Name : Sum Yi Li
Student ID : 505146702
CS 188 First Homework Part b)

Figure 1 : 

Extra Examples : 

I have chosen microwave as my first instance of bad design because microwave panels most of the time consist of a lot of functionalities that are useless to the users.

According to Jakob Nielsen's usability heuristics, the microwave in Figure 1 fails to support the usability goals. First, the microwave only beeps once when the reheating process is finished. The design fails the visibility of system status requirement because either the users might have missed the signal sound at first or the users might have forgotten about the food that is being placed inside the microwave. Therefore, one of the improvement for this design could be adjusting the signaling system of the microwave in order to send out beeping sounds every five minutes until the food is being taken out. Second, the size and the format of the words that appear on the button makes it harder for the user to read. As a result, the design fails the principle of matching between system and real world. The manufacturer should get rid of the cursive writing and increase the size of the words with the same font in order to display the information clearly to the users. Third, the microwave implements a plenty of functionalities that are similar to each other. It actually causes a lot of confusion and doubts for any first time users. The interface of the microwave does not meet both the minimalist design requirement and the consistency, standard requirements. Since the microwave contains overlapping functionalities, the user might wonder the differences between any two similar buttons or the operations of some complex buttons, such as differences between the usual reheat button and the reheat button that is specifically for beverages, the purpose of the convection button…The users' main goal is to reheat their food as quickly as possible instead of spending time to cook a full meal. The designer of the microwave should take into account of a basic and clear design for the buttons by excluding irrelevant, extra informations. The panel just needs to include the necessary buttons such as the start, stop, temperature and time button in order to leave it as simple as possible for the users to achieve the goal. Fourth, the microwave only displays a number code whenever an error has occurred and this requires the users to look up any relevant information toward the fixing methods. As a result, the design of the microwave does not fulfill the error prevention

requirement for not being able to display appropriate and useful error messages. An effective adjustment would be implementing a short descriptive message whenever a specific error has happened such as displaying the “Max Temp” message when the users have accidentally input a incorrect value as the reheat temperature.

Figure 1 : 

Extra Examples : 

I have chosen the elevator control panel as my second instance of bad design of because the layout of the elevator buttons that is shown in Figure 1 makes it harder for the riders to understand at the first glance.

The design of the elevator panel fails to fulfill the consistency and standard requirement because the riders might be wondering the differences between the two identical floor buttons. Majority of the time, they would be confused by the purpose of the extra button for each floor. Riders might need to take a couple seconds to think which button to choose among the two in order to get to the destination he or she wants to arrive at. Therefore, one significant improvement toward the design is removing the extra buttons for each floor. Second, the layout of the elevator buttons also does not meet the requirement of matching between systema and real world. According to Figure 1, the position of each floor button seems to be placed randomly on the panel. The display and the organization of the buttons does not follow a logical or familiar way that allows our human eyes to adapt to the information. As a result, the designer of the elevator panel should choose an intuitive layout for the placement of the buttons, for example, separating the buttons into column, sorting the columns from left to right with the lowest level button is placed at the bottom while the highest level button is placed at the top of the area. Third, the panel contains several special buttons which have descriptions about the locations of specific department offices at the building. Even though it provides extra information for the users, the explanation decrease the level of visibility and thus creates more confusion by failing the aesthetic and minimalist design requirement. The improvement regards to this specific problem is excluding those several special buttons and keep the whole panel simple and easy to understand. Fourth, the elevator panel fails to fulfill the recognition rather than recall requirement due to the lack of Braille dots underneath each floor button. The Braille alphabet allows people who have vision problems to be able to understand external information through touch reading. The lack of the braille dots on the panel makes it tremendous difficult for them to understand the usage of the panel. Some of them might need to ask for guidance or to simply remember which buttons to push in order to get to the floors they want. For each of the floor

button, the interface designer should include a line of braille dots that correspond to the indicated floor number.