



User Study Report

Digital Dawg Pack



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Executive Summary

Our web-application is in the very early stages of development so our user studies could not be too in depth. Our MVP for Sprint 1 was to just get our application deployed with minor work done on the other pages. Due to this, it was hard to gather real findings and improvements we should make. Through the different personas in our user studies, we identified issues and features that have not been implemented, but are planned. In our user findings, the issues addressed matched the tasks that we plan to implement in the coming Sprints. We have identified a couple main issues: color contrast, navigation controls, and button or picture design. This means that our future tasks line up with the features we need to implement to satisfy the conditions of our personas, given the feedback. Based on the user feedback given, we can see that the original accessibility features we need to implement have not changed. For this reason, our Persona lineup did not change from our



original set because we have not been able to implement enough material to fully review and change our chosen personas. Going forward, we plan to have a much better product to review and collect feedback from as we finish up Sprint 2. This will allow us to actually take feedback from our target audience and address the issues and concerns they might bring up.

Personas

Persona 1: Maria

Based on the feedback from Sebastian, who has similar accessibility needs, our original tasks line up with the concerns and issues that Sebastian addressed. Because of the feedback that aligns with our original concerns, we do not need to change the features or requirements that can be addressed for Maria.

Persona 2: Carol

Based on feedback from Nancy, who has a similar issue to Carol, our original tasks of creating keyboard navigation to make it easier to navigate our web app still stand. Creating these features will make it accessible for anyone who has issues with precise mouse clicks. This feature will be helpful to many different disabilities.

Persona 3: Lea

Given the feedback from Debbie Higgins who's arthritis is similar to the experience of someone with the kind of fatigue that Lea has, we can work to accommodate this condition by minimizing the need for excess button use and page switching. The possibility of implementing alternate input devices could also increase accessibility for users with issues with typing and button use.

User Study Participants

Participant Name (May be Changed for Privacy)	Persona and Accessibility Needs	Responsible Team Member
Sarthak Singh	Poor eyesight with corrective lenses	Kaghan Odom
Sebastian Carrillo	Bilingual, prefers visuals	Chance Hughes
Debbie Higgins	Severe arthritis	Hayden O'Keefe
Nancy Fern	Tremors in hands	Quinn Bromley



Alex Do	Learning difficulty, low attention span	Ethan Woods
Arun Natarja	Poor eyesight, emphasized convenience, time sensitive	Jacob Kuruvilla

User Study Findings

Buttons that are small make it challenging to find and click the right buttons for people with less than full range of use of their hands and eyes. There were no clear indicators that there were more buttons lower on the page. This design was not intuitive for multiple users. Using colors that do not contrast well lead to difficulty deciphering portions of the application. Extensive use of a mouse can lead to the user not being able to precisely click on options provided on the application.

Proposed Design Moves

High-level Design Move	Detailed Description	Justification
Make larger buttons	Buttons need to be resized to make navigation easier and interaction more reliable.	Poor eyesight makes it hard to see the cursor and click small buttons.
Add more section headers	Make the sections on the ordering screen more noticeable so that it is clear that the user should scroll down for more options.	Some users did not think to scroll and thought they had seen the whole menu when only looking at the topmost section of the cashier page.
Adding more color contrast	Adding a background to the tables that separates them from the rest of the page. Choosing better fonts that have bigger lettering to help with visually impaired users.	The table displaying information did not have a distinct background and made it hard to read the text.
Add Keyboard navigation to website	The buttons need to be accessible by pressing tab or the arrow keys to select different menu items. This needs to be implemented wherever a button click with the mouse would be required. Enter would function	Adding keyboard navigation would help people with limited mobility use the website.



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Appendix 1: User Study Observations and Interview Notes

Participant Name	Observations	Interview Notes
Sarthak Singh	Large button size, clear color separation, does not have undo or back buttons	Could improve text size and some text contrasts in certain places. Could implement more buttons for navigation between pages more simply
Sebastian Carrillo	Simple layout shows simple choices, colors okay but had a hard time looking at info table with so much maroon void space, item order text should be displayed in new lines rather than comma-separated, did not notice at first that there were more options lower on the page,	Pinpad should show interaction such as numbers showing instead of asterisks. Adding a background for the table would improve readability and contrast to the page. Adding more section labels would make it clearer that there are more buttons lower on the page. The small buttons are too thin. Translation not implemented yet.
Debbie Higgins	The distance between the buttons seemed too far and caused further strain on her wrist. There were too many clicks to do something and she seemed frustrated. On the customer and manager page, she had to scroll down because the content didn't fit the page. This made the pages unintuitive to the user.	Minimize clicking options to reduce the risk of cramping. Single page view to lessen the need to utilize input components. Ability to be compatible with non-conventional input devices (keyboard driven, touch screen, voice). To minimize frustration making larger buttons will lessen the strain on hands and ensure they are able to click the button. It's time consuming to have to put a lot of effort using external devices.
Nancy Fern	Because of the tremors she experiences it is difficult for her to navigate websites with a mouse, she prefers to use keyboard controls. It is hard for her to accurately and precisely click anything with a mouse. This made the entire GUI difficult to use since we don't have	We could improve the customer page by adding keyboard controls, since it is hard for her to click though the website. This could also be applied to every GUI, but the customer would be first priority since it will be interacted



	keyboard navigation implemented.	
Alex Do	Because of the learning disability and low attention span, Alex finds it hard to stay focused. With our basic MVP and not very developed pages, it was hard for him to understand the navigation system. The overly maroon backgrounds made it hard for him to focus on reading the table	We can make the table more visually appealing and easy to read so users can focus on reading the table easier. By changing the background color, he would be able to see the words better with the contrast of the table.
Arun Nataraja	Arun emphasizes convenience and intuitive design. Arun also said the menu board items should have contrasting colors. Items need to be large.	Arun has a low attention span and finds it difficult when the interface is not intuitive to use. He easily gives up and then he cannot eat his lunch. To prevent his problem we should make the design more intuitive. As well as the menu board needs to have contrasting colors as well as be large. Arun is time sensitive and he will prioritize a lunch place that gets him his food pronto.