

Monash University Malaysia
BSc Computer Science
Assignment # 1 (Stage B)

Design Guidelines

FIT3063 - Human Computer Interaction

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Design Guidelines for FIT3063 Assignment Stage B

Gold fonts written by Tee Kai Yoong.

Green fonts written by Ng Kah Hoe.

Blue fonts written by Bazil Muzaffar Kotriwala.

Black fonts written by Wong Xun Guo

Brown fonts written by Sham Ying Ying.

Screen Layouts

It is crucial for the application to have a well-arranged screen layout. Based on the eye tracking heat map, the users mostly place their eyes on the top left. Therefore, we should have our logo located at the top left corner so that the user will always know which site he/she is in. The more attractive content can be placed on the top of the page, so that the tendency of the users to stay on that page is higher.

The screen should be clean and only provide useful content. A crowded screen tends to distract users and increase their memory load. For example, when the user is on a payment page, it is best that the screen only has the crucial content so that the user will proceed to paying. Otherwise, the users may be distracted by other things and leave the payment page.

For the forms that is on the application, the input field needs to be consistent. All of the input fields should be aligned. The input fields must not confuse the users. For example, if the user is supposed to enter address into the field, it should be long enough for someone to enter the address. If the field is postcode, the input field shouldn't be too long like the address field.

Menus

Menu should be placed at the top of the page, so that when a user navigates to another page, he/she doesn't have to move their eyes elsewhere to see the changes of the page. For example, if the menu is at the side, the user have to observe what have changed in the middle of the screen to make sure he has navigated to another page.

The menu should always be sticky to the top so that the user do not have to scroll all the way to the top when he/she wants to navigate to another page. The background color of the current page in the menu should be shaded or in a deeper color to indicate that the user is currently in that page.

Dialog Boxes

The two main goals of dialog boxes are:

To ask for the user's approval or input regarding the tasks he/she wants to perform.

Offer Informative Feedback i.e. (SGR3), inform the user about any expected or unexpected situation and ask for input to solve the task if needed.

Guidelines:

Dialog boxes should appear in the centre of the current page, This compels the user to read the box and make the required decision instead of ignoring it.

Dialog boxes must not be empty, they should contain text which offers informative feedback (SGR3) to the user, thereby allowing the user to understand the purpose of the dialog box.

Dialog boxes must not contain large chunks of text, rather contain a as concise message as possible without its meaning being lost. The message should be clear and simple so that the user can understand its purpose. This follows (SGR8) i.e. Reduce short-term memory load.

The buttons available for the user input on the dialog box must be prominent with the meaning of the words on the button so clear that the user would not have to think twice what the button would do.

All dialog boxes apart from message dialog boxes must contain a 'cancel' or 'back' button with respect to SGR6 i.e. permit easy reversal of actions. Both of these actions for the user buttons are essential to have in a dialog box which requires user input to support easy reversal.

Message dialog boxes must have an icon associated with the message it's conveying thereby making the feedback more informative and easily understandable for e.g icons for confirmation, errors or warnings.

The preferred options' button on the dialog box when asking for user's input must be highlighted. This offers more informative feedback (SGR3) and cater's for universal usability (SGR2) as it assists novice users in choosing the preferred option.

Dialog boxes must not use flashy colours, blinking text or a harsh tone as this technique may seem to get the user's attention, but instead, it irritates the user, severely having a negative impact on his user experience.

Dialog boxes must provide feedback at the end of the task (SGR4) i.e. design to yield closure, for e.g. a confirmation message confirming the completion of the task with an 'OK' button.

Dialog boxes should use simple and nontechnical language as much as possible to make it easier for the user to understand and also give him the option of online help on the dialog box itself. This follows the (SGR7) i.e. support internal locus of control.

Fonts

Font is an essential element of design as text would be the main channel of communication between the application and the user. The font used must be consistent across all the interfaces. Since we are designing for the screen, font typeface should be sans serif for better readability. There is no restriction on the font size of the text but the general rule is that users should be able to read it easily and it does not take up too much space. The relative font size in decreasing order should be as follows: Title, Heading, Normal Text

Font types that are used should be standard across the whole application, 2 - 3 type of fonts are acceptable. Different types of font can be used to differentiate between the content and heading. The font type for all headers should be the same.

The font type should not be too funky, for example "THIS FONT" is bad on website especially when it is used in long text. This strains the user's eyes a lot and causes uneasiness in users' eyes after they focus on the text for too long.

Font size for the text in the application should be standard, such as 12p. It is a standard in all formal text so that it is neither overly big nor small. If the font is too big, some text will take a lot of lines to finish, and it is pretty frustrating for the user, especially in the mobile screen. On the other hand, if the font size is too small, some people, especially the elderly, will have a difficult time reading the text.

The font for more important text on the application can also be **bold** or *italic* so as to draw the user's attention to it. For example, the header of a page can be bolded so that the user knows where he/she is at. The promotional text on the homepage can also be bolded to increase the likelihood of the users to click on it.

Icons

Icons chosen must be as close as possible to the objects it is representing as user recognises things better than recalling things. This also help users to cater for short term memory load rather than using mere text to represent objects.

Icons should not be too similar to each other so that it will not cause false recognition and leads to gulf of evaluation.

Icons must be consistent throughout the design. For example icons within a group must have the same shape or same size.

Colors combination used for icons must be comfortable for viewing. For example a combination of hot pink with purple would be a bad choice whereas a combination of light blue and white would have a better effect.

Icons must be simple so that it is easy for the user to recognize does not require users to figure out what the icon is about. This is to satisfy Norman's principle of affordance.

Icon size and resolution must be dynamic to the electronic device's screen size so that orientations of the icons will not mess up and users will have a comfortable view as icons will not stay at a fixed size.

Icons must be interactive to user so that it satisfy Shneiderman's golden rule of offer informative feedback. For example cursor will be change to finger cursor when cursor hovers over clickable icons.

Icons should have names or a very short description to describe the icons so that every user will understand what the icon means as different users perceives icons differently

Icons representation must be relatable to real life so that Norman's principle of knowledge in the head and in the world is satisfied. This is to shorten the time needed to learn about an application.

Colours

Changing the colour of a hyperlink informs the users that they have view the particular link to avoid users from clicking into the same hyperlink twice without realising it. This follows Shneiderman's 8 golden rule which is to reduce short term memory load.

Error messages should have the font colours in red to pull users attention to the error message. Having a different font from the other text would catch the attention of a user. The colour red has been frequently used to indicate an error.

Objects that have different status with different colours helps user indicates the status of the particular object. For example a table with status not available might be coloured in grey and a table with status reserved might be coloured in red.

Buttons like "Cancel Order" coloured in brownish red will be easily recognised by users as it is a common colour for actions that resembles delete are represented in a type of red. We've used a brownish red colour so that it would be colour-blind friendly.

Having colours for the background and the text which compliments each other well is very important. This does not only allow the text to be readable but it can make the application look more harmonious.

The color of the font should also be color-blind friendly in order to obey the rule, universability and usability of our application. The color blind users will then also have a application environment with harmonious color, and have no problem setting their eyes on the application for too long.

The application should have **one** theme color so that it is easier for users to recognise the brand. Since humans are more sensitive to color, they tend to have better memory on things when they are colored. For example, Facebook is blue and it is widely recognised for its color.

Other than that, Facebook uses only blue and white, this is to reduce the color on the page, because it never know what users will post on Facebook, so when it uses only plain color, it will complement what the users post better compared to choosing a very colourful theme colour for the application.

Highlighting

Highlighting a tab in the menu shows user which part of the page they are currently at. This helps reduces short term memory load especially if the users are within a nested menu.

Objects selected which is highlighted also helps reduce short term memory load. Users are able to differentiate which object they have selected among the other different objects.

Titles highlighted in bold shows emphasis and to help differentiate between different sections of a text as it is easier to read and will draw the user's attention. Bolding titles can be a way of showing grouping.

In a form, highlighting a incorrect field will allow the user to find their mistakes easier. This prevents the user from going through the form again to look for their mistakes.

Highlighting a clickable image when the mouse is hovered over it will let users know that the image is clickable if they wish to click into it.

Fields that are highlighted in grey tells user that the fields are not accessible. This prevent users from accessing such field so that users will not mistakenly filling up fields that are not suppose to be filled. This satisfy Shneiderman's golden rule of prevent errors.

References

Clapham, S. N. (n.d.). Eye tracking is an excellent tool for website usability testing. Retrieved October 6, 2016, from

<http://www.parachutedigitalmarketing.com.au/tag/eye-tracking-heat-maps/>

Custom, B. T. (n.d.). W3C. Retrieved October 07, 2016, from

<https://www.w3.org/standards/webdesign/>

High Fidelity Prototypes. (2016). Retrieved October 07, 2016.

Introduction - Material design - Material design guidelines. (n.d.). Retrieved October 07, 2016, from <https://material.google.com/>

IOS Human Interface Guidelines. (n.d.). Retrieved October 07, 2016, from

<https://developer.apple.com/ios/human-interface-guidelines/>

User Interface Design Guidelines. (n.d.). Retrieved October 07, 2016, from

[https://msdn.microsoft.com/en-us/library/jj651618\(v=nav.80\).aspx](https://msdn.microsoft.com/en-us/library/jj651618(v=nav.80).aspx)