Beep. Boop. Let's write a story together!

Keeping people with dementia and family members involved in the storytelling process

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01 Introduction

Storytelling improves the well-being of people with dementia by increasing confidence and self-esteem, making them feel a sense of purpose. Robots can be useful facilitators for a collaborative storytelling session.

02 Research questions

How can a robot keep people with dementia and family members involved in the storytelling process?

- How can the robot facilitate a collaborative storytelling session?
- How can the robot be an active participant in the creation of the stories?

03 Methodology

System design: Three important features of the system are:

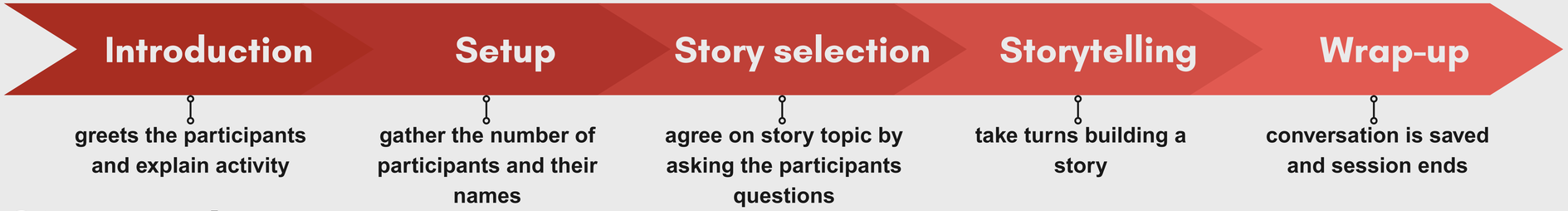
- structured storytelling flow,
- turn-taking,
- empathetic reaction to user's input.

The storytelling session is separated into 5 phases. The change between these phases is triggered by specific phrases. This helps maintain a structured flow, making the participants aware of what to expect.

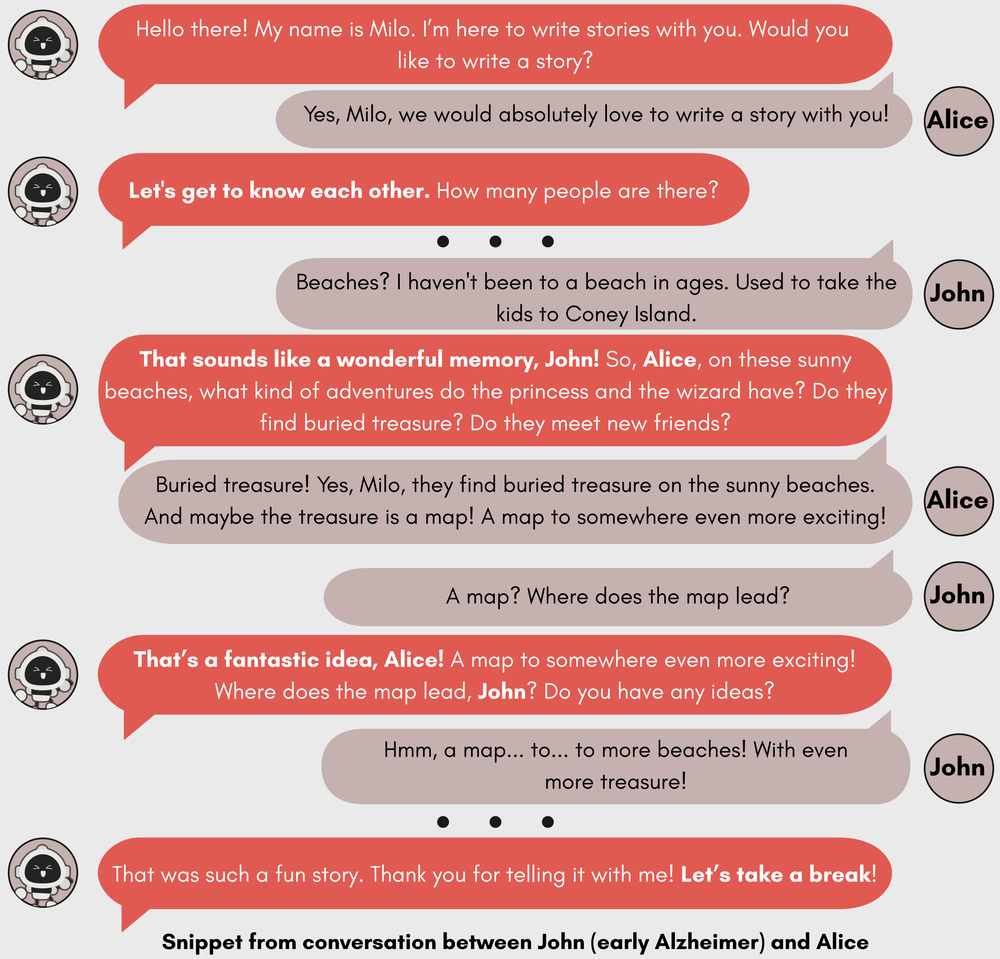
Evaluation setup: To evaluate the system, personas based on people with dementia and their family members will be used.

- John (person with dementia) - imitates the memory lapses and the communication difficulties of a person with dementia
- Alice (spouse) - has memories with John and is there to assist him

04 System phases



05 Results



Snippet from conversation between John (early Alzheimer) and Alice

This is a snippet from a conversation between John - who has early Alzheimer, Alice - his wife, and Milo - the storytelling robot. The session successfully follows the implemented features.

- The conversation follows the implemented phases. The triggering phrase "Let's get to know each other!" is successfully employed.
- The system follows the turn-taking approach by first asking Alice to contribute, then John.
- The robot answers enthusiastically and empathetically while accepting the user's ideas.

06 Conclusion and future work

"How can the robot facilitate a collaborative storytelling session?"
The system successfully implements structured storytelling flow, turn-taking, and empathetic reaction to user's input. These features promote involvement from people with dementia and their family members, creating a safe-space for people to contribute. In the end, a story is created from this session.

"How can the robot be an active participant in the creation of the stories?"
While the system makes small suggestions on how the story could be continued when asking questions to the users, it doesn't make significant contributions. This makes the robot be more of a facilitator than a participant.

In conclusion, this project demonstrates how the system can support collaborative storytelling sessions for people with dementia and their family members. The implemented features keep the participants involved in the process.

Future work could focus on improving the system's design and the contributions of the robot. Testing with real users is also necessary to realistically assess the strengths and limitations. Finally, integration with the other parts of this project would make the system complete.