**DESIGN ASSIGNMENT 1**
# *RE-DESIGNED LIFT CONTROL UI*
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**TABLE OF CONTENTS:**

# 1. Approach and Research

I decided my approach would be to base my design off personal preference from my own experience using lift UI's. Using my own experiences, I would be able to determine features I thought needed to be added and features I thought were not important to include.

Simplicity would play a big role in my design to eliminate confusion.

I also wanted to consider the different kinds of users that may be using the lift and what kinds of situations some of these people might be in, for example, an ambulance crew, or possibly someone who does not speak English.

With these factors and the usability guidelines in mind, I could reach an optimal solution that promotes maximum efficiency.

# 2. First Sketch
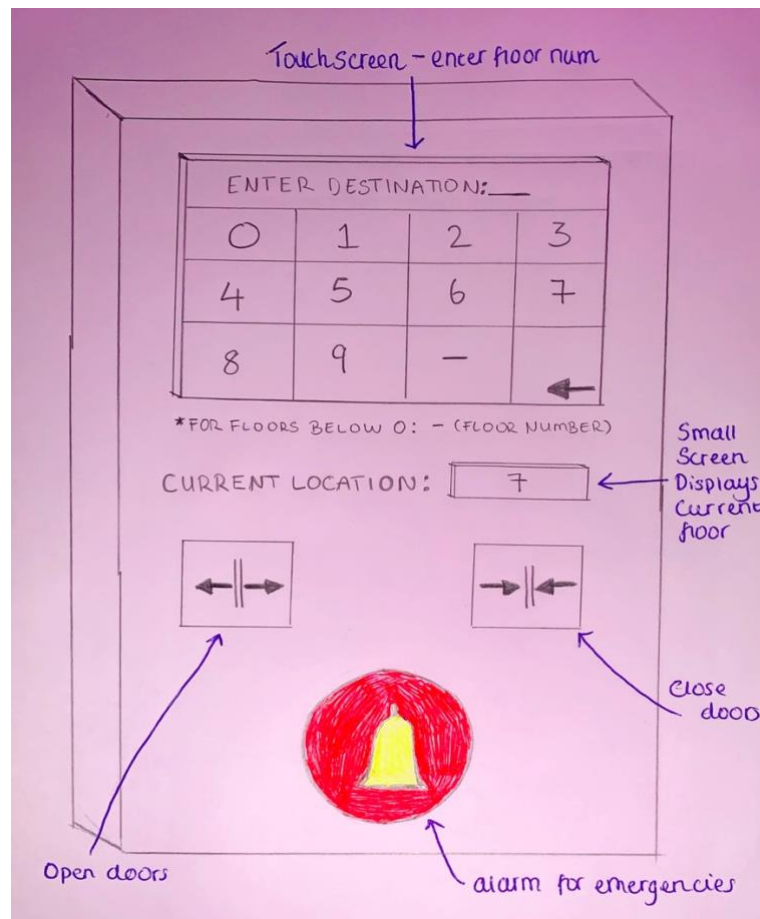


As seen above, my first sketch displays a touch screen device built into the control panel. The user can enter the number of the floor they wish to visit, with a minus symbol included for underground floors below the 0th level and a backspace button in case they press an incorrect digit/symbol. When the user begins to enter the number of the floor they are going to, the 'Enter Destination' text disappears and is replaced by their entries.
There is also a small screen displaying the current location of the user.
The only other features of this design are an open door button, a close door button, an alarm button, and a guide explaining how to reach underground levels.
If the user enters an invalid floor number, an error message is displayed on the screen.

## 3. Evaluation of First Sketch

My reasoning for opting for a touch screen rather than individual buttons for each floor is that the user will typically have a destination in mind before stepping into the lift, meaning they have a number in their head. The touch screen enables them to input the number promptly, rather than searching for the correct button, which saves time. Also, if they press the wrong button, they can use the backspace feature to correct their mistake, whereas if there were individual buttons for each floor and they mistakenly pressed the wrong one, they would have to visit that floor before reaching their desired destination. This can be inconvenient and hazardous in emergency situations, such as paramedics trying to reach a casualty.

I used arrows for the open and close door buttons rather than the usual less-than and greater-than symbols (< >, ><) as from experience, these can be misleading and easy to mix up, especially if you are in a rush.

I decided the only wording I wanted to include would be the short instruction on how to reach underground floors as again from experience, people tend to ignore lots of writing, assuming it's safety precautions or other information not considered important in the moment.

The alarm button as seen is red and yellow, colours typically associated with emergencies, and in contrast with the rest of the panel, which easily catches the attention of the user in situations requiring it.

## 4. Second Sketch
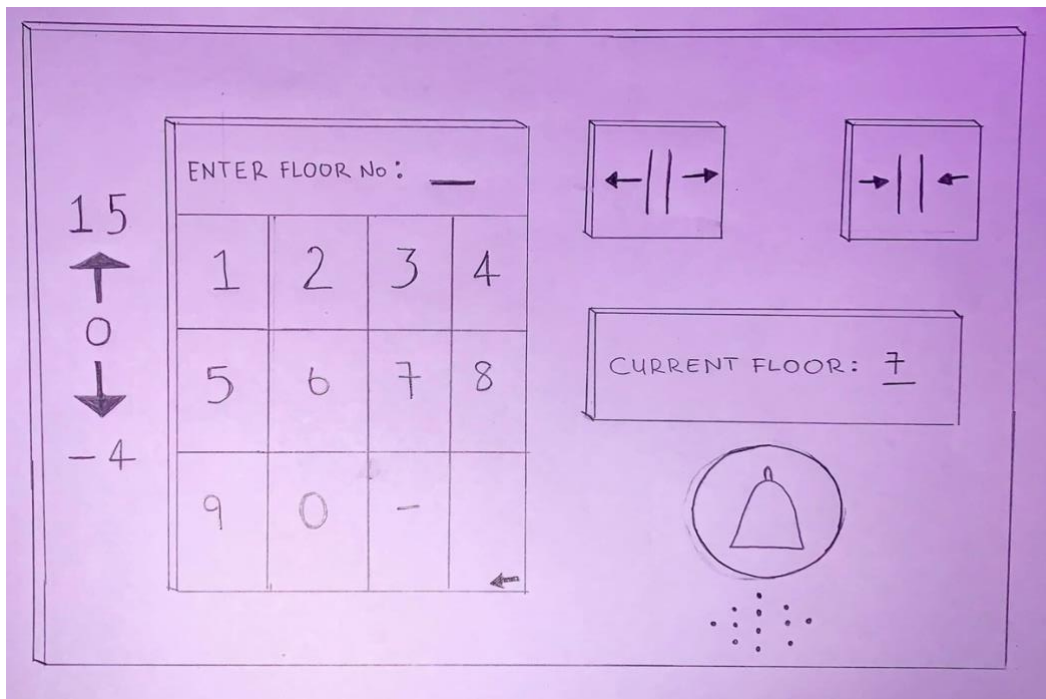


While the features of my UI have remained more or less the same in the second sketch (design of the open-doors and close-doors buttons, colour and design of alarm button, 'current floor' feature, layout of touchpad), I changed the layout to 'landscape'. I also altered the floor guide, removing the description of how to reach underground floors and replacing it with a number guide indicating the order of the floors. I also added in speaker holes below the emergency button.

## 5. Evaluation of Second Sketch

My decision to change the layout of the control panel was to maximise the efficiency of the UI as much as possible. The buttons are all now placed to be at the user's eye level, so they don't have to look down to evaluate it. The floor guide is much easier to interpret; the user does not have to do much to gauge the order of the floors, which will be beneficial for users who speak different languages. Putting this beside the touchpad where the user enters their desired floor number also adds emphasis to the function of the touchpad. The speaker holes beside the emergency button tell the user where they should direct their speech.

## 6. Conclusion

I think my design promotes optimal _efficiency_ in its simplicity. I included exactly what I thought was necessary and nothing more, keeping ease of use for most kinds of users in mind throughout the designing process.

Importantly, it follows the design guidelines set out. The _alignment_ of the features on the control panel is in keeping with the flow of the user's habitual tendencies; humans typically read from left-to-right, which is why I placed the main feature of the UI (the touchscreen) on the left hand side of the panel, and the other features on the right.

The design is _consistent_; aesthetically, the shape of the buttons and features (excluding the emergency button for obvious reasons) is square, clean and sharp. The colours used for the emergency button (red & yellow) stand out against each other and the rest of the panel. They are also colours that invoke attention.

Finally, the _error rate_ of the system is presumably low due to its ease of use and understanding; the symbols used are clear, concise and universally known and the backspace button on the touchscreen allows the user to avoid wasting time visiting floors they did not intend to due to pressing the wrong button.

## *7. References*

1. "*A human-centered design approach to the 1,000 floor elevator challenge*"
   https://uxdesign.cc/a-human-centered-design-approach-to-the-1-000-floor-elevator-challenge-9a16c35c49d7

2. "*Are the numbers on elevator panels arranged in the right order?*"
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3. "*Elevator Interface: Don Norman's Usability Design Principles*"
   https://nisaasgaralihoffman.com/elevator-interface