

University of Wisconsin- Oshkosh

Group Evaluation of Engine6
A Usability Study
CS 247

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Table of Contents

Objective of the study.....2

Participants.....2

Environment.....2

Conclusions.....7

Data.....8

Thank you.....13

Appendix.....14

Phase 4: Group Evaluation

Objective of the study

The objective of the study was to find ways to improve the usability of the Engine6. This was done by asking questions such as the following:

- What features of Engine6 work well?
- How can Engine6 be more intuitive to users?
- What preferences do users have when it comes to web design?
- How can user preferences be incorporated into Engine6?

The survey questions, prototype, and interview questions were all designed with the intent to answer the questions listed above.

Participants

For the first round of surveys, we created a Google Forms survey and had everyone in the group send it to as many people as possible. By doing this, we were able to get a total of 197 responses. We didn't give any incentives to fill out the survey, we just sent it out and hoped to get as many responses as possible. The only demographic information we collected from participants was age, and we saw that the majority of the respondents (62.4%) were between the ages of 16 and 25, and the next largest age group was 46+ (22.8%).

The second round of surveys we conducted one-on-one interviews, but still used Google Forms to record responses from participants. Like the last survey, we didn't give any incentives to participate in the interview, and we were able to get 28 one-on-one interviews. We collected the same demographic information, but this time we narrowed down the age ranges more, in order to get a better idea of the age ranges we were dealing with. Once again, the majority of respondents were between the ages of 16 and 25 (78.6%), but the next largest group was between 26 and 35 (10.7%), which differs from the first round of surveys.

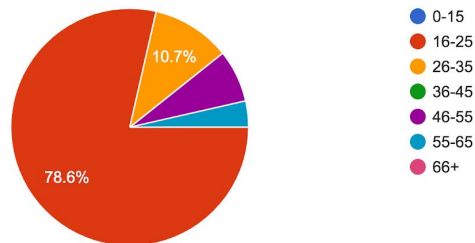
Environment

The desired environment would be testing and sampling potential users that have experience with usability in website design. We sampled a variety of people without design knowledge to test the overall ease of use of the different designs. Engine6 will be used to design websites for specific dealerships. Some of the users might have design experience, and some might not. Our results reflect similar users because of our sample audience.

We created a survey to get a better idea of how people use websites and what they prefer to see. We used our survey results to create our mockups and our interview questions. We conducted our one on one interviews by showing one screen with Engine6 and one screen with our redesigned screenshots. We created a Google Form to host our answers from the interview.

How old are you?

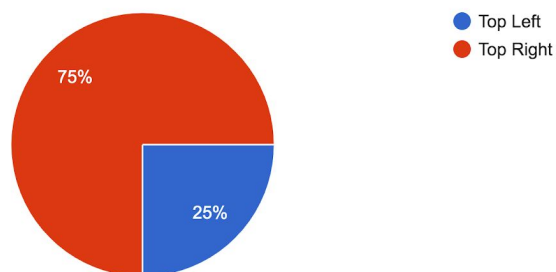
28 responses



The majority of our audience was in the age range of 16-25, followed by 26-35.

Where do you prefer the search bar to be located on a website?

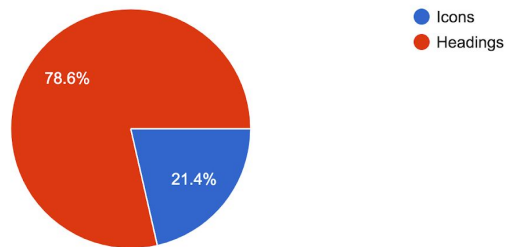
28 responses



Something new we implemented in our designs was adding a visible search bar, we surveyed our audience to see where they prefer the search bar. The majority said they prefer the search bar in the top right.

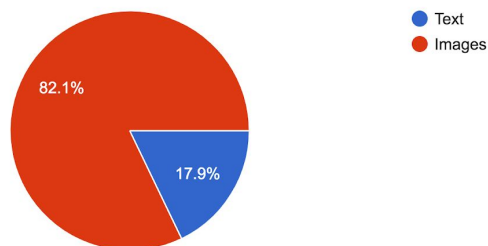
Do you prefer icons or headings on a website?

28 responses



Do you prefer text or images on a website?

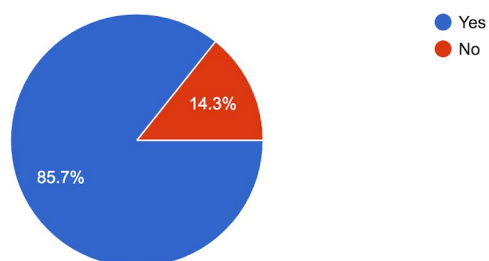
28 responses



We also experimented with different visual versus text options. From our results we gathered that people prefer headings on menus, and images within the content.

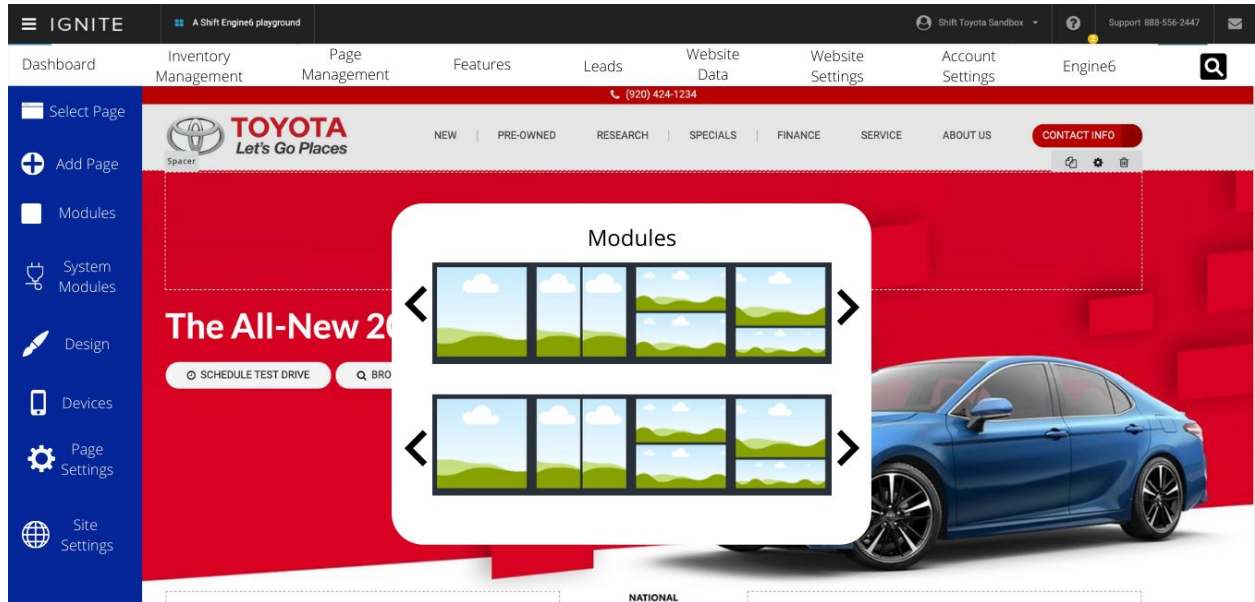
Do you enjoy having a menu that stays on the screen no matter how far down you scroll?

28 responses

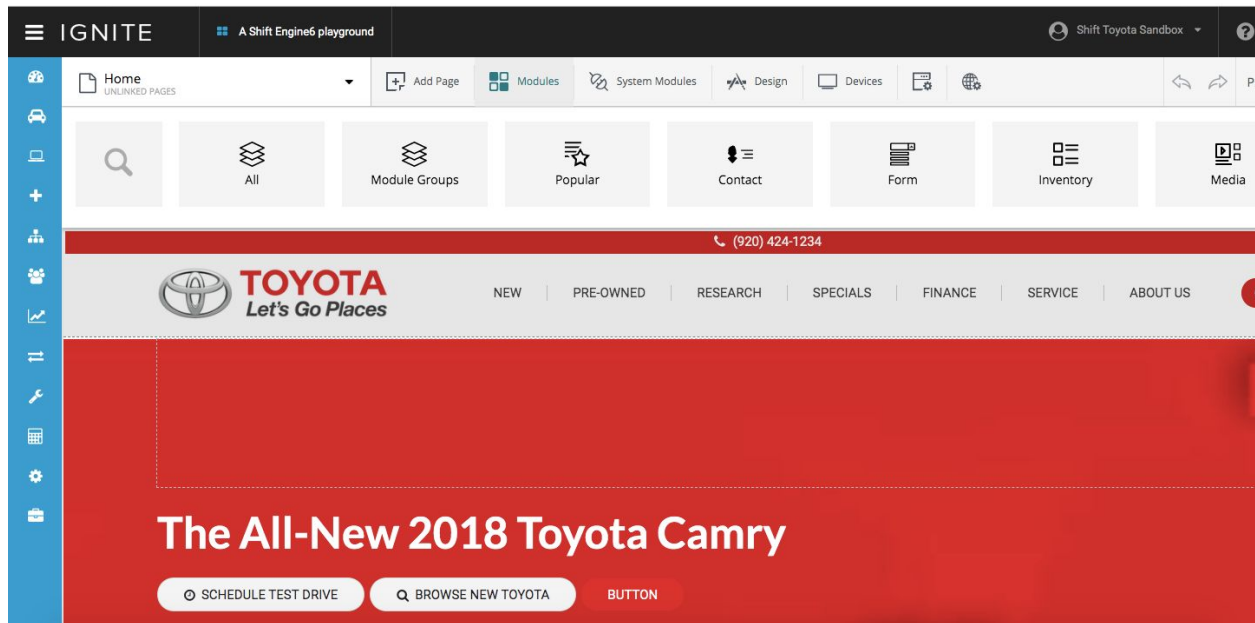


Something new we experimented with was adding a scrolling menu on the webpage. The majority said they prefer that option on a website.








































Our Version:



Original Version:



Our Version:

Dashboard	Inventory Management	Page Management	Features	Leads	Website Data	Website Settings	Account Settings	Engine6						
<div>Select Page</div> <div>Add Page</div> <div>Modules</div> <div>System Modules</div> <div>Design</div> <div>Devices</div> <div>Page Settings</div> <div>Site Settings</div>	<input type="checkbox"/>		T9973	New	2018	Toyota	Camry Hybrid	SE	\$30,863	\$31,663	9			EDIT
	<input type="checkbox"/>		T10025	New	2019	Toyota	Avalon	XLE	\$37,132	\$37,232	9			EDIT
	<input type="checkbox"/>		T10026	New	2019	Toyota	Avalon	XSE	\$39,917	\$40,817	9			EDIT
	<input type="checkbox"/>		TT9060	New	2018	Toyota	RAV4	LE	\$26,188	\$26,288	9			EDIT
	<input type="checkbox"/>			New	2019	Toyota	Avalon	Limited	\$44,118	\$44,318	9			EDIT
	<input type="checkbox"/>		T9631	New	2018	Toyota	RAV4	XLE	\$29,503	\$29,703	9			EDIT
	<input type="checkbox"/>		T9975	New	2018	Toyota	RAV4	Adventure	\$31,889	\$32,689	9			EDIT
	<input type="checkbox"/>		T9602	New	2018	Toyota	RAV4	SE	\$31,528	\$31,628	9			EDIT
	<input type="checkbox"/>		T9933	New	2018	Toyota	Sienna	SE	\$39,315	\$39,415	9			EDIT
	<input type="checkbox"/>		T9929	New	2018	Toyota	Sienna	XLE Premium	\$42,789	\$42,889	9			EDIT
	<input type="checkbox"/>		T9844	New	2018	Toyota	Sienna	XLE	\$40,020	\$40,220	9			EDIT
	<input type="checkbox"/>		TT9053	New	2018	Toyota	Highlander	LE Plus	\$37,697	\$37,797	9			EDIT
<input type="checkbox"/>		TT9064	New	2018	Toyota	Highlander	LE	\$35,317	\$35,417	9			EDIT	

Original Version:

Menu icon

IGNITE

Home

Inventory

Inventory

Add a Vehicle

Bulk Price Change

Price Rules

Page Management

Features

Leads

Website Data

Website Settings

Account Settings

Engine6

Shift Toyota Sandbox

Support 888-556-2447

Inventory

+ ADD VEHICLE

Quick Search

Show advanced

DELETE

DEFAULT

1-50 of 203

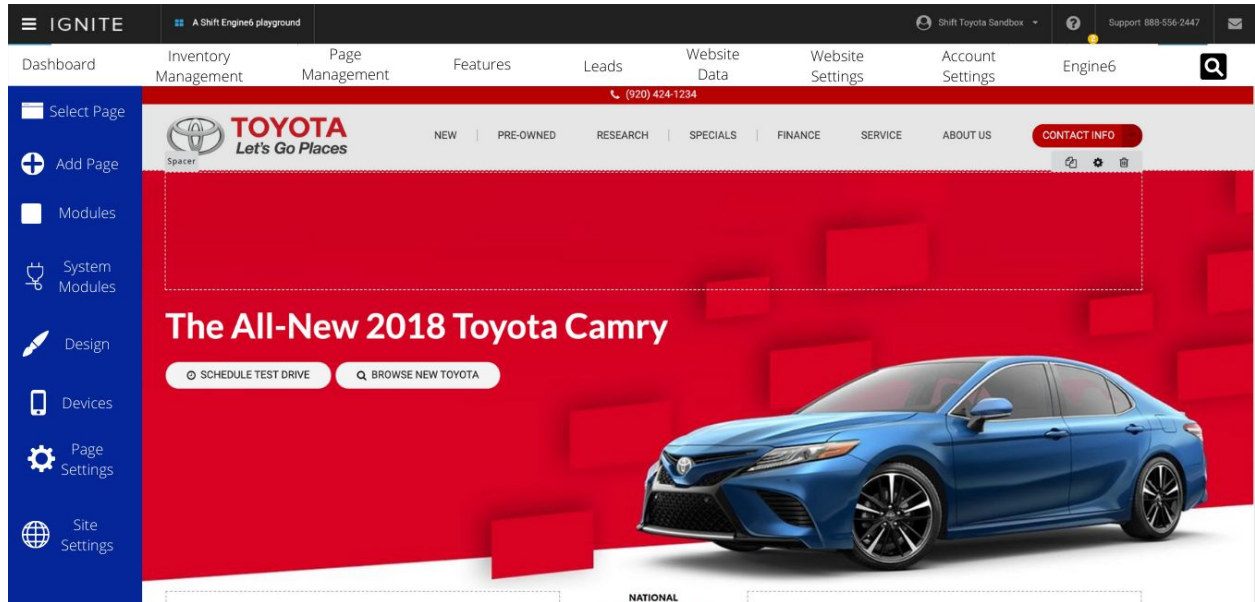
Export

Show 50 per page

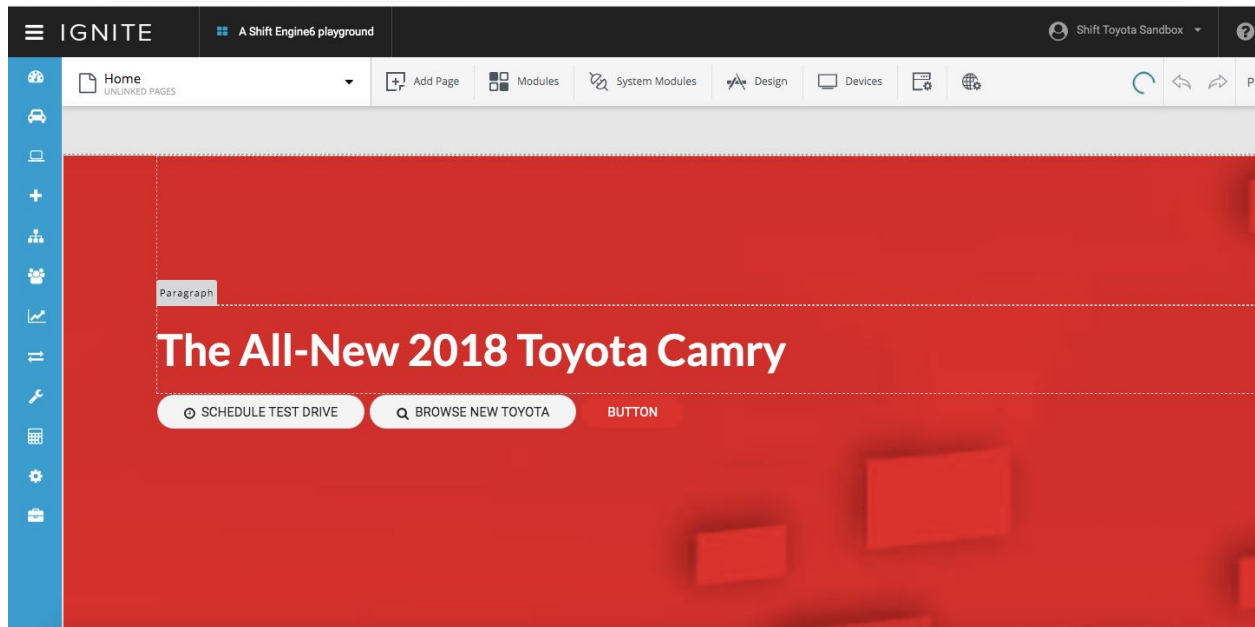
Page 1

	Stock #	Type	Year	Make	Model	Trim	MSRP	Selling Price				
		T10030	New	2019	Toyota	Corolla	SE	\$21,888	\$21,988	9		<div><div></div><div></div><div>EDIT</div></div>
		T10027	New	2019	Toyota	Corolla	LE	\$20,378	\$20,478	9		<div><div></div><div></div><div>EDIT</div></div>
		TT9019	New	2018	Toyota	Prius c	Two	\$43,006	\$43,106	9		<div><div></div><div></div><div>EDIT</div></div>
		T10035	New	2019	Toyota	C-HR	C-HR LE	\$22,678	\$22,778	9		<div><div></div><div></div><div>EDIT</div></div>
		T9921	New	2018	Toyota	Camry	LE	\$25,188	\$23,468	9		<div><div></div><div></div><div>EDIT</div></div>
		T10036	New	2019	Toyota	C-HR	C-HR Limited	\$27,338	\$27,438	9		<div><div></div><div></div><div>EDIT</div></div>
		T9835	New	2018	Toyota	Camry	LE	\$25,188	\$23,468	9		<div><div></div><div></div><div>EDIT</div></div>
		T10042	New	2019	Toyota	Camry	XSE V6	\$38,838	\$35,876	9		<div><div></div><div></div><div>EDIT</div></div>

Our Version:



Original Version:



Conclusions

After both the surveys and the one-on-one interviews, our group had a good amount of data to form some conclusions. Being that the majority of the people we surveyed and interviewed would probably never use a website like this, we had focused on basic usability functions and general features of websites that our audience would be familiar with.

We found that the majority (49.5% of survey results; 32.1% on interview results) of our audience prefers blue on a website. When participants were filling out the survey, they did not have the website in front of them, so it required more recall for them to remember what colors they like seeing best on a website. Therefore, when we asked the same question during the one-on-one interviews, participants were able to see the colors on the Engine6 website and responded a little differently (granted, they were different participants from the survey). While the majority was still blue, white and black were a close second. All three colors are found in Engine6's website, with white and black are the main colors and blue being an accent color. Many participants enjoyed this color scheme as it was pleasing to the eye.

Another feature that we asked participants about was icons versus headings. The majority (78.6%) preferred headings over icons. This could be because if a user is not familiar with a website, they may need headings to navigate the website successfully. Icons are more helpful when a user is very familiar with the website and doesn't need an explanation of where that link is taking them. Our suggestion is to pair the icons with the headings on the navigation bars, or to just eliminate the icons all together. Quite a few of the participants mentioned that they were confused as to what all of the icons on the left-hand navigation bar did. The headings may take up more space, but they are less confusing to users.

We asked participants where they prefer the search bar, and 75% said the top-right versus the top-left (25%). This is one feature that the current version of Engine6 did not have on its main navigation page. Especially for people who are unfamiliar with the site, a search bar can be helpful for finding specific modules or features of the site. We suggest adding a search bar on the top-right hand side of the website.

Our research also showed that users (85.7%) enjoy having a menu/navigation bar that stays on the screen no matter how far down you scroll. This is helpful for users because it can be a hassle to scroll all the way back to the top of the page to navigate somewhere else. If the side navigation or top navigation bar stays with the user, it is more user friendly and allows them to navigate more efficiently.

From the open-ended questions during the one-on-one interviews, we asked participants what they would change about Engine6. The full list of responses is below in the data section, but here are some responses that stood out, or were repeated among users:

- Unless users had access to a very large desktop, they have to scroll side to side in order to see all the functions on the website.
- Clarification of the icons
- Scrolling menu
- Module menu should be a pop-up menu because there are a lot to scroll through on the small top drop-down

Data

To protect participant privacy, we did not collect any names or personal information, other than age range, so that participants were able to remain anonymous.

This is the raw data that we collected from our surveys.

How old are you?	Where do you prefer the search bar to be located on a website?	Do you prefer icons or headings on a website?	Do you prefer text or images on a website?	Do you prefer pop-up menus or drop-down menus?	Do you enjoy having a menu that stays on the screen no matter how far down you scroll?	What is your favorite color to see on a website?
16-25	Top Right	Headings	Text	Drop-Down Menu	Yes	Black
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	Black
16-25	Top Right	Icons	Images	Drop-Down Menu	Yes	White
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	White
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	Black
16-25	Top Left	Headings	Images	Drop-Down Menu	Yes	Green
16-25	Top Right	Headings	Images	Pop-Up Menu	Yes	Blue
16-25	Top Right	Headings	Images	Pop-Up Menu	Yes	Blue
46-55	Top Right	Headings	Images	Pop-Up Menu	Yes	Black
26-35	Top Right	Headings	Images	Pop-Up Menu	No	White
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	Blue
16-25	Top Right	Icons	Images	Pop-Up Menu	Yes	Black
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	White
16-25	Top Left	Headings	Images	Drop-Down Menu	No	Blue
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	White
16-25	Top Left	Icons	Images	Pop-Up Menu	Yes	Blue
26-35	Top Right	Headings	Text	Drop-Down Menu	No	White
26-35	Top Right	Headings	Text	Drop-Down Menu	No	Black
16-25	Top Right	Headings	Images	Pop-Up Menu	Yes	Blue

16-25	Top Right	Icons	Images	Drop-Down Menu	Yes	Red
16-25	Top Left	Headings	Images	Drop-Down Menu	Yes	Black
16-25	Top Right	Icons	Images	Pop-Up Menu	Yes	Black
16-25	Top Right	Headings	Images	Pop-Up Menu	Yes	White
46-55	Top Left	Headings	Images	Drop-Down Menu	Yes	White
55-65	Top Left	Headings	Text	Pop-Up Menu	Yes	Blue
16-25	Top Left	Headings	Images	Drop-Down Menu	Yes	Blue
16-25	Top Right	Headings	Images	Drop-Down Menu	Yes	Blue
16-25	Top Right	Icons	Text	Drop-Down Menu	Yes	Purple

Do you prefer dark colored text with a light colored background or light text with a dark background?	What do you like about Engine6?	What would you change about Engine6?	What platform did you like better and why?
Dark Text / Light Background	I liked the bold red color as backdrop. It makes the lettering visible.	I would switch the search bar onto the right side, it just seems more convenient. Also, I would get rid of the icons, it's confusing and I'm not sure what each entails.	I liked the modified version. It fit well with what I preferred and what I would personally change. I got rid of unnecessary icons and switched the search bar to the right.
Light Text / Dark Background	I like how the menu remains at the top no matter how far you scroll	It feels very cluttered on the top. I'd recommend making it look less cluttered. I also do not like scrolling side to side. I want to be able to see everything on one screen.	modified platform
Dark Text / Light Background	how it shows you what the website will look like while editing it	the left side bar doesn't follow you when you scroll side to side.	Modified, because I like having to see descriptions of the icons, instead of just the icons.

Dark Text / Light Background	It has a lot of customization options.	It feels really cluttered, especially because you have to scroll side to side. I'd like to fit all of it on one page without going side to side.	modified, it implemented a lot of things that I like to see in websites.
Light Text / Dark Background	I like how the side bar with the icons saves a lot of space and if you want to look at the descriptions of them you just have to click the three bars on the top left.	I feel like it would be confusing to use.	Modified, however I prefer the icons on the side bar.
Dark Text / Light Background	Likes the drop down menus.	Modules to be a pop up menu because it is too annoying to scroll through all of them.	Prototype, because the changes are more user friendly.
Light Text / Dark Background	The page you're editing is really big on the screen	Unsure of what the side navigation icons mean at first glance	Prototype because it's more intuitive for someone with little web experience to use
Light Text / Dark Background	When you hover over modules on the page there are options that pop up to edit or delete it	Try to make it a little more obvious to use	Prototype because it was more obvious on how to navigate
Dark Text / Light Background	You can edit modules and text and see how they look on the website in real time	Some of the icons aren't very apparent as to what they do or mean	Prototype, it was easier for someone who isn't tech savvy at all to figure out how to change the webpage
Dark Text / Light Background	You can click to edit things right on the webpage	The menus are kind of small and can blend in with the webpage	Prototype, I like the headings on the menus
Light Text / Dark Background	There's a lot of space to edit the webpage	The outlines of the modules on the webpage are very faint	Engine6 because there's more space to edit the webpage
Light Text / Dark Background	There's a lot of room to edit the webpage	The icons are really small on the side navigation	I liked the icons on engine6, but they weren't very intuitive so I think I liked the prototype better since it was easier to figure out how to use
Dark Text / Light Background	You can see all the different pages you're working on in the drop down menu	I don't like that you have to scroll side to side to see the whole page	Modified version, less scrolling and it still had the features I liked
Dark Text / Light Background	The background color pops	too many words on the homepage	newer version, it had less text

Dark Text / Light Background	the icons on the side	the images that were used on the page	Engine6 because it has a more professional look to it
Light Text / Dark Background	Seems easy to use like wix	nothing, it looks very well put together	Engine6 because of the ease of use
Dark Text / Light Background	use of colors	add a little more text to explain what each feature is	the prototype, I like how the icons on the side say what they are
Light Text / Dark Background	I think it would be easy to use for a car dealership	add a search bar	Engine6 because of the text headings.
Dark Text / Light Background	I like the colors of the website... blue, white, and black.	The menus need to follow you down as you scroll down the page, or else it is a pain for people to scroll all the way back up. I would also have less icons on the far left navigation bar. More categories for the modules so that there would be less in each category. I don't like having to scroll a lot horizontally.	I like Engine6 better because I like the lighter blue better than the darker blue on the prototype. Engine6 was also a little more concise with the menus and they didn't look as cluttered. The prototype had too many words on the navigation bar.
Light Text / Dark Background	the icons on top of the pages	add more images	the prototype because the layout seems more simplified
Light Text / Dark Background	Having a concise way to make the website, seeing the changes in real time and being able to preview it.	I don't like that you have to scroll side to view the whole website.	Engine6 looked better. It was more aesthetically pleasing to the eye.
Dark Text / Light Background	the simple layout	change the font for the top headings	prototype, I liked the menu with icons on the side of the page
Dark Text / Light Background	I like the layout of the website and the icons on the left navigation bar. I also liked that there was both the heading and icon for the top navigation.	I would make the icons more clear as to what they are, or when you hover over the icons, have the description pop up.	I liked the prototype better because it gave a better description for the icons and I felt like I could navigate easier.
Light Text / Dark Background	red and white	Don't like the icons, they aren't clear	Second one, its a cleaner home page with all the options once you go deeper in

Dark Text / Light Background	Clean colors, white on blue	icons need words with them	The newer one, the icons had words with them and I like the scrolling bar
Light Text / Dark Background	Had more images than text	Add a scrolling menu	The newer one, used light text on dark background
Dark Text / Light Background	The blue color scheme, clean look	More text to correspond with the images	The first one, it had drop down menus and was easier to see everything
Dark Text / Light Background	The overall layout is good	Change the icons on the left side to headings because its hard to understand what many of them are/what they do	Prototype, it fixes what i didnt like about it

Thank you

Thank you for allowing our class to work on this usability project with your company this semester. Through our various assignments in this project I think everyone in our group gained valuable insights on what a usability actually consists of. This knowledge we gained from this project will be very helpful as we move on to other computer science classes and more importantly our careers.

What we learned

Throughout this usability project, we feel that there were three main things we learned. The first one being how a usability project is actually conducted. Through the surveys, one on one interviews, and then analyzing the data, we learned firsthand what professionals in this field to make their websites more usable. The second thing we learned are best usability practices. Keeping things consistent, keep it simple, and knowing your devices are all valuable elements to think about when doing a usability project. The final thing we learned is what our users prefer to see on a website. Icons over headings, images over text, and pop-up menus over dropdowns are what a majority of people prefer to make a website more usable.

Appendix

Usability Survey:

https://docs.google.com/forms/d/1CHd-9gK4eds9MFA-s_m-vIXq2evCATgrrZXRYOT-UVU/edit?usp=sharing

One-on-one Interview Results:

https://docs.google.com/forms/d/e/1FAIpQLSf-Mya2F_UvhTxrEyFXaqITt-of9J8HC962RYUxciHIPtF1Q/viewform