Prototype revisions

The alpha prototype of 'Luma' is now functional and allows users to interact with the system through the intended method: a remote control paired with a two way mirror display. This prototype reflects the core objectives defined in the original project proposal, which aimed to provide a hands free, low effort access to essential morning information using calm interactions and the core interactions like checking time, weather and tasks can now be fully carried out using the prototype.

Design objectives
Luma was designed to address issues like morning distraction, phone dependency and cognitive overload. Our goals were:
- Reduce phone reliance in the morning
- Present information passively and at glance, in a calm way
- Support natural morning routines by using a mirror, something that users already look at every day
- Use a simple remote to navigate, keeping interaction low effort
- Avoid feature overload, focusing only on what is needed

Physical prototype implementation
Luma's physical build uses accessible materials while still achieving the effect of a smart mirror, for the mirror construction we used:
- Standard computer monitor as the display
- An acrylic sheet placed in front
- A mirror foil (one reflective film) applied on top of that sheet to create the mirror surface

This combination successfully creates a reflective surface where the digital interface remains visible through the mirrored film and creates a reflective surface so the user can check their appearance. Although it is not a commercial two way mirror, this construction fully supports the prototype's intended functionality during user testing. For the display integration:
- The acrylic + mirror foil diffuses light well enough for clear reading of text and icons
- The brightness of the computer monitor can be adjusted so the UI remains visible in different lighting conditions
- Text and elements were positioned to minimize obstruction of the user's face while grooming

Prototype functionality
The prototype successfully implements the key interactions needed for Luma to work as intended. The following features are now functional or partially functional:
- Display integration
- Remote controlled interface: All key interactions can be completed without touching the mirror

- Home dashboard: Displays the essential morning information (time, date, weather, forecast, calendar events)
- API data integration: Weather API implemented and google calendar syncing
- Software system and scripts: JavaScript backend running on Raspberry Pi

Revision made based on feedback

Feedback from observations, user interviews and early test resulted in the following adjustments:

- Material adjustment for mirror surface: Switching to acrylic sheet + mirror foil, provided clearer visibility and easier construction
- Removal of remote calibration step: Originally, users needed to calibrate the remote, this was removed because it was unnecessary and was not contributing to their calmness.
- Removal of manual Wi-Fi setup: The early concept included a manual setup for internet access through the screen on the mirror and the remote, however the Raspberry Pi has built in Wi-Fi and adding a separate setup UI created unnecessary duplication and would distract from the core purpose of the mirror
- Core display features fully implemented: Time and date displayed continuously, weather information pulled through API, google calendar sync, brightness control and a calm and minimal UI.
- UI refinements for calm design: Less visual clutter

Alignment with objectives

The current prototype aligns strongly with the original goals

Design objective	Prototype implementation
Reduce phone usage	Essential information available directly in the mirror
Support calm tech	Minimal display, no pop-ups, no sound and glanceable
Integrate into routine	Mirror used during grooming, so no new behaviour required
Low effort interaction	Physical remote with simple directional input
Provide essential morning data	Time, weather and tasks

Overall, the alpha prototype is functional, aligned with the design goals and ready for usability testing. It supports the most important interactions and reflects meaningful improvements based on user feedback.