Design and Development of a Virtual Reality System to support Reminiscence Therapy for Patients with Dementia

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Abdurrahman Ansari, 100585644

Dhanushga Lionel, 100616831

Mohammed Hameeduddin, 100587893

Mingwei Zhang, 100519827

OntarioTech
UNIVERSITY

Objectives and Goals

- Allow easy access to reminiscence therapy media through an intuitive web interface.
  - Allow staff to access profiles of every patient as well as general profiles.
  - Allow caregivers to access media associated with a specific profile.
- Allow users to view and stream images, videos, and audio files.
- Allow streaming of media to one of many available streaming devices.

Project Stakeholders

- Ontario Shores Centre for Mental Health Sciences (primary stakeholders)
- Ontario Tech University
- Ontario Tech University - Faculty of Health Sciences
- Dr. Ramiro Liscano

Hardware Implementation

Existing Solutions:

- Google Chromecast for streaming
  - Pros: Commercial off-the-shelf solution, easy maintenance, easily available support, has been rigorously tested by multiple consumers and professionals.
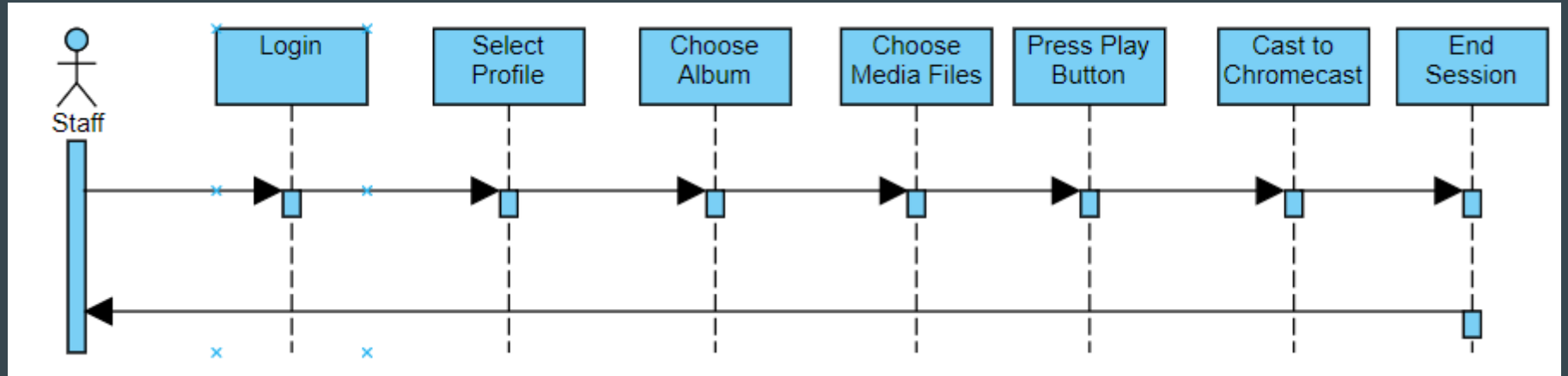 - Cons: Security, not customizable

Custom Solutions:

- Proprietary streaming device
  - Pros: Customizable to suit our needs
  - Cons: Support not always readily available, maintenance up to developers (no easily available resources)
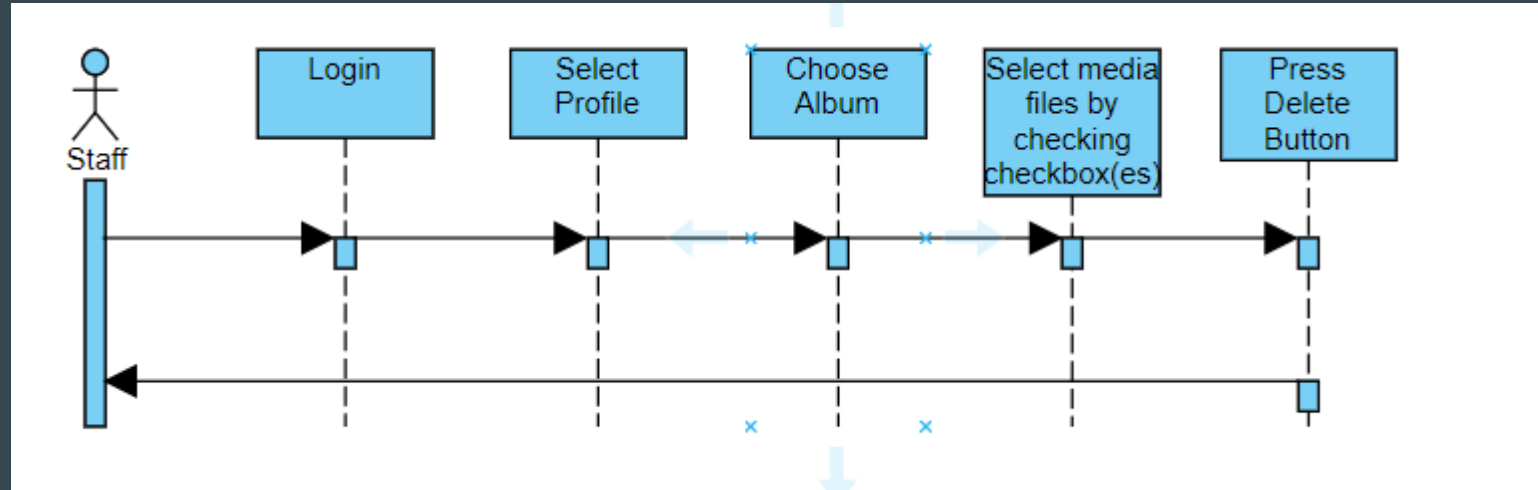
Software Implementation

- Full Stack Web Application
  - HTML/CSS - Front end
  - PHP - Server side
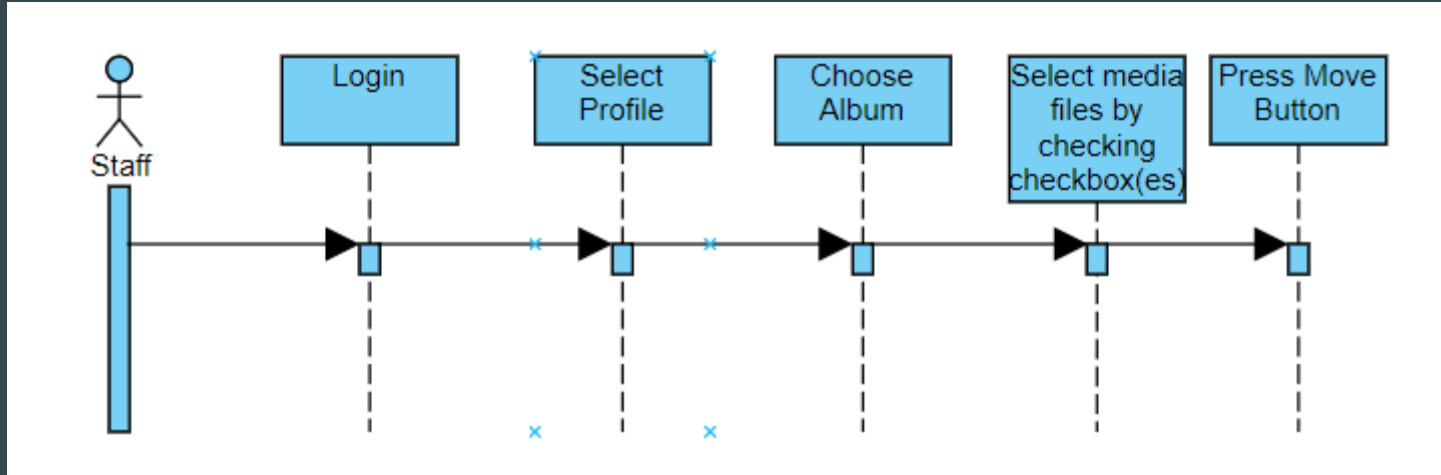 - MySQL - Database

Design Analysis

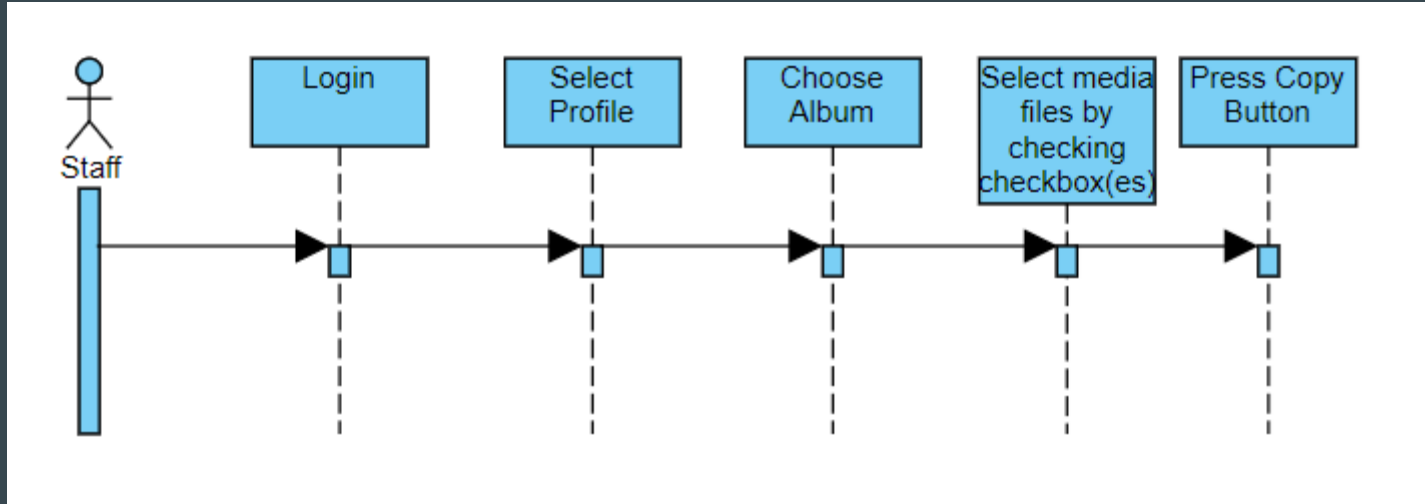# Sequence Diagram - Play Media Files

Sequence Diagram - Delete Album

Sequence Diagram - Move Album

Sequence Diagram - Copy Album

Novelty Factor

Why not use Google photos or something similar?

- Ease of use - Primary stakeholder requirement
- Administrator Full Control
- Different Roles
- Patient Data Storage Restrictions

Demo

Q&A