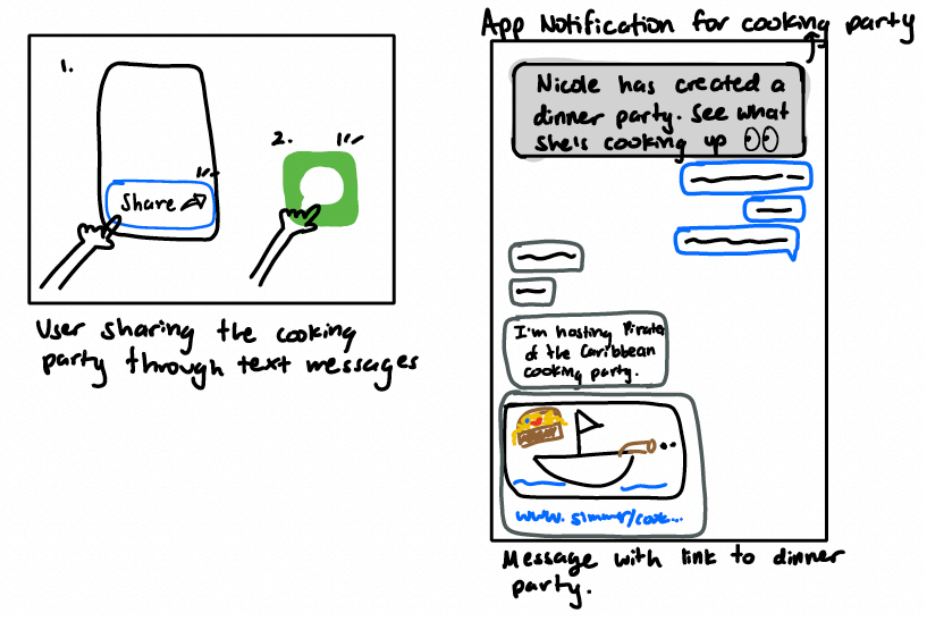

Figure 2b. Native Mobile App Concept Sketches

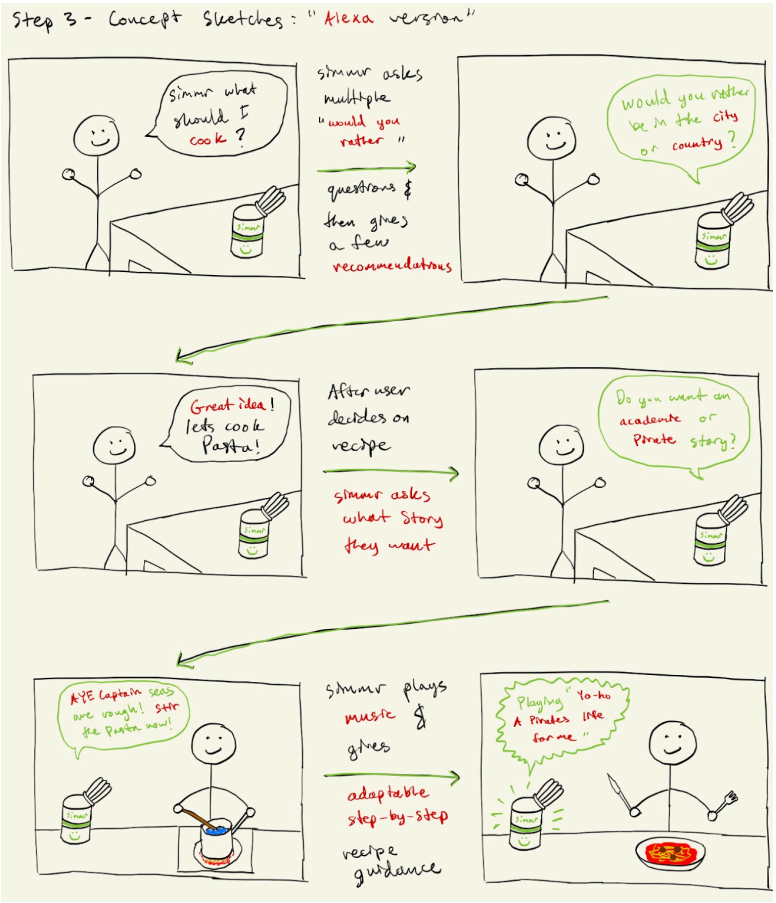

Figure 3. Amazon Alexa Concept Sketches

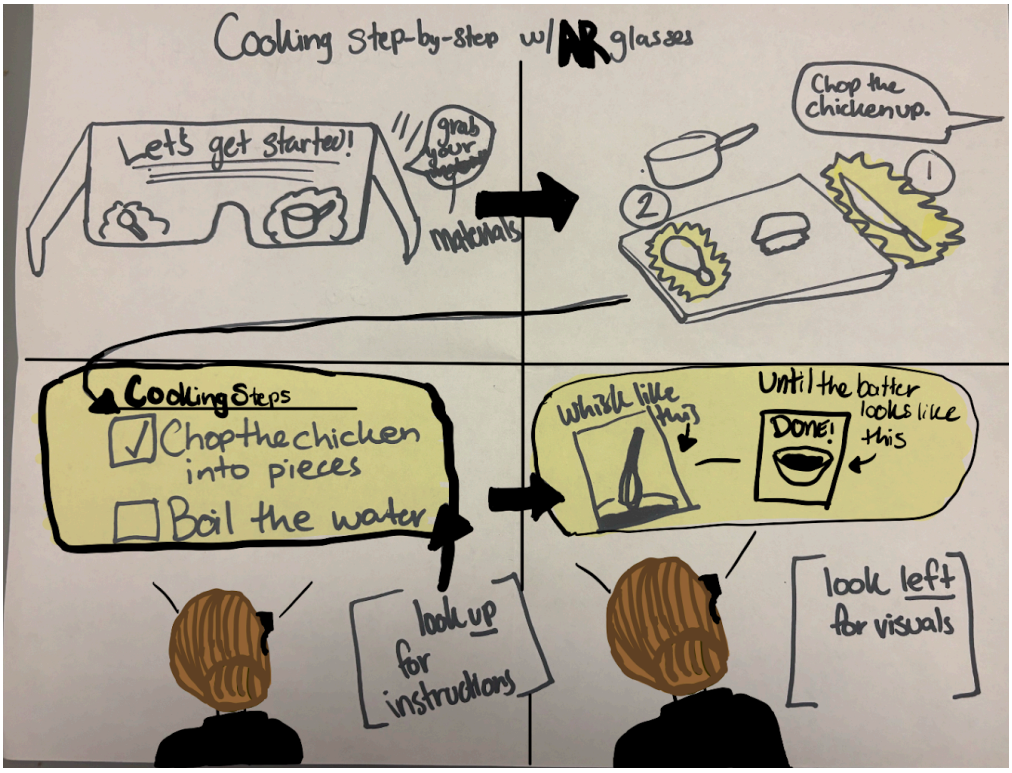

Figure 4. Augmented Reality Concept Sketches

KEY SCREENS

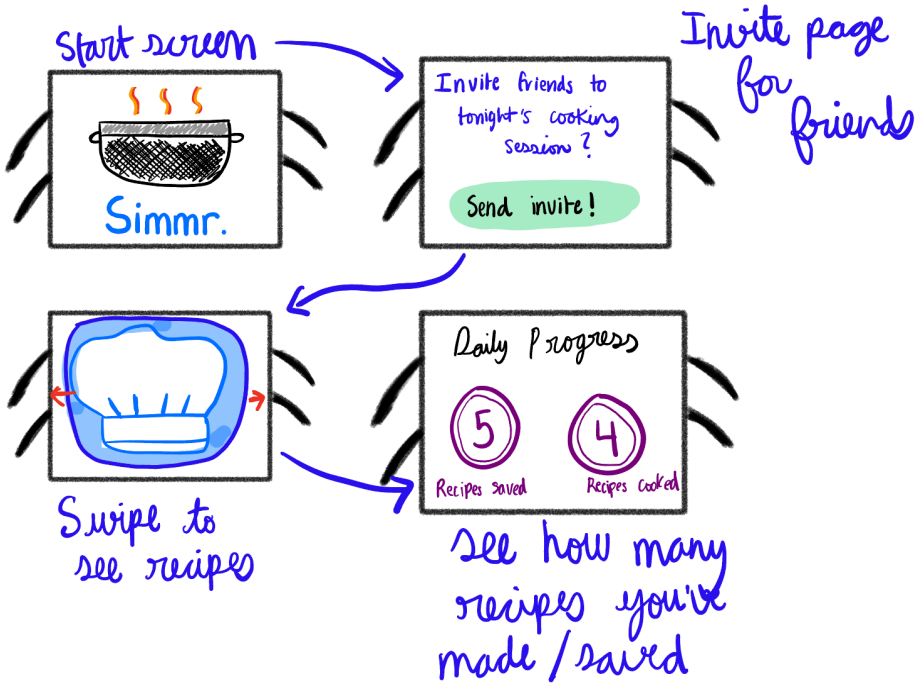

Figure 5. Digital Wearable App Key Screens

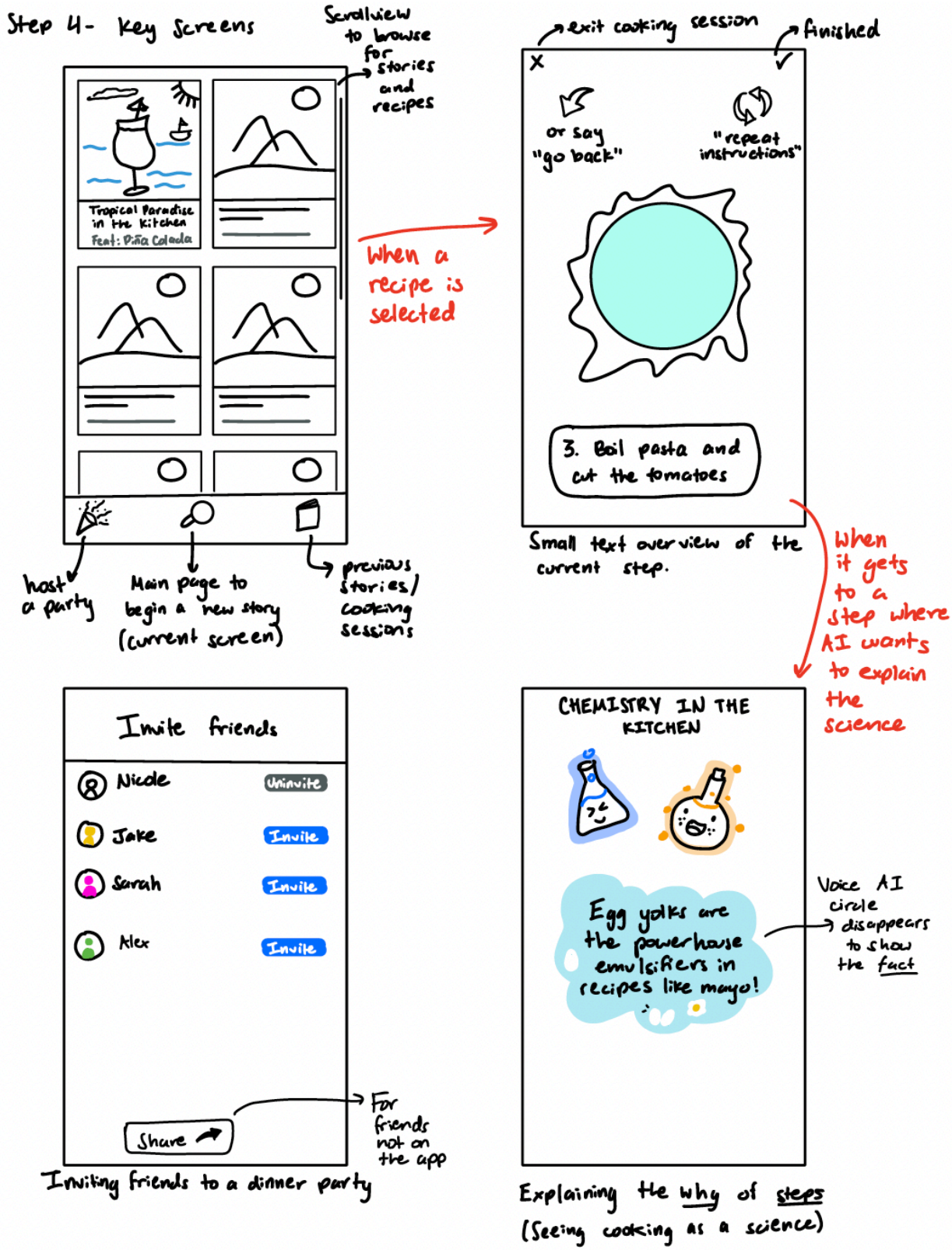

Figure 6. Native Mobile App Key Screens

FINAL INTERFACE DECISION

DIGITAL WEARABLE APP

PROS	CONS
1. Users can navigate recipes, receive prompts, or track progress without touching their phone. Ideal when their hands are messy while cooking. 2. Wearables enable short, contextual interactions (e.g., step reminders, timers, or "fun fact" pop-ups) that enhance immersion without distraction. 3. Could integrate calorie tracking, nutrition insights, or activity metrics (like heart rate during cooking) to position the product as part of a holistic wellness experience. 4. Few cooking or learning apps extend meaningfully into wearable devices 5. Parents cooking with kids can keep both hands free while following visual or haptic cues from their smartwatch	1. Our target users (parents, single moms) are less likely to own a wearable 2. Designing a meaningful UI/UX experience on small screens is complex; the app would need to prioritize minimal interactions or voice integration. 3. The wearable experience might not appeal to our broader audience if most users are content with the mobile app's visual engagement. 4. Adding sensors or tracking (e.g., movement, voice) introduces new ethical and security considerations regarding data collection and storage. 5. Some interactions (like step timers or notifications) may be replicable via iPhone notifications, making the standalone wearable app less essential.

NATIVE MOBILE APP

PROS	CONS
1. Hands-Free, Natural Interaction: Designing around the context of use and reducing cognitive and physical load (lecture 07, early stage prototyping): Cooking involves multitasking since users' hands are often busy or messy. Voice AI removes friction by allowing users to stay engaged with recipes and stories	1. Limited Multimodal Interaction: Mobile voice apps depend primarily on audio, which can make it harder to integrate visual or tactile cues that reinforce learning or creativity (e.g., seeing ingredients, timers, or textures). This limits multimodal engagement, which HCI research shows is key for maintaining attention and deepening

without needing to pause and touch a screen. 2. Encourages Flow and Play: Users can fully experience the app's story-driven cooking guidance through visuals, audio, and touch, creating an immersive and engaging cooking flow. 3. The larger screen supports rich storytelling: animations, music, and narration can be layered to enhance emotional connection. 4. Voice interaction and prompts feel natural on iPhone (e.g. Siri) 5. Recipes and dinner parties can be easily shared with friends or family through built-in social integrations (e.g. Messages)	understanding through sensory feedback. 2. Some storytelling features may feel redundant if users already rely on voice assistants like Siri, Alexa, or Google Home in their kitchens. 3. Potential for Cognitive Overload: If the voice interface overtalks or gives too much information at once, users may experience listening fatigue or lose track of steps. This risk can be reduced with adaptive pacing or "repeat last instruction" features, learned through early testing and iteration. 4. Environmental Noise & Recognition Errors: Kitchens are noisy environments; blenders, kids, and background chatter can interfere with speech recognition accuracy.

Ultimately, we decided to move forward with prototyping our native mobile app solution. Based on design exploration and prototyping fundamentals, a native mobile app solution is better than a digital wearable solution because:

- AppleWatch violates accessibility and equity principles: it requires expensive equipment that not everyone has access to (lecture 6, design-exploration)
- Voice AI better fits the "experience-first" model, focusing on what users feel and accomplish rather than on technological novelty.
- As Eisenmann emphasizes, great products solve real, blatant, frequent, and important problems — not just aspirational or latent ones
- The larger screen supports rich storytelling and allows users to fully experience the app's story-driven cooking guidance through visuals, audio, and touch.

STORYBOARDS

SIMPLE TASK FLOW - Listening to a story while completing a recipe

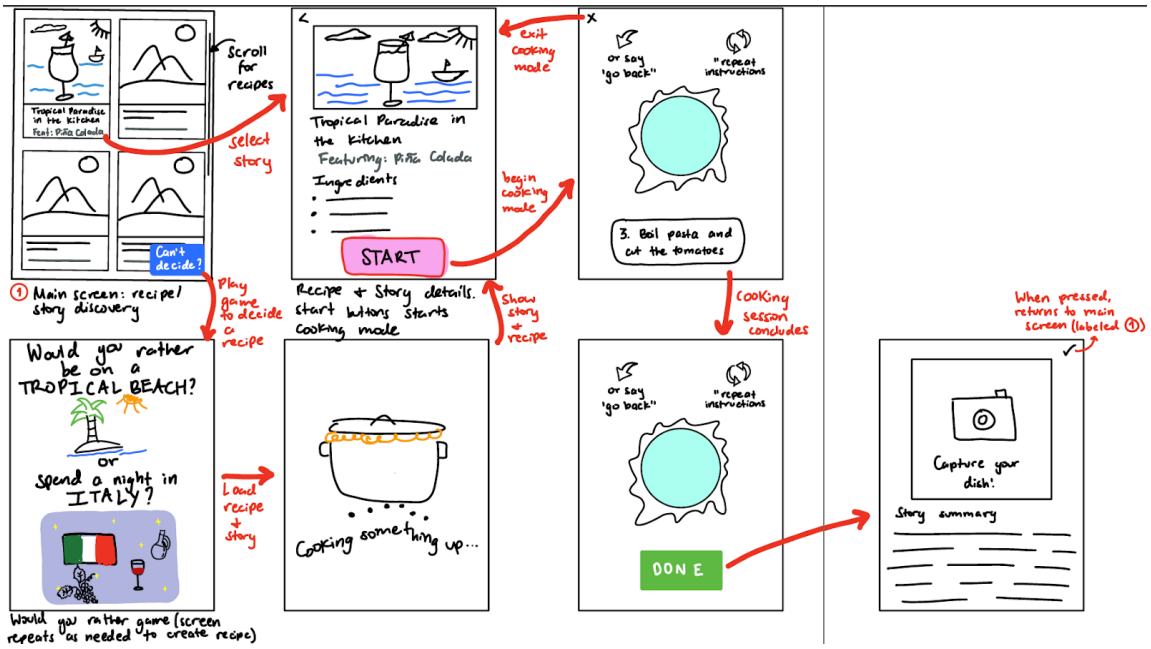

Figure 7. Storyboard for Simple Task Flow

MODERATE TASK FLOW - Create a dinner party for your friends

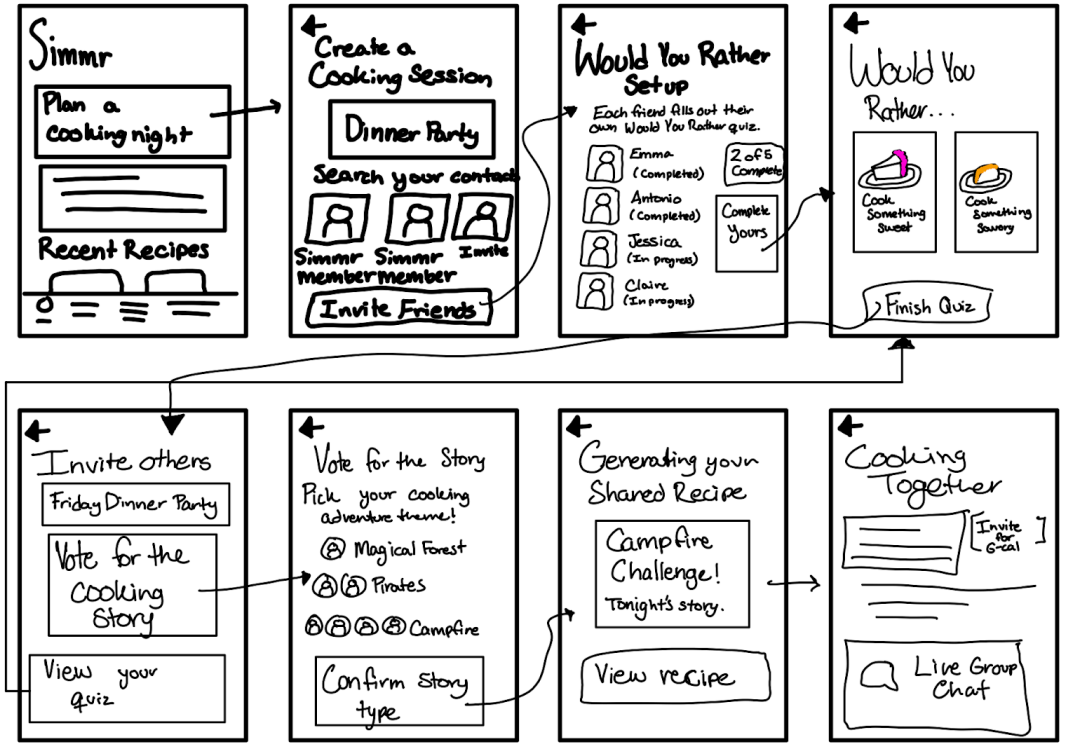

Figure 8. Storyboard for Moderate Task Flow

COMPLEX TASK FLOW - Cooking while entertaining a kid by using kid mode

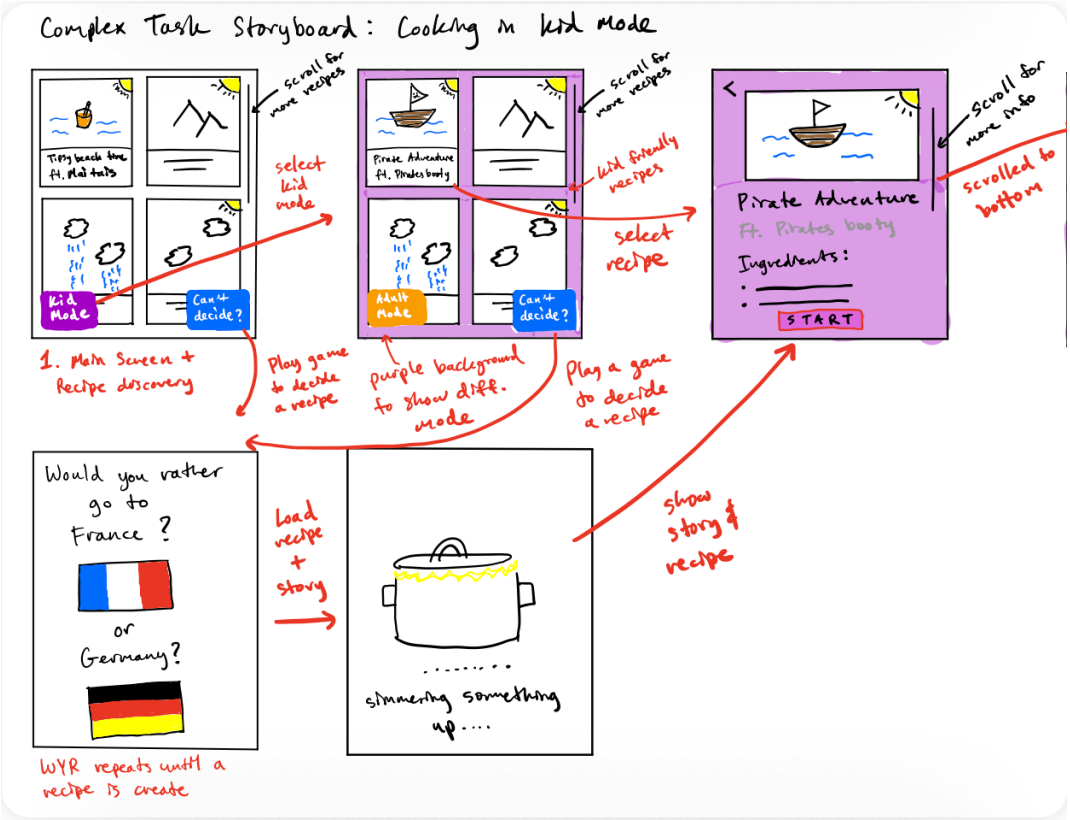

Figure 9. Storyboard for Complex Task Flow

LOW-FIDELITY PROTOTYPE

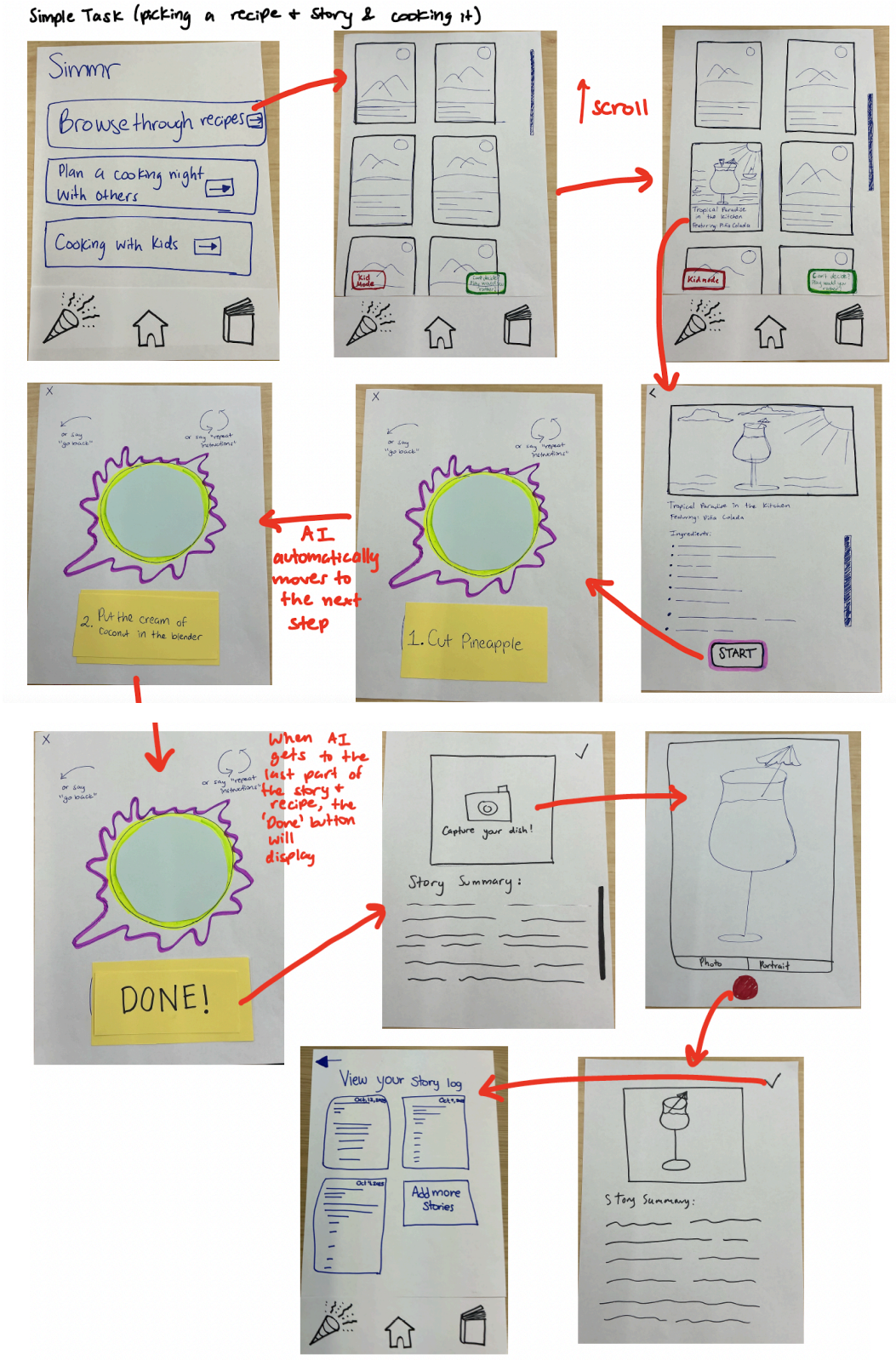

Figure 10. Low-fi Prototype for Simple Task Flow

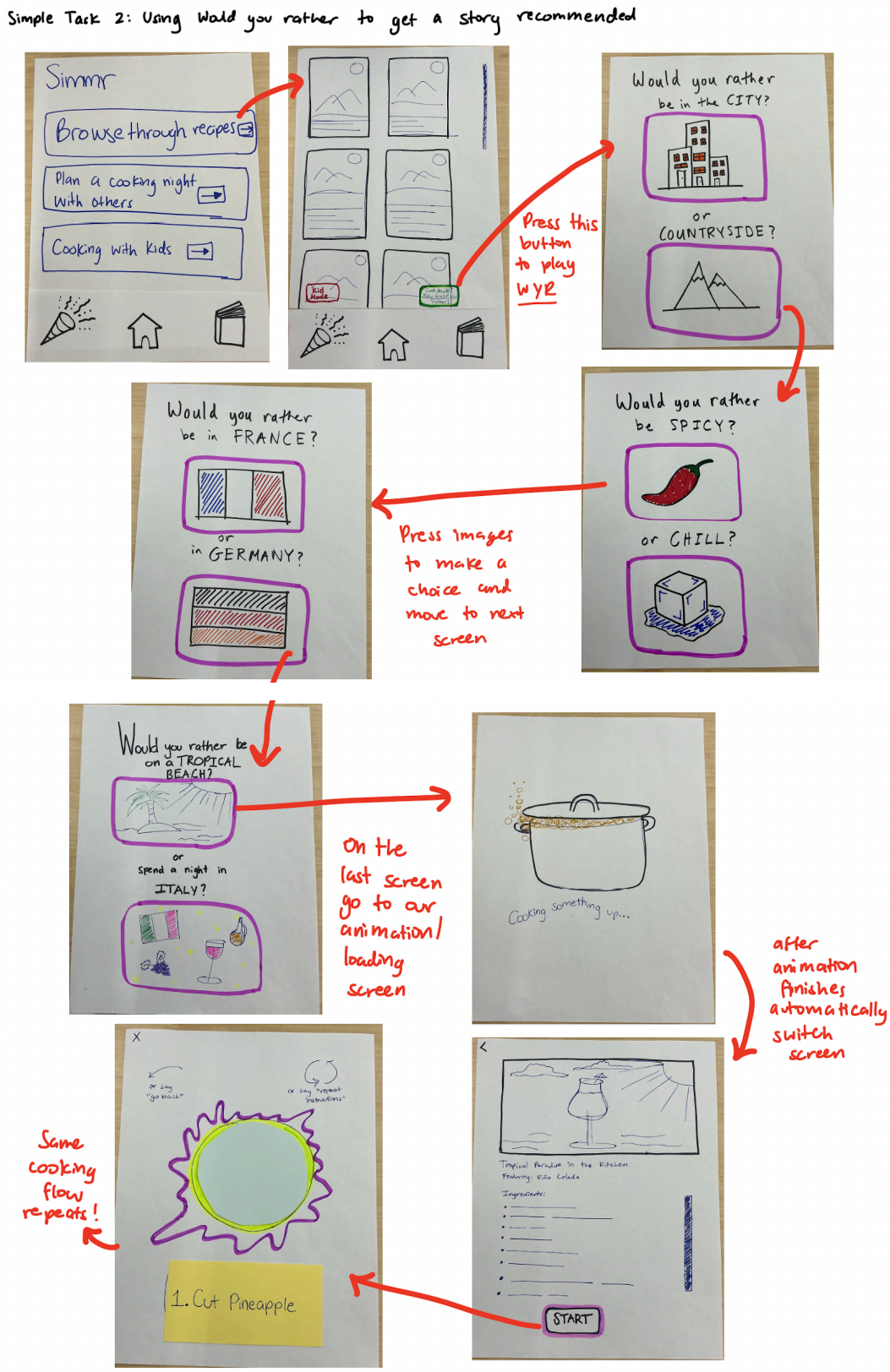

Figure 11. Low-fi Prototype for Playing the Would You Rather Game

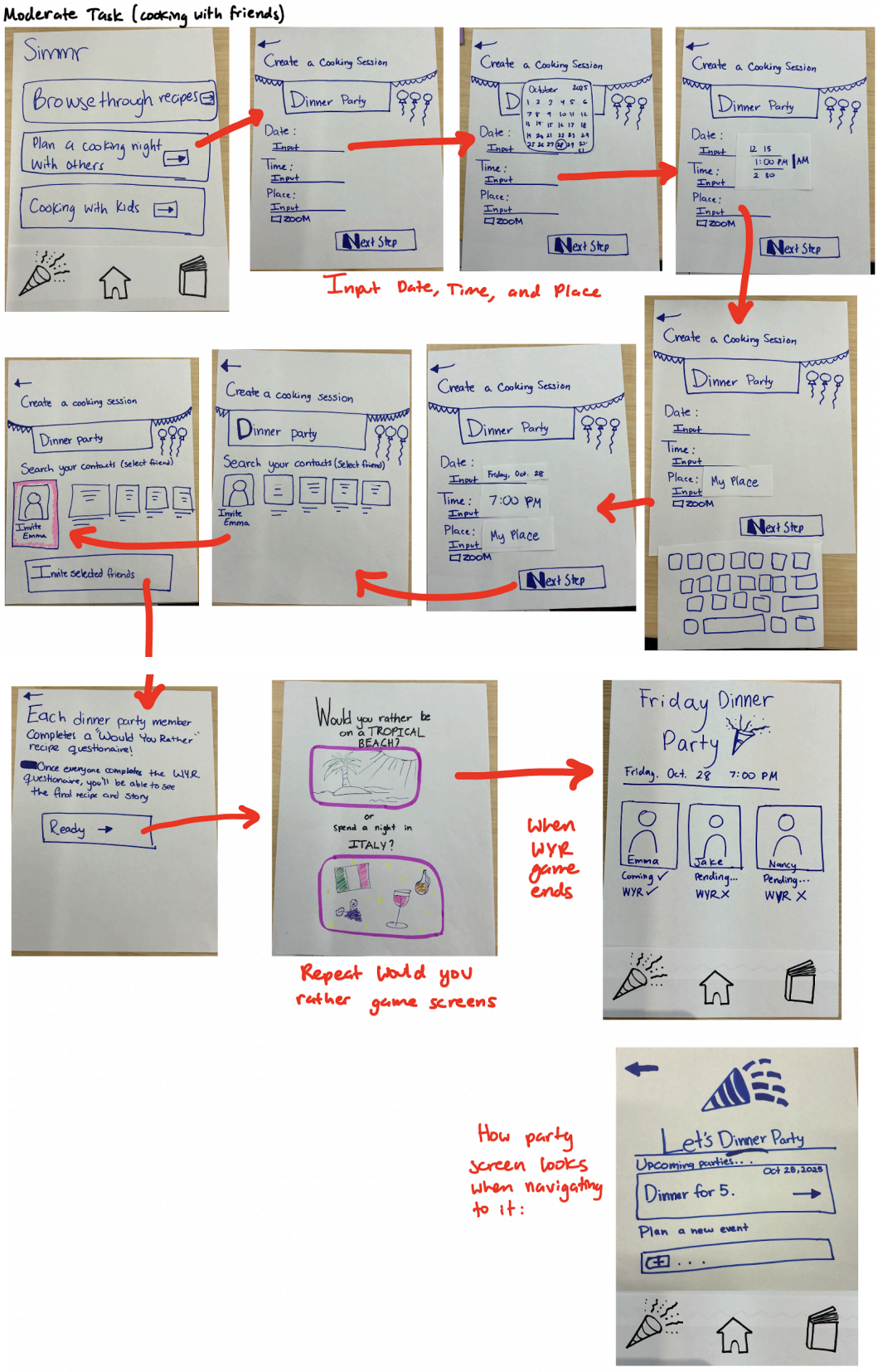

Figure 12. Low-fi Prototype for Moderate Task Flow

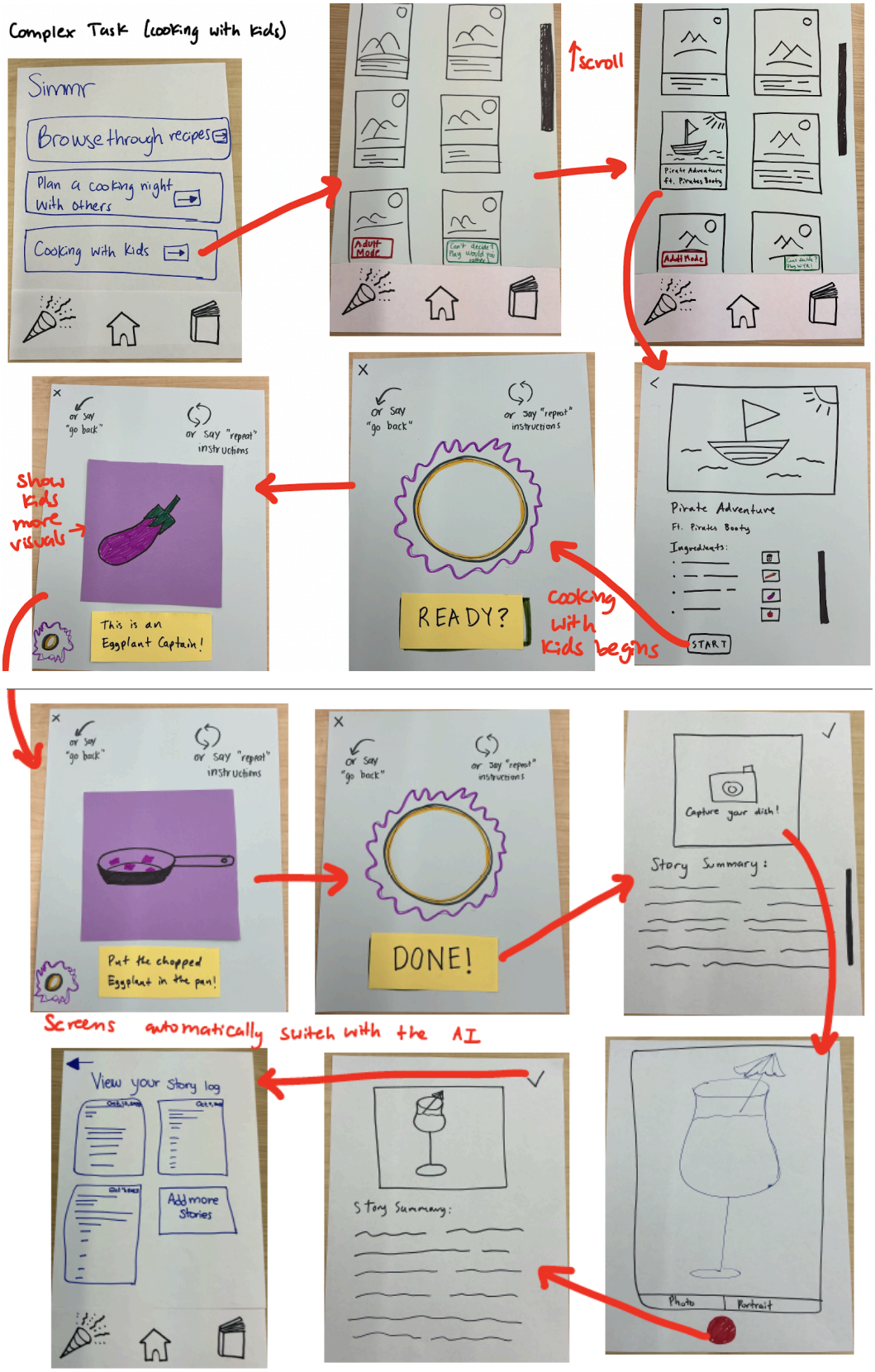

Figure 13. Low-fi Prototype for Complex Task Flow

TESTING METHODOLOGY

PARTICIPANTS

1. Pramod: Entrepreneur and dad. Wants "the ability to improvise and create some excitement in cooking for himself and his family/friends".
2. Senay: Mom. She likes to experiment with cooking and sharing food.
3. Rebeka: Mom. She finds cooking very repetitive. She also feels like "people are not grateful for her food" and "they just scarf it down". When she hosts parties, she likes to have her food reviewed.
4. Martin: Busy data Scientist and dad of 2. He finds it hard to make time to cook.

We selected these participants because they closely represent Simmr's target user base: parents and home cooks who find cooking repetitive or isolating and seek to make it more engaging. **Pramod** and **Senay** embody users who view cooking as a shared, expressive activity and want to bring more excitement to their routines. **Rebeka** reflects users who feel underappreciated in their daily cooking and crave a sense of joy and recognition. **Martin** represents busy parents who struggle to make time for meaningful cooking experiences but would benefit from an app that makes the process more enjoyable and efficient. Collectively, they capture a diverse range of motivations and challenges within our core demographic.

ENVIRONMENT

Pramod: Los Altos Community Center outside tables
Senay: Tressider outside tables
Martin: Tressider outside tables
Rebeka: Tressider outside tables

USABILITY GOALS & METRICS

Goal 1: Enhance Learnability and Ease of Navigation
Purpose: Users should be able to intuitively find and interact with recipes, features, and AI functionalities without prior training.

- **Process Data:** Instances where users hesitate, express confusion, or struggle to proceed to the next step in a task flow.
- **Bottom-Line Data:**

    - *Metric:* Number of navigation errors (e.g., misclicks, backtracking events).
        - *Measurement Approach:* Count total user mistakes or hesitation pauses per task.
    - **Rationale:** Since the prototype introduces novel concepts (e.g., "Would You Rather" recipe discovery and voice cooking), validating intuitive discoverability is critical to shaping first-time user success and overall engagement flow.

Goal 2: Increase Engagement and Emotional Enjoyment During Cooking
Purpose: Ensure the prototype successfully transforms cooking from a repetitive task into an engaging, interactive, and rewarding experience.

- **Process Data:**
    - **Feature Exploration:** Count of distinct features used per session (Would You Rather flow, create dinner party flow, kid-friendly filter, capture dish photo screen).
    - **Step Confirmation Behavior:** Frequency of simulated step confirmations (clicking "Next Step," "Repeat," or "Clarify" in the voice-guided flow).
- **Bottom-Line Data:**
    - *Metric A: Prototype Task Completion Rate* - Number of participants who complete the full flow for each task (e.g., find "Tropical Paradise" → start simulated cook flow → capture photo screen).
        - *Measurement Approach A*: Task success (binary) per participant, logged by completion of the final screen for each task.
    - *Metric B: Willingness to Reuse* - Post-task Likert response ("How likely would you be to use this feature in real cooking?" 1–7).
        - *Measurement Approach B:* Post-Interview responses
    - **Rationale:** The app's central hypothesis is that fun, interactive cooking drives retention. Measuring emotional engagement validates whether story features and voice interaction deliver on that experiential promise.

Strategic Implications

These usability goals are aligned with the **current phase of development**: testing conceptual clarity and experiential delight. Positive results, such as fewer navigation errors and higher emotional engagement, will justify our critical design decisions around storytelling. Conversely, low engagement or frequent confusion will signal a need to simplify task flows or refine interaction cues before advancing to high-fidelity prototyping.

APPENDIX

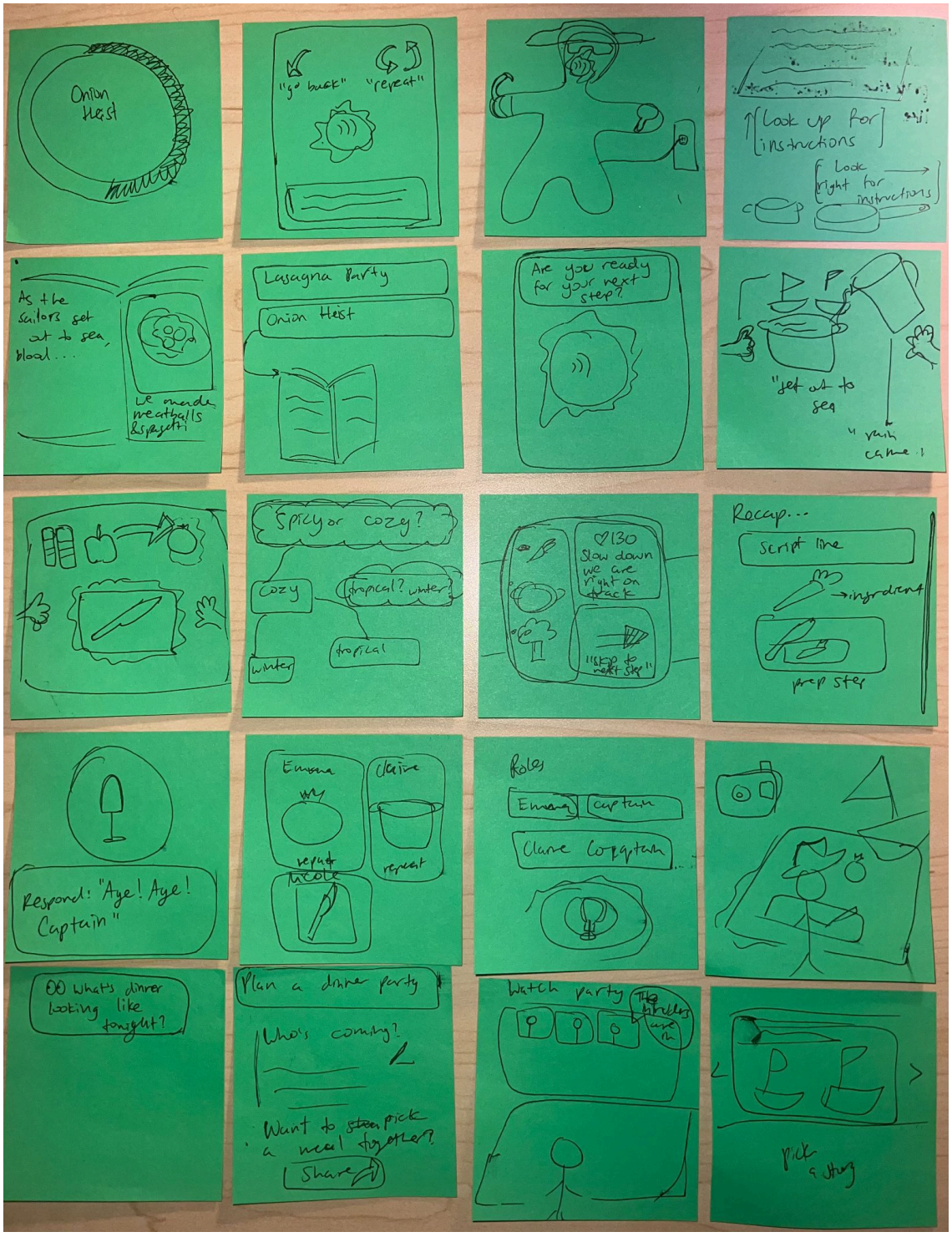

Figure 14. Sketches of Solution Ideas from Studio