a)

Prototyping is useful to:

- Demonstrate concepts and try out design options.
- Clarifying implementation costs and issues.
- Find out more about the problem domain and its possible solutions.
- Eliminate ambiguities and improve accuracy in interpretation of system requirements and functionality.
- It encourages reflection: very important aspect of design.
- A prototype may be used to check the feasibility of a proposed design in terms of costs and technology.
- Help with the elicitation and validation of system requirements.
- Reduce time and costs because changes cost more to implement as they are detected later in development. Quick user feedback leads to better solutions.
- Increased user involvement- interact with a working model of the system so they can provide more complete feedback and specifications. Users get a better idea of what is being developed.
- Reveal errors and omissions in the requirements or functionality that have been proposed.

b)

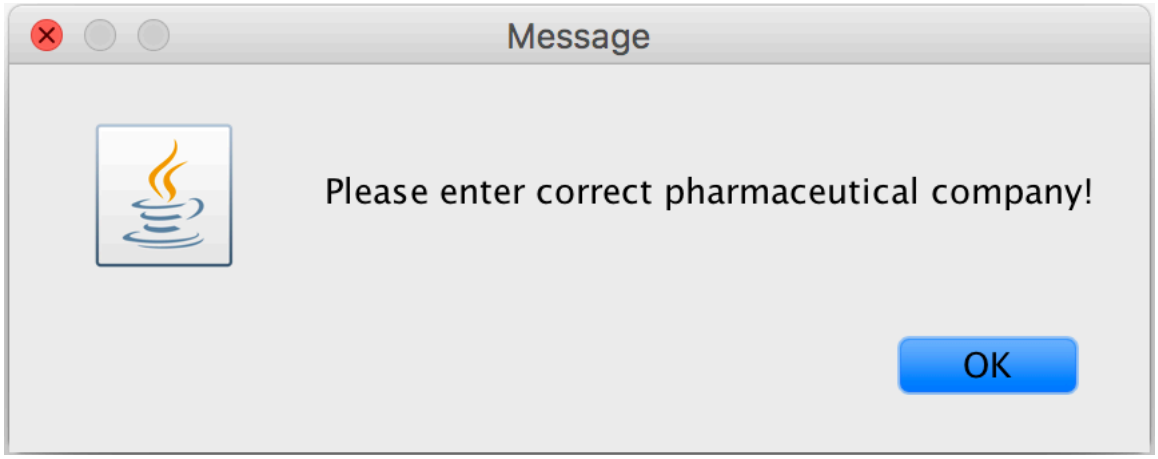
Consistency through common UI elements: 'Back to main page button' always in the same place. Consistent sequence of actions for similar situations, identical terminology for prompts, menus and help screens.

Strategically use color and texture- to direct attention towards important features.
White background used for clarity and black writing predominantly used as easy to read.

Affordance- buttons reflect state. I.e. back buttons are red, go buttons are green: helps guide user's eye.

System communicates what's happening, informing users of actions, changes in state, or errors.

If medication added incorrectly, an error window pops up instructing user what to input:

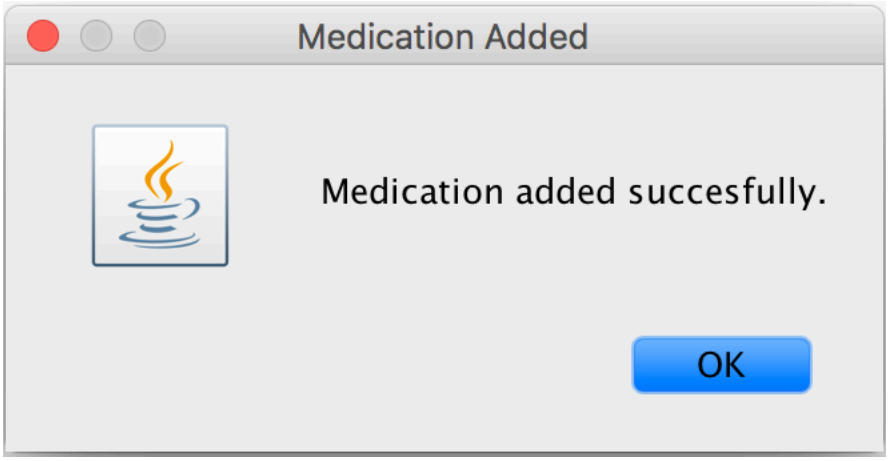


Typography to create hierarchy and clarity; the titles were in a larger font and each text field had a corresponding label to ensure users knew what each text field should contain.

Help screens/pop-ups where needed to help users.

Visibility- keep users informed about current state and actions with timely **feedback.**

Constraints- Stops users making mistakes, i.e. adding medication twice. Does this by providing a confirmation message, redirecting to results page and clearing the input text boxes once the medication has been added.

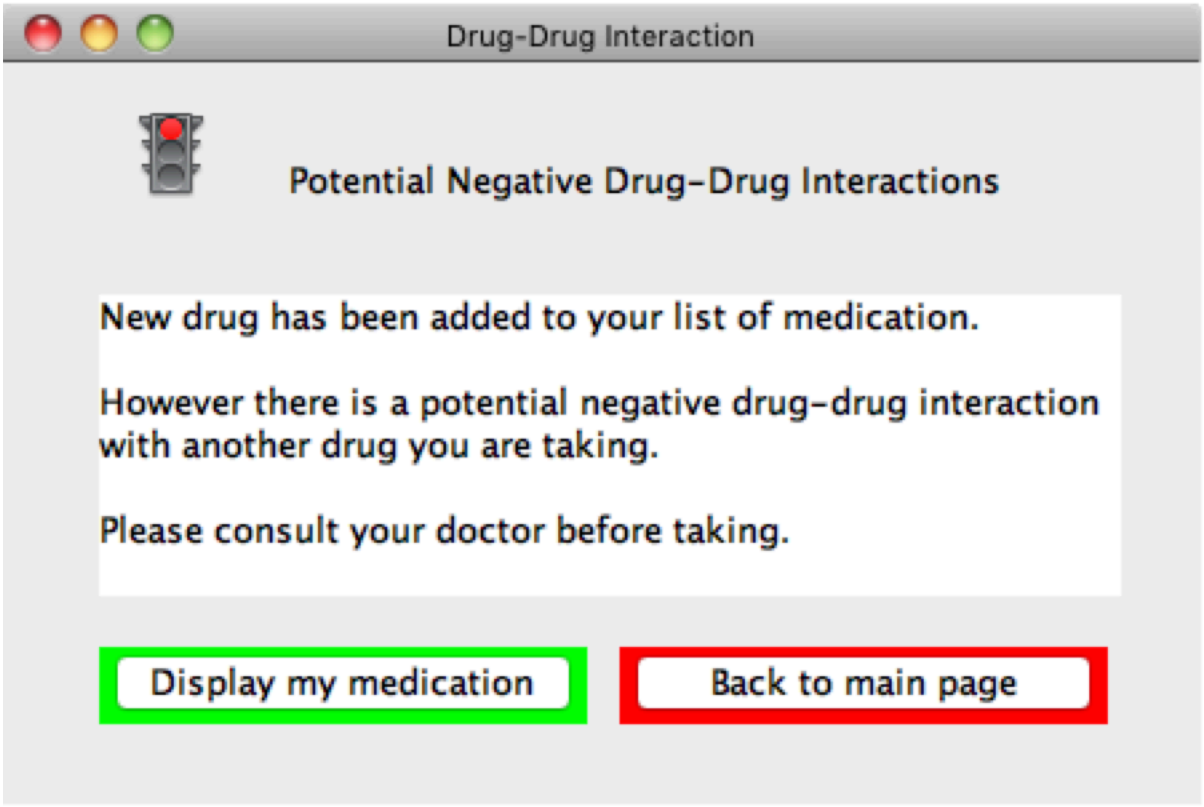


Error messages, confirmation button.

I included a J-Scroll pane in the display medication frame so if lots of medication is added it can all be viewed on one page.

Ensured the PMA system can be used be someone who is **colour blind**.

Information may be emphasized by colour but not dependent on it.



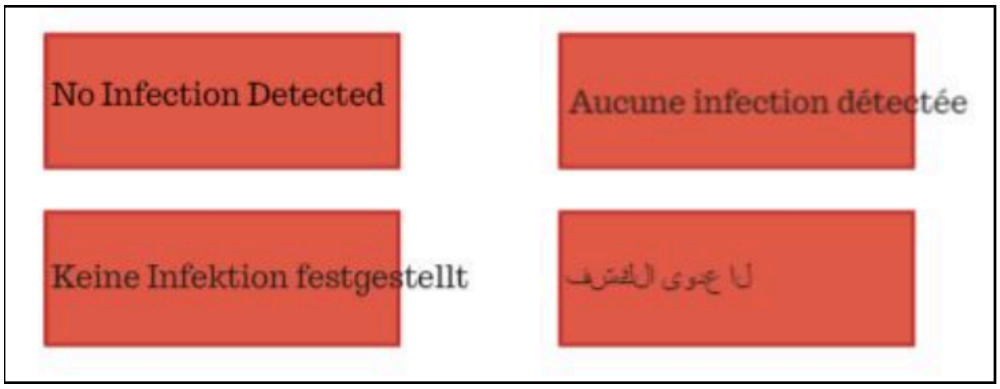
Future implementation

The PMA system may be used by a blind user so audio messages may be necessary.

The PMA system will be usable on phones or tablets however these have different ratios of screen size.

The prototype has a frame size of [450x300]. As a result, it is shaped for the ratio of a desktop screen. However, a common touchscreen phone has a screen size of around [320x550]. No more than 1 image per screen, limit number of buttons so as to not clutter small screen, keep essential info only. Full version would be able to resize frame, i.e. drag to fit size of screen, adjustable to phone. Dimension sizing, number of pixels of phone or laptop determines frame size.

PMA system usable in **different countries**; must be able to display the text in different languages. Due to the different style of writing of each language, the text size may increase and so text box needs to be big enough to account for this change.



Usable by people with poor vision: provide opportunities for making text large on a screen, without affecting the formatting.