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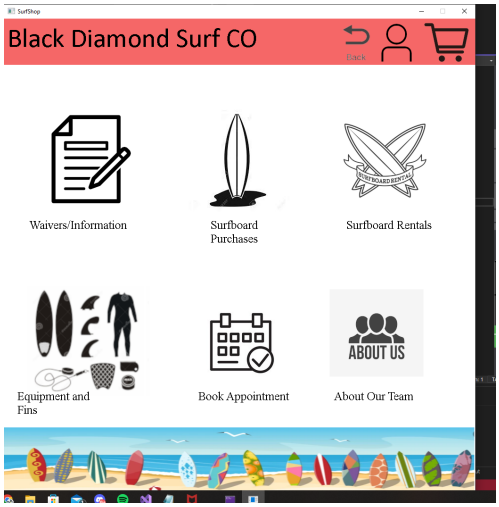
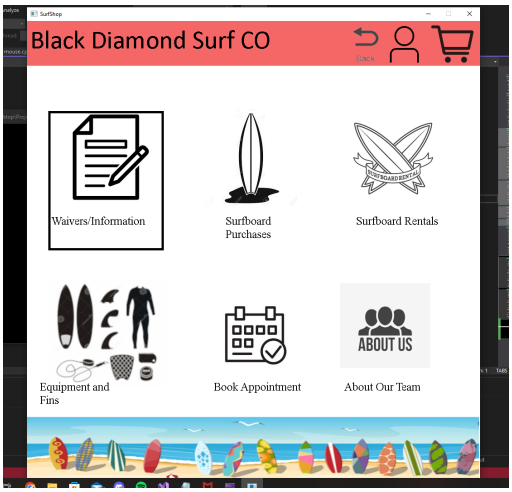
Assignment 3 Surf Shop Evaluation

Comp 482 Human Computer Interaction

Surfshop Main Menu:

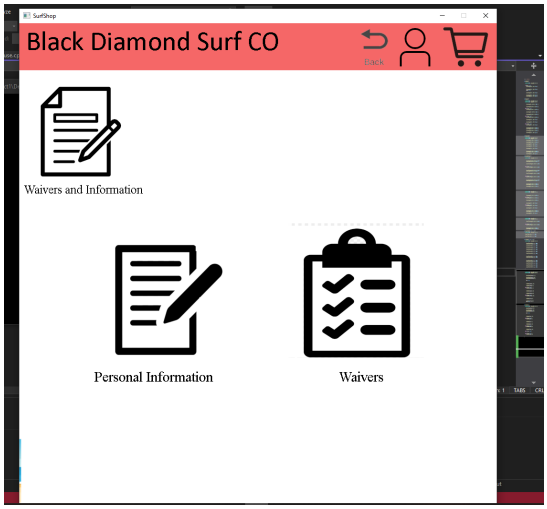


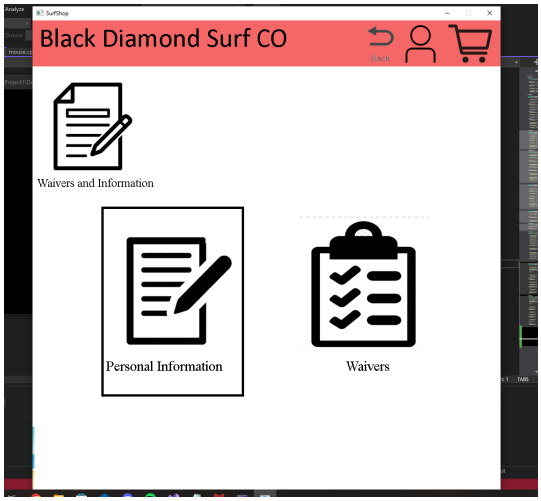


(Figure 1.1) (Figure 1.2)

Figure 1.1 is a screenshot of the Main Menu section of the interface. The task of the main menu is to be able to navigate to the other sections of the interface in a visually pleasing and simple manner. Figure 1.1 shows how the main menu looks when the mouse is not scrolled over a button compared to Figure 1.2 where the mouse is scrolled over a button. All the images in the main menu can be used as buttons to navigate the system including the top 3 buttons to access the cart and account page.

Surshop Personal and Waivers:

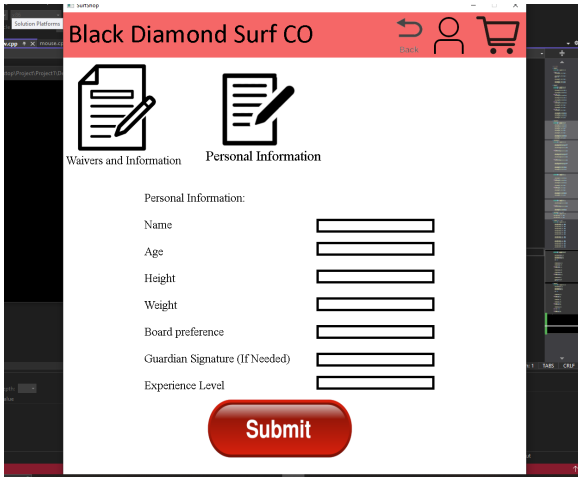




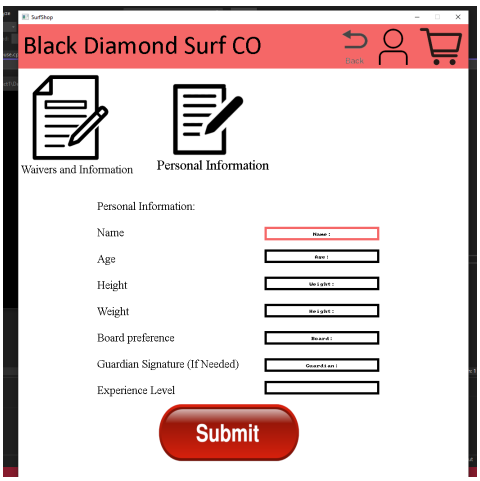
(Figure 2.1) (Figure 2.2)

Figures 2.2 and Figure 2.2 serve a similar task as the main menu however it is used only to navigate between the waiver forms and the personal information forms. This helps reduce the amount of clutter in the main menu page by subdividing the main system into specific areas.

Personal Information Forms:

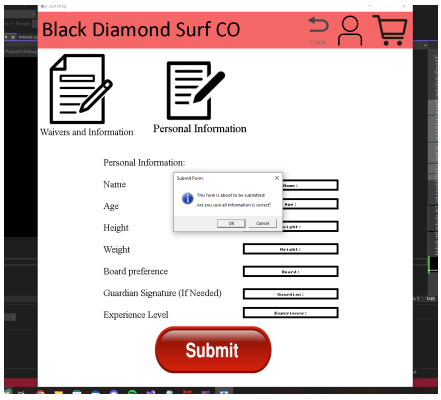


(Figure 3.1)



(Figure 3.2)

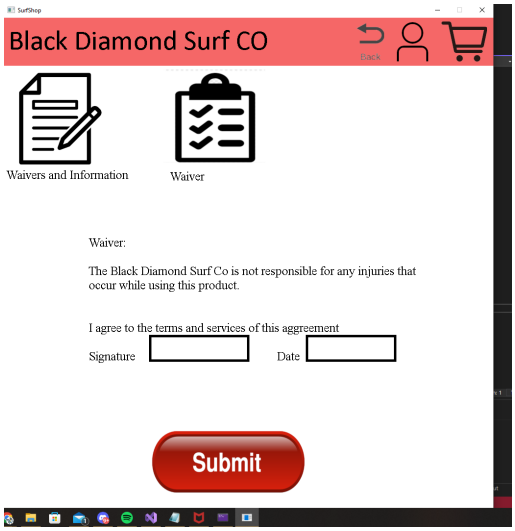
Figure 3.1 is a screenshot of the personal information form that can be navigated from the previous page. The main task of this form is to receive input from the user to aid employees in setting them up with the right board for quick and future uses. The user can input a variety of information including name,age,weight,height,board preference, and experience. There is also a submit button on the screen when the user has inputted whatever data they prefer.



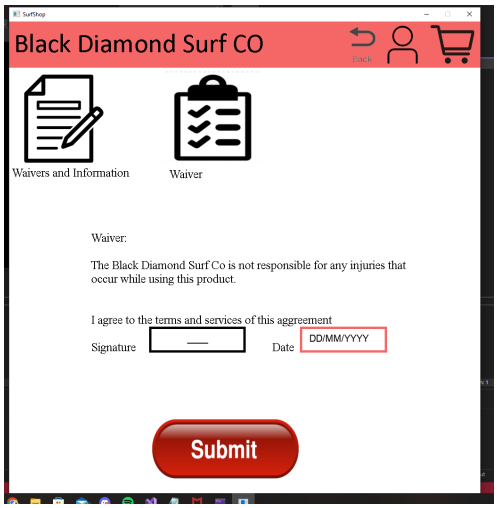
(Figure 3.3)

Figure 3.3 demonstrates what pop up message occurs after pressing the submit button. The pop-up is used to ensure the user input was correctly inputted and if they want to make changes they may before the form is submitted.

Waiver Form:



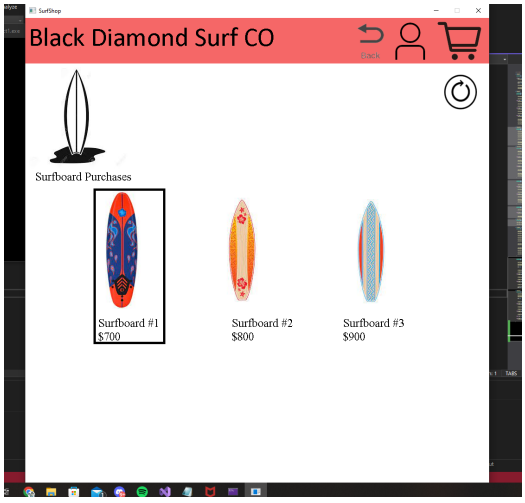
(Figure 4.1)



(Figure 4.2)

Figure 4.1 is an example of the waiver form that can be filled out by a customer. The form includes just a signature field and a date field in which the user can accept the agreed waiver and submit a copy to the surf shop. Figure 2.2 demonstrates how typing in the field works by highlighting the text box in pink when the mouse is scrolled over.

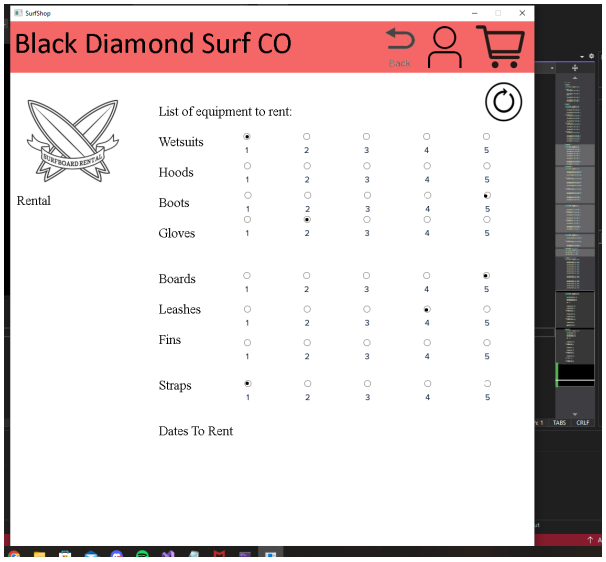
Surfboard Purchases:



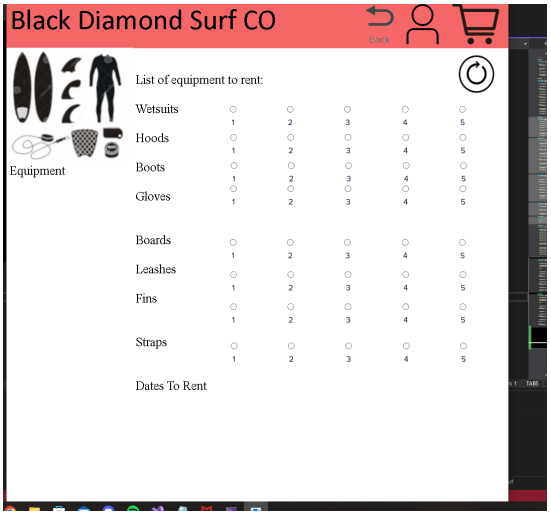
(Figure 5.1)

Figure 5.1 is the surfboard shop in which users may see surfboards for sale and purchase one if required. They click on the board they want to add to the cart. There is also a reset button in top left to revert the selection.

Rentals and Purchasing Equipment:



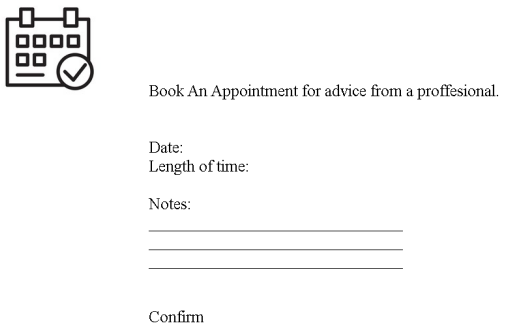
(Figure 6.1)



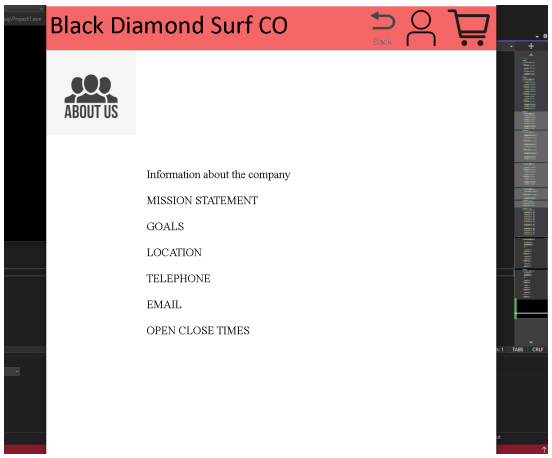
(Figure 7.1)

The next to Figures 6.1 and 7.1 essentially use the same system to add equipment that can be purchased or rented to the cart. The system uses buttons to allow the user to determine how many of each item they require which will then be properly added to the cart. In this prototype prices were not included but mainly just the amount to allow for groups to use the system.

Book appointment and About Us:



(Figure 8.1)

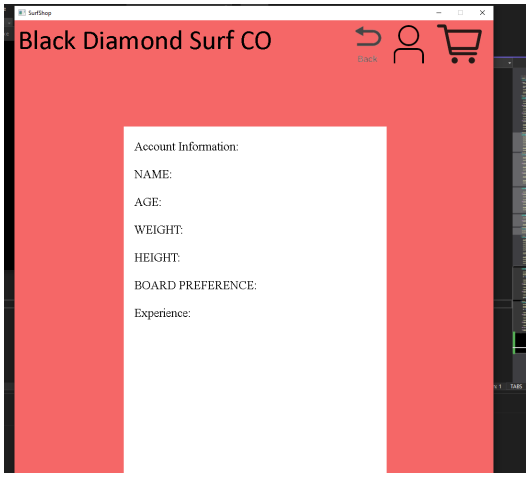


(Figure 9.1)

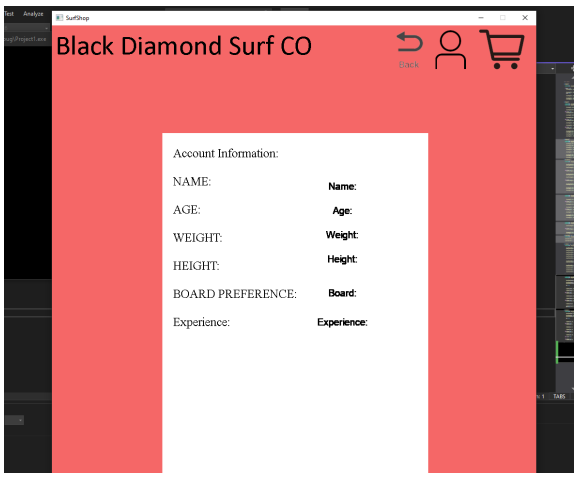
Figure 8.1 depicts how the user can book an appointment with a staff member of the surf shop. In this prototype there is currently not a system in place as it would just use previous functions to fill out a form and send it to the surfshop to be approved.

Figure 9.1 just shows what the about us section of the Surf Shop would look like. Because the user does not need to edit but just view data it does not require much explanation.

Account Section:

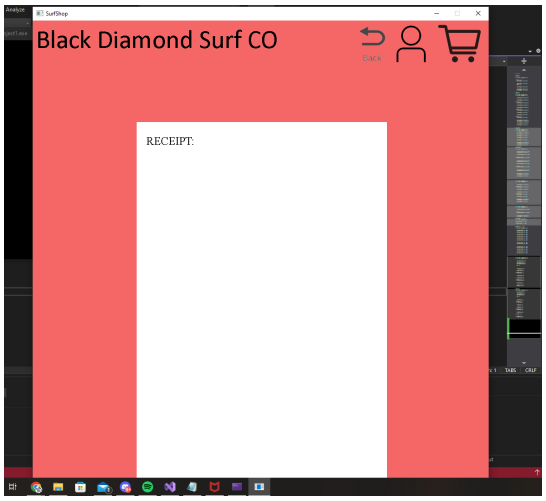


(Figure 10.1)

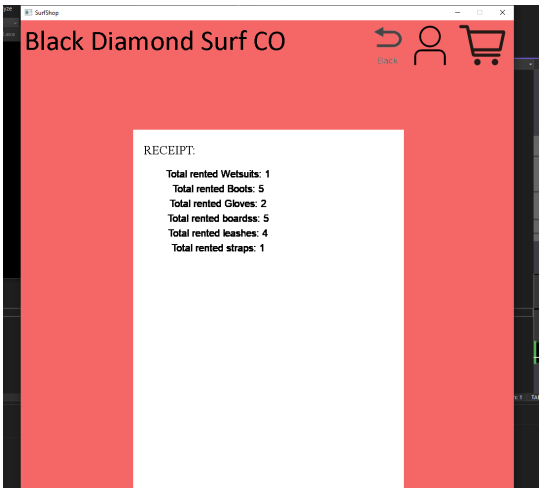


(Figure 10.2)

Figure 10.1 and 10.2 depict how the account section visually looks. While the current system in place does not provide a method of retrieving account information. It does display any information inserted by the current user. This can be accessed from any page on the main menu.



(Figure 11.1)



(Figure 11.2)

Figure 11.1 depicts how the cart works by adding any of the previous selected items to a cart for display including the quantity of the products selected. This can also be accessed anywhere on the interface.

Below are the 10 heuristics that will be used as criteria while the current system is evaluated.

Visibility of System Status:

The design should always keep the user informed what is currently going on in a reasonable amount of time. For example

System and Real World:

The system uses concepts such as words, phrases and images that are familiar to the user. To allow for information to be used in natural logical order

User Control and Freedom:

Users are likely going to make mistakes. There must be processes in place to help reduce or eliminate mistakes by users.

Consistency and Standards:

The user should not have to wonder about performing specific actions and those actions should be consistent when needed.

Error control:

Error messaging systems to prevent problems from occurring in the first place. These issues are not user errors but derive from the system itself

Recognition:

The user should not have to remember so making elements and actions visible. They should also not have to remember information from one section of the interface to another.

Flexibility and Efficiency:

The interface can have shortcuts that may improve sections for more experienced users such as providing shortcuts.

Aesthetic and Minimalist Design

The system should not provide information that is irrelevant or not needed in the system.

User Diagnose Errors and Recovery:

Help the user clearly find errors and give precise criticism to suggest solutions when they do arise.

Help and Documentation:

The system provides proper documentation to allow the user to complete every task.

Problems and Bugs

Major Problems:	Description	Heuristic	Problem Severity	Possible Solutions
Items transfering to cart without user recognition	There is currently no submit button when adding items to cart. This is problematic as users might not be aware when they add an item to the cart	Visibility of System Status	Major	Create a submit button for users to select after selecting items in either surfboard,rentals or purchase equipment.
Waiver or Personal Information has been submitted	The system does not show the user if they have previously submitted a waiver or personal form	Visibility of System Status	Medium	Add a section to account that shows if a form has been filled
Back-end problem of not storing information	Assuming that the store is going to keep track of user input such as waivers and personal accounts there is currently no system in place to store that data for simple access.	System and Real World	low	Create a search system for employees.
Payment methods	There are currently no plugins or ability to make purchases for the surfboards.	System and Real World	medium-High	Look for other c++ libraries that allow for payment and use one of those widgets
Login System	There is currently no password protection or account management system	System and Real World	medium	There is no need for this system if the interface is only used in store and is assumed each customer is beginning from scratch
Back Button does not return to previous page just menu	Because the back button always sends the user to main menu they can lose info if clicking it accidentally	User Control and Freedom	low	The system can continuously track data to prevent any loss.

Back Button could be a Home button instead	Making a better indication that the user is returning to the main menu and not previous page	Consistency and Standards	Low	Changing the images and wording to reflect the real world.
Check Waiver for date errors	Check to see if the user has imported the wrong date. Example MM/DD/YYYY instead of DD/MM/YYYY	Error Prevention	low	When they submit waiver form check to see if date is in write format
Personal Form (not deleting characters)	While filling out the personal information and preferences the system currently has a filler word to show where the information goes. However if not deleted that filler is saved to the system. example: Name: is not deleted when writing Josh.	Recognition	low	This can be ignored based on how the store wants the information stored. For example if kept in a text file the strings can be formatted properly.
Bug when pressing back button after pressing buttons in rentals and purchases	When items are filled out in rentals and purchases. If the user returns back to the main menu and opens up the rentals or purchases it does not save history of previous buttons	Recognition	medium	This will make the user have to re-input the request. Which is an unnecessary step
The current prototype cannot change the size of the screen.	The build currently has a set size of width for the display screen making it not accessible on phones. This is because it uses pixels to map out button coordinates.	Flexibility and efficiency	Medium	Make the screen images scale with ratios based on the devices that want to be used. For example set a width and height for phones compared to pc specs.

Ressources on the pc.	As this program is built as an app and not a website it does use a higher amount of resources to load graphics.	Flexibility and efficiency	High	This may limit the amount of devices that can run the program. Currently only tested on Windows10.
Resource allocation and antivirus	This is a separate problem where there are two many images while loading that prevent anti virus software from running the program properly.	Flexibility and efficiency	High	There may be a way to lower the quality of the images used as bitmaps or minimize the use of other resources like buttons.
Main Menu button does not need to appear on Main Menu	The main menu button does not have a purpose while the user is on the main menu.	Aesthetic and Minimalist Design	Low	Remove button from main menu
Make text easier to read	Because of how the text is written it could be clearer to read by having a different font and size	User Recognition	Medium	Make sure the font and size are readable and clearly shown
Help Document	Provide a clear document that demonstrates each part of the system and how it can be used	Help and Documentation	High	Provide employees with access to a document that explains every part of the interface

Evaluation From Heuristic Evaluation:
From the heuristic evaluation I found that while my interface does perform graphically very well it does suffer from having many minor problems occur. Because of how difficult it is to edit individual parts of the pages it becomes very tiresome to make the same changes over and over. This could have been prevented if the functions in the program were more efficient and I recycled functions to make editing sections easier.

Evaluation of Interface:

Overall while the design does accomplish the majority of the task that was originally stated in assignment one including creating waivers and having storing information to be processed in a cart. It was also created to almost look like exact copies of the storyboard and follows it very closely, with only minor feature renovations and addons. I did make an error in the API used to create the system. While I was using ALLEGRO5 because I was familiar with its uses in C++ and how to make a graphics engine with it. The core concept might have been better actualized in a language and system that promoted web layout such as React or just Javascript. Being able to implement this as a website instead of a standalone program would aid in not only bringing users to the store but also would help in making the system consistent with other websites of similar nature. While ALLEGRO5 is a powerful engine that can accomplish the graphic task I required of it, it uses more resources than I initially was intending to use and could have trouble performing some future task like sending the information and storing the data.

Unfortunately I do not think the system created would work well for the users and the final task of creating a system for the Surf Shop. Near the end of developing the prototype I began to learn how difficult it would be to add additional features as well as maintain a decent looking system. It also would become difficult to make changes such as adding new surfboards or selling a variety of products from other brands. I do believe the concepts of the system were met but for the system to become the best product I believe the execution of the system should be changed to a web based design. The concepts that were made during the prototype are still usable, just the execution of how the system was produced should be changed.

Video Link:
https://youtu.be/tyQZlQUtBNY

References:
(document with some examples of evaluating systems)

1. https://docs.google.com/document/preview?hgd=1&id=1hcr9mbgw1NUHWQ5xX8oq0xfEDfFR-RNpzE0n6Knj4s4

(article with 10 heuristics)

2. https://www.nngroup.com/articles/ten-usability-heuristics/