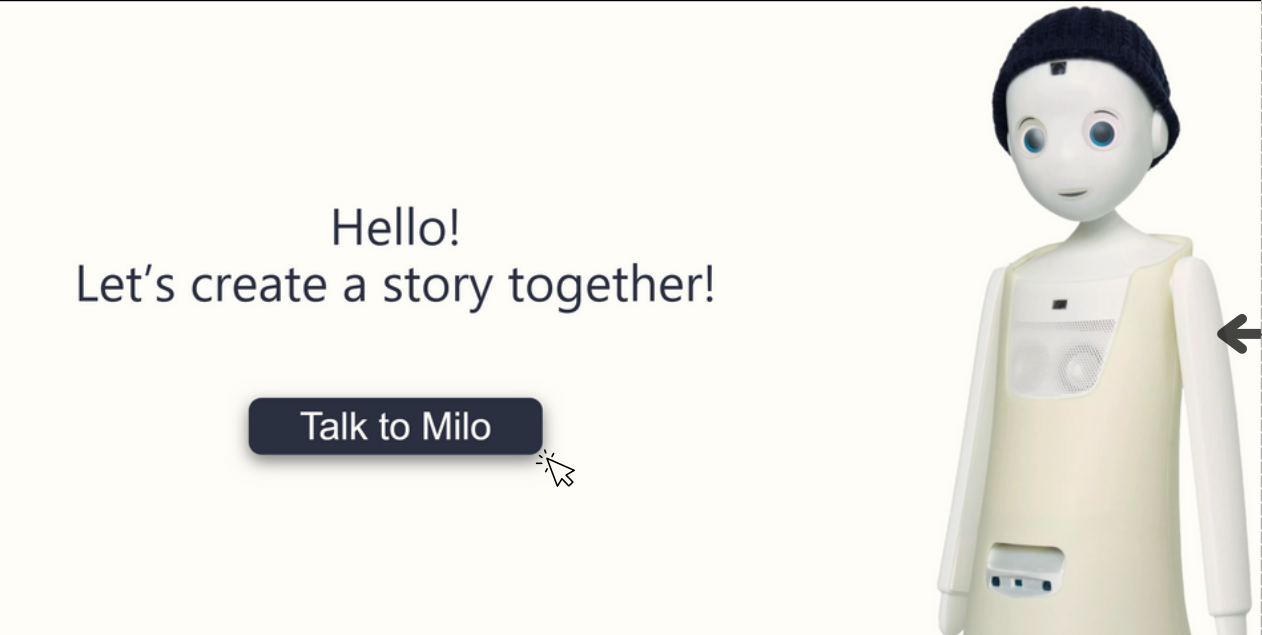
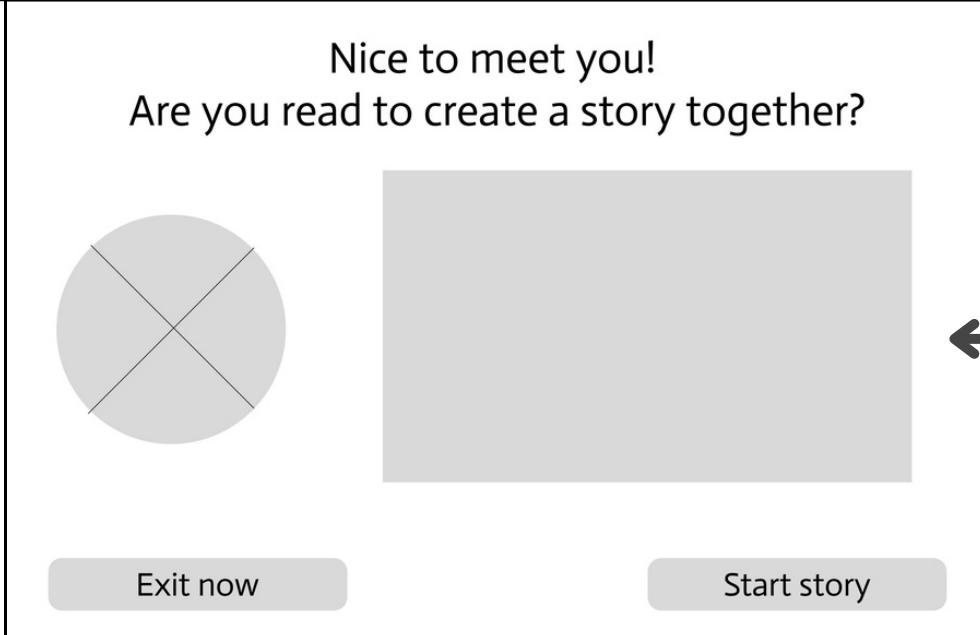
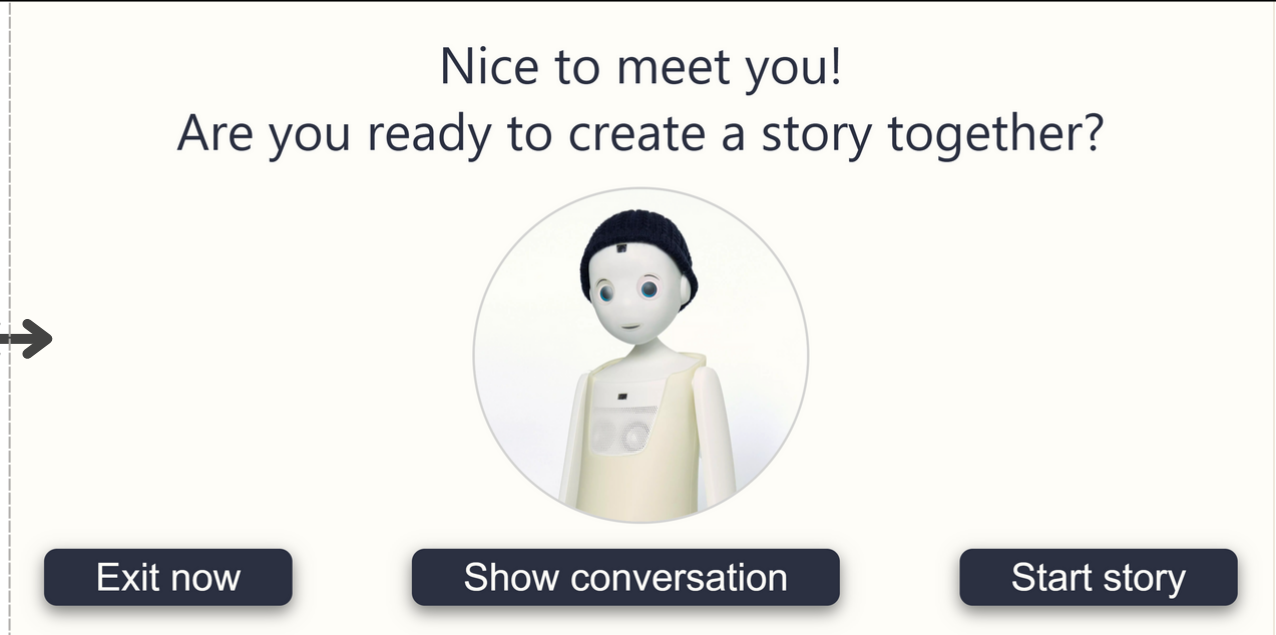
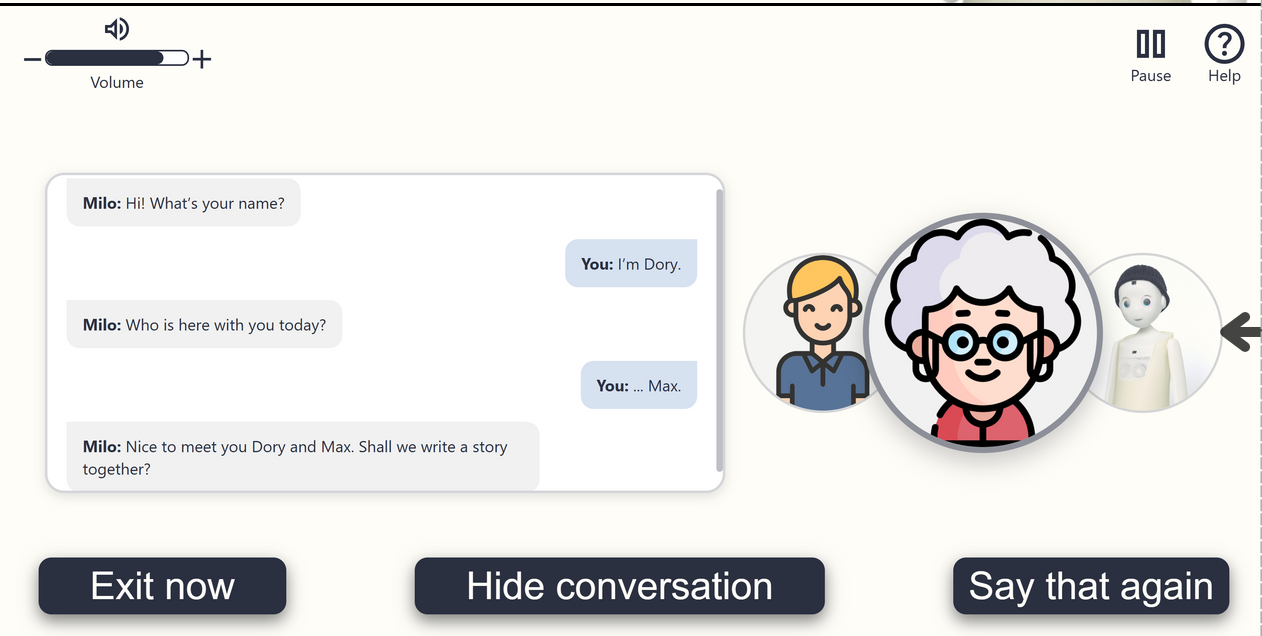
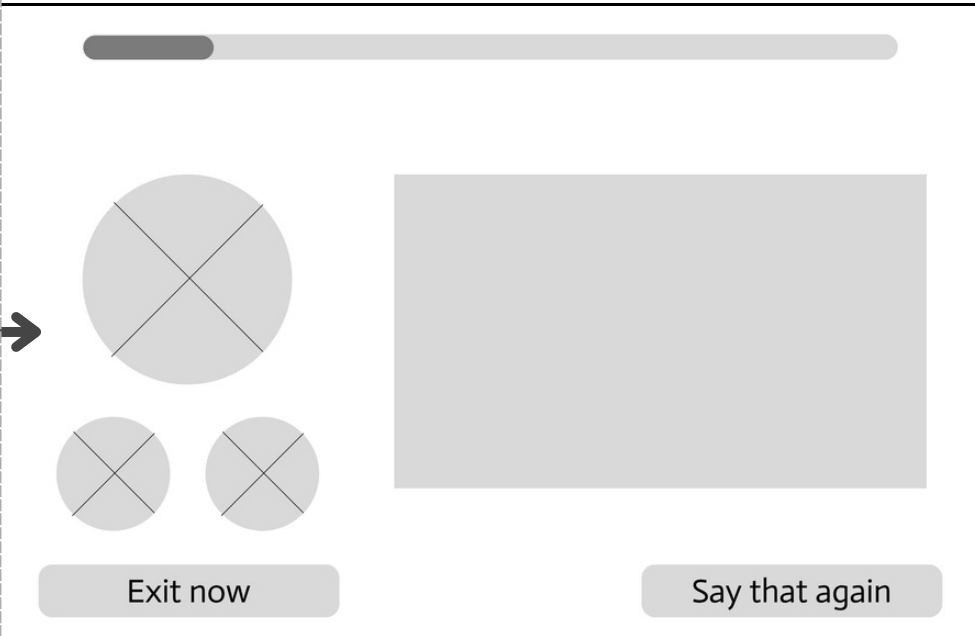
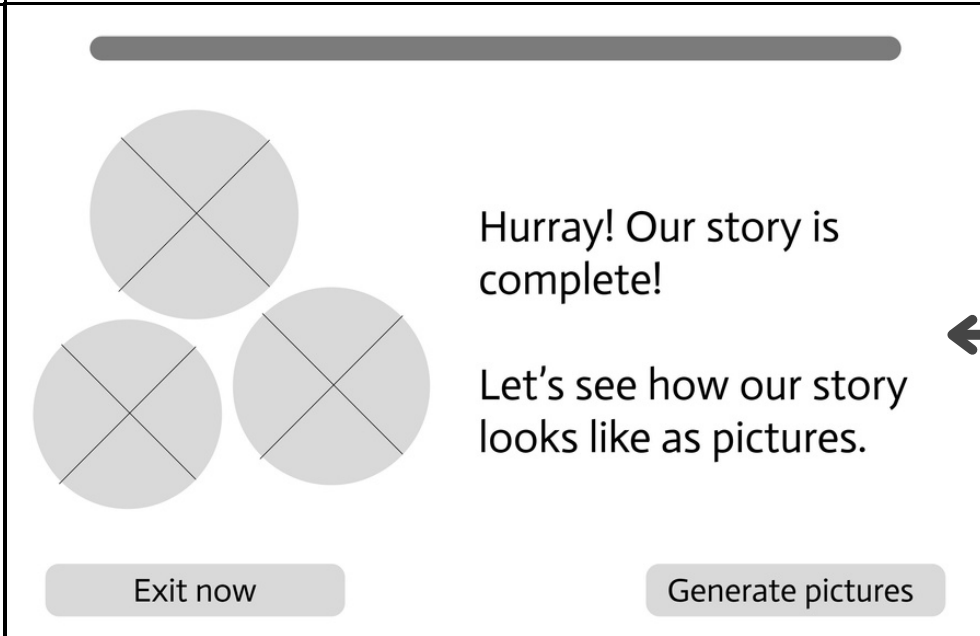
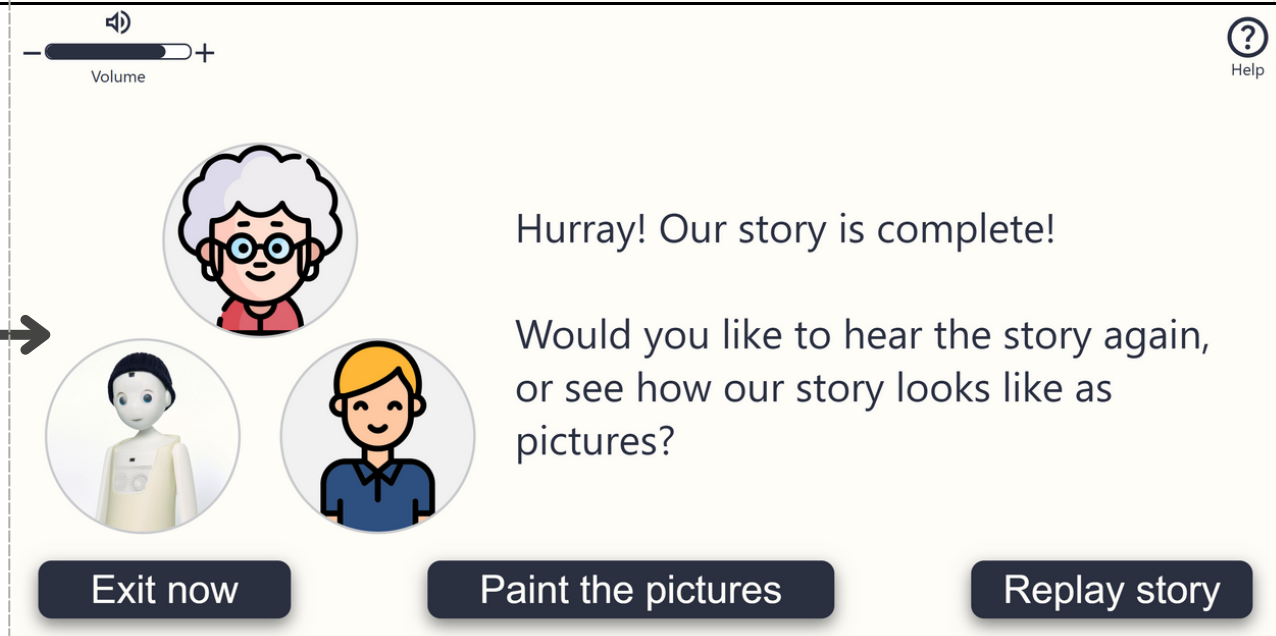
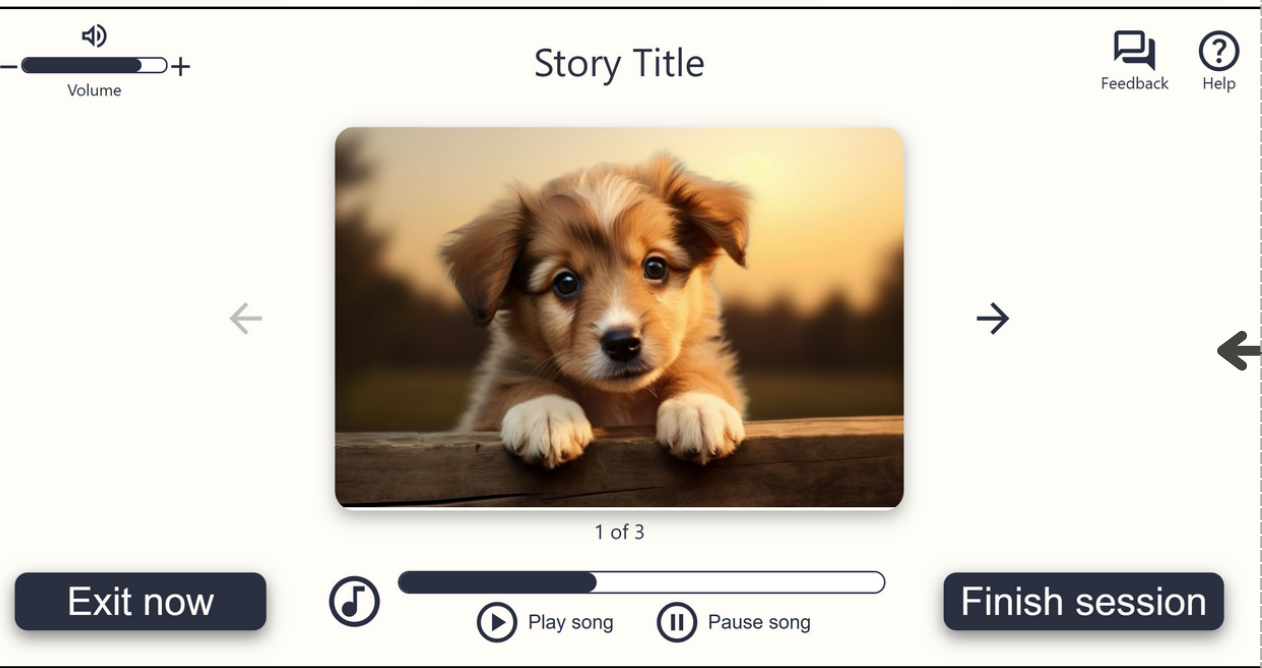
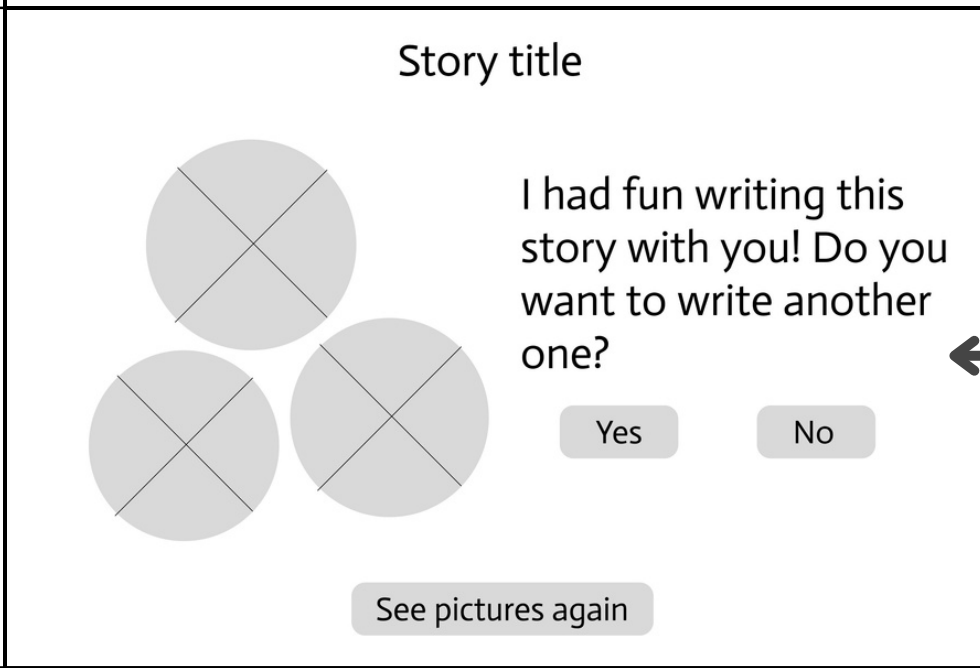


Tap. Talk. Tell a Story

Designing a simple interface, suitable for People with Dementia
Part of the project “A Storytelling Robot for People with Dementia” - proposed by the Interactive Intelligence Group

01. Motivation and Questions	02. What we already know	03. Research & Design Approach	04. Prototype Evolution
Design a simple interface, for use with a social robot, to support cooperative storytelling - How to - guide and support storytelling without causing confusion - What - can show progress or completion in a cognitively supportive way - Which - interface elements are easiest for People with Dementia to use - Which - input methods are most intuitive and accessible - What - feedback best reassures and engages users - How to - integrate an interface and robot for a smooth, supportive experience	Interfaces effective for PwD rely on simplicity, clarity, and personalization to reduce cognitive load and support varied abilities. - Plain layouts, large readable fonts, and high-contrast visuals - Clear buttons, minimal distractions, and consistent navigation - Subtitle support and multimodal cues (e.g., audio, visuals, touch) - Emotionally supportive design and caregiver involvement to promote engagement and dignity	Developed a cognitively accessible tablet interface for storytelling with Milo the robot, using a user-centered, expert-informed process - Applied a qualitative, iterative approach based on literature, supervision, and feedback from HCI students and a medical expert - Followed three key stages—requirements gathering, prototyping, and expert evaluation—aligned with dementia-focused design practices and adapted to ethical constraints	Low-fidelity sketches to explore layout, user flow, and interaction design, focusing on structural clarity over visual detail - First mid-fidelity prototype created based on supervisor feedback, adding simplified storytelling screens (hiding transcript), mute and save story buttons, clearer tutorials - Second iteration of mid-fidelity prototype, based on heuristic evaluation, addressing confusing terminology, passive screens, inconsistent exit messages, lack of volume control and creating debate about the effectiveness of the progress bar, and mute button
			
			
			
05. Evaluation and Results	06. Limitations	07. Conclusion	08. Future Work
A medical expert reviewed the prototype in a guided session simulating a robot-led storytelling experience. Feedback confirmed the interface was clear, intuitive, and not overwhelming, with helpful multimodal cues. Key improvements based on feedback: - Transcripts made optional and icon views default - Added +/- volume controls, help button, and color-coded popups - Clarified transitions with a “Finish Session” button and ensured consistent exit options Final prototype was deemed suitable for 1:1 use, supporting emotional safety and clarity.	Impossibility to directly involve PwD in the evaluation, due to: ethical considerations (special consent and safeguards needed to prevent distress or overwhelming) accessibility constraints (limited time and scope to form clinical partnerships) Proxies can't capture PwD's emotional or cognitive responses. Assessing well-being, distress, and verbal feedback remains a challenge.	- This research designed a cognitively accessible interface supporting storytelling between a PwD and a caregiver, guided by a social robot. - Expert-informed, iterative design helped facilitate storytelling, simplify input, reduce cognitive load, and align robot-interface integration. - The project contributes to dementia-focused HCI through progress cues, feedback, and multimodal interaction, despite the limitation of not involving PwD directly.	Integration: All the projects that were conducted in parallel should be fully integrated in order for the robot to perform as intended User Testing: Future studies should involve real users through medical partnerships to validate the design Caregiver and personalization features: Adding statistics, session histories, and user accounts would support long-term use