**Design Review**

**How does it minimise kinematic and cognitive load？**

Based on the experience and screening of multiple websites, several types of design solutions suitable for the website were selected. By reducing the cognitive load of users, the kinematic and cognitive load of the website can be better reduced. This shows that if you want a website to be successful, then we must minimize the kinematic and cognitive load associated with the user experience.

By eliminating some unnecessary sliding behaviour of users, the user's kinematic load can be better reduced. For example, the map on the website can directly display the location of the hot spot, providing the location and necessary information. When the user enters the initial interface, the map provides the user with the approximate range of the hot spot, which can reduce unnecessary kinematic load. The search engine at the top of the map provides an easy and quick search method. In this way, users can quickly learn about the location information they want to know with minimal interactive actions. This function reduces the kinematic load for users to open the map to search and provides shortcuts to various locations.

Secondly, prompting the user to search for location information during the search process, can effectively reduce the kinematic load, and listing some effective locations can help the user save some unnecessary time and motion. By reducing the continuous interaction time of the user, the kinematic load can be effectively reduced. In addition, it is necessary to ensure that the interaction distance complies with Fitts's law, which can also effectively reduce the user's basic sliding or finger kinematic load.

At the same time, the cognitive load can be reduced to the greatest extent by reducing the user's cognitive investment in the use of the entire website. How to achieve this effect, is to effectively reduce the cognitive load of users through the study of the website layout and the concise and clear design of the website.

One of the main ways to effectively reduce the cognitive load of users is to put important information in a conspicuous place for easy searching. For example, place the hot spot map required by the user in the middle of the website, which is convenient for users to find. The main information is placed prominently to better attract the attention of users, so as to reduce unnecessary search time for use, and by placing different images and pages to avoid confusion space intervals a need, but also can effectively prevent information overload problem. In the same way, the necessary interactive functions can be displayed by using different keys, so that users can easily find the interactive functions they want to use. In addition, by using the same page layout and similar colour background, users can effectively reduce cognitive fatigue during the interaction process.

A common website structure and layout can be adopted, which can also reduce the cognitive burden of users. In the same way, familiar functions such as using common search navigation structures and recognizable picture tags can also reduce cognitive burden.

The existence of the logo, search box, and short introduction will help users understand the website and make interaction easier. A brief introduction can deepen users’ understanding of the website, and it will be easier for users to understand how to get the expected results from the website. Simple and easy-to-understand icons are often more comprehensible than words, which can also greatly reduce the mental investment of users and effectively reduce the cognitive load.

**Does it meet standards and heuristics?**

10 Usability Heuristics for User Interface Design is a measure of website effectiveness and user experience. The guidelines have high usability, although not necessarily applicable to all users. Here are 10 heuristics for user interface design usability. Although not all usability heuristics are applicable to the site, they are implemented within the allowed time frame.

#1: Visibility of system status

The design should always keep the user informed about what is going on and supply appropriate feedback and information within a reasonable amount of time.

#2: Match between system and the real world

The design should also use language that is easily understood. Use words, phrases, and concepts familiar to the user, rather than internal jargon and idioms. Follow real-world conventions, making information flow in a natural and logical order.

#3: User control and freedom

Users often perform actions by mistake. Therefore, they need a clearly understood and easy to find "emergency exit" to exit successfully the unwanted action without having to go through an extended process which can cause frustration with the product.

#4: Consistency and standards

Users should not be confused as to whether different words, incidents, or actions mean different or the same thing. Always follow standard platform and industry conventions, so there is no confusion.

#5: Error prevention

Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone situations, or check for any potential error situations, and present users with a confirmation option before they commit to the any error type action.

#6: Recognition rather than recall

Minimize the user stress of having to remember, by making elements, actions, and options visible and clear to find. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable and found when required especially in a hurry.

#7: Flexibility and efficiency of use

Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions and create their own shortcuts if need be.

#8: Aesthetic and minimalist design

Interfaces should not contain information which is irrelevant or rarely needed. Information should be kept simple and be relevant. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.

#9: Help users recognize, diagnose, and recover from errors

Al and any error messages should be given and displayed in simple to understand language (no error codes), precisely indicate the problem, and constructively suggest a solution.

#10: Help and documentation

It’s best if the system doesn’t need any additional explanation or information. However, it may be necessary to provide documentation to help users understand how to complete their tasks.

**Group review**

The sketch of the site design has been handed over to another group for review. Review the usefulness and functionality of each page, and the changes made to each page will be listed below.

**Home page**

*“There are too many blank spaces on the homepage, maybe the button position and the background design can be improved, but it is good for user to find the buttons for each function. The map in the center is meaningless, don’t know what it does, maybe is using to track the severity of the epidemic in each region by searching the city names in the search box. However, it is not good looking, I think there must be another way to show this map. I like the logo on the top-right side of this web page and the copyright at bottom. Logo part can let users remember that this logo is a website that can check the epidemic situation. Copyright part can increase the credibility of information and prevent others from directly stealing your website data. At the right-bottom side, there are three link which are home, about us and contact us. I have no idea about the function of the home link at the home page, maybe there are some other home pages. Moreover, about these three links, in my opinion the color may let users ignore this part, maybe it is better to change a color.”*

Changes made:

● Move the three links (Home, About us and Contact us) to the middle of the page

● Changed the color of background

● Adjusted the layout

● Made the map more functional which can see and search the hot spot

**About us**

*“The background of this page is the same as the main page, but the main part is now in three sections (our story, location and join us). Also, the title changed to about us as well, it shows this is an about us page. In our story section, there is a logo on top of this section, it is good looking and easy to recognize and let user to remember this sign is for the web sides. Under the logo is the title of this section, which is our story. After title is a subtitle to let user can understand what the following passage is trying to explain. At the bottom of this section is a home button, which is link to the homepage, it is a good design to line each element in this structure is easy to find information. These three sections have same structure is good, but both the button at our story and location are same, both of them are link to the home page, i think the function is crushed, if both can go back to home page why not just combine them together. At the right-bottom side, the three links are still there and link to home page, about us and contact us, which the function is as same as what the buttons do in three sections, it is better to delete these three links. Finally, this page is switched from home page the switch movement cartoon of whole page is not quite fluent, you can just change the position of the coloured background to make sure that when switch pages the move fluently.”*

Changes made:

● Deleted the three links at the bottom

● Changed the function of the button at location section

● little change on background colour to make it looks better when users viewing this page from home page

**Contact us**

*“In this page is all the information that can contact you, but the layout of the text can be improved. If the information showed like this will make users spend more effort on finding which part is for what information. I think you should add some subtitle for contact phone number and email and the office hour. By the way, if possible, you can add an office address. Also there are three links at the right-bottom side of this page. For this page, I think it is better to have a go back button than use this link, and in this page the contact us link is useless, maybe you can do some change on this part. Furthermore, the same problem that about us page also had is the background color looks strange hope you can change it.”*

Changes made:

● We set up a new button to go back to homepage

● The layout of information has been changed

● Added the subtitle, easier for user to find information

**Log in**

*“Login page has a big login title at the middle of the page and uses different background color to form an area to contain all basic login functions. It has Id input and password input with login button. My suggestion is you can add an email login, because some users cannot remember their login ID, they think it is more convenient to use their email to login. Beside the login part is the register link for users who have not had an account yet to register one. The good part is you added two buttons to let user can let user login with Facebook and google. It seems that you will link users’ Facebook and google account to User id, but still not working now, expect to see the progress. Also, I notice that there is no forget password link for user to find their password or let them change a new password. This is a very important part for a login surface, otherwise if they forget their password, they cannot use that account anymore. Out of the login box, there is a logo at right-top side of this page, a good symbol to represent this web page. In this page finally has a back button which can right back to home page and the position of it is as same as the login button at homepage. It looks very comfortable that design like this, if user miss clicks the login button, they can go back to home page very quickly. In addition, still the color problem, I do not like the color of this page very much maybe you can change a color or change a design of this page.”*

Changes made:

● We added the forget password link for user to find password and change password

● Changed the background color and the layout of the login box

● ID login change to ID/email login so that user can login by using their email as well

● Small change on font-family to make the feature more good looking

**Sign up for user**

*‘Sign up user page is similar to the login page; the logo is at the right-top side and the back to home page button and the three links at right bottom of this page. One thing new is the login button beside the back button. It can jump to the login page directly if someone want to go to login page but miss click the sign-up button. At the middle of this page is a sign-up box contain all inputs for user to input their personal details, which has first name, last name, email, phone number and password. After that is the sign up and cancel button. For me, I think it might be better to have a confirm password input to help users to confirm their password, otherwise if they type the password wrongly, they have to change password again. After finish sign up it gives a personal ID to login and identify users in the web side. On top of that, still the background color problem, I really don’t like this color maybe you can change a better background color.”*

Changes made:

● Changed the background color

● We added the confirm password part to make sure user won’t type their password wrongly

**Sign up for venue**

*“Sign up venue page is similar to the sign-up user page; the logo is at the right-top side and the back to home page button and the three links at right bottom of this page. One thing new is the login button beside the back button. It can jump to the login page directly if someone want to go to login page but miss click the sign-up button. At the middle of this page is a sign-up box contain all inputs for venue to input their shop details, which has shop name, shop address, shop contact and password. After that is the sign up and cancel button. I think it might be better to have a confirm password input same to the sign-up user page that to help venue to confirm their password, otherwise if they type the password wrongly, they have to change password again. After finish sign up it gives a venue ID to login and identify users in the web side.”*

Changes made:

● Changed the color of background

● We may add the confirm password part to make sure venue won’t type their password wrongly

**User page**

*“The user page looks nice and simple. Your logo is on the right-hand side on the top. On the top of the left-hand side, it got two buttons, one is log-out, and one is My account which was clear for the user to see. It got the check-in part under the logo and two bottoms; this will make the user easy to find out the check-in part that was a good design. Also, put the hot spot in the middle of the user page that will let the user easy to make sure the location of hot spot. Show the history on the bottom of the user page was good to. I like the design of the history part, use the dot point form to make the user check in history clearer to see. Shows the timeline will let the user can quickly to find out their check in time. But you guys can make these three parts in different size, something like hot spot will go bigger and history timeline will make smaller.”*

Changes made:

● Make different size of the check in, hot spot and history

● The page background color should be similar, not design too many different colors.

● Check-in locations that are dangerous can be marked

● Changed the size of the map

**User my account page**

*“I saw the user my account page is showing the user detail, such as the user's first name, last name, password, email and phone. On the top it has a logout button. This will make the user's operation much easier. I thought it may not show the passage on the user account page, because is not safety. The good things is on the account, you guys design a “change information” that would be nice to let the user change their information. For the button of the footer, it connected to the about us and contact us that was good design.”*

Changes made:

● May hide the password part

● Have the button can change the password

**Venue**

*“This page is for user to check in and see who and how many people have checked in this venue. At the middle of the header is designed to show the name of venue, and below the header is a bar with two buttons, check-in and account. In check-in page there is a search bar that can search user by name or id. So that user can find people who have been to this place or not and see how many times he had been here and when he had been here. The account part is for user to check the venue id and location. Moreover, they can check the condition to see if this venue is safe or not. Below all these is a box can manage the venue information. It is convenient, but I don’t think it is good looking way to show this box, I think you can separate the showing information part and the managing information part. After all these is the footer which is as same as other pages.”*

Changes made:

● Changed the background color

● Changed the layout and separate the manage part and information part.

● Modified the size of the box which shows users information

**Official**

*“Official page is similar with the venue page. The logo at left top side, log out button at right top side and the huge title of official is at the center of the header. The difference is the number of buttons in the bar below the header is much more than the number of buttons in venue page. The first is check user which has the same function as the check in in venue page. And others are the buttons for check venue, set hot spots and manage and sign-up official accounts. Your layout is very clear that easy for user to use and find the functions they want. This page is quite clean and designed quite well.”*

*Changes made:*

● Changed the background color

● The order of the buttons in the bar