Project Journal

Personal Portfolio Website

Submitted by – Ajay Babu Gorantla

GitHub Repo - https://github.com/AjayBabuGorantla/project-web-dev

Website Link - https://ajaybabugorantla.github.io/project-web-dev/

May 24, 2022 – May 25, 2022

My plan was to started building on the website with whatever UI design I had in my mind.

The technologies I intended to use were HTML and CSS. My current plan is to first build the static UI and then add the responsiveness like accepting inputs in the contact form etc. or any other graphic animation

First, I started building the Navigation bar with buttons/links to different sections. I plan to design all sections in one page, where a button/link when clicked should ideally be taking us to the corresponding section
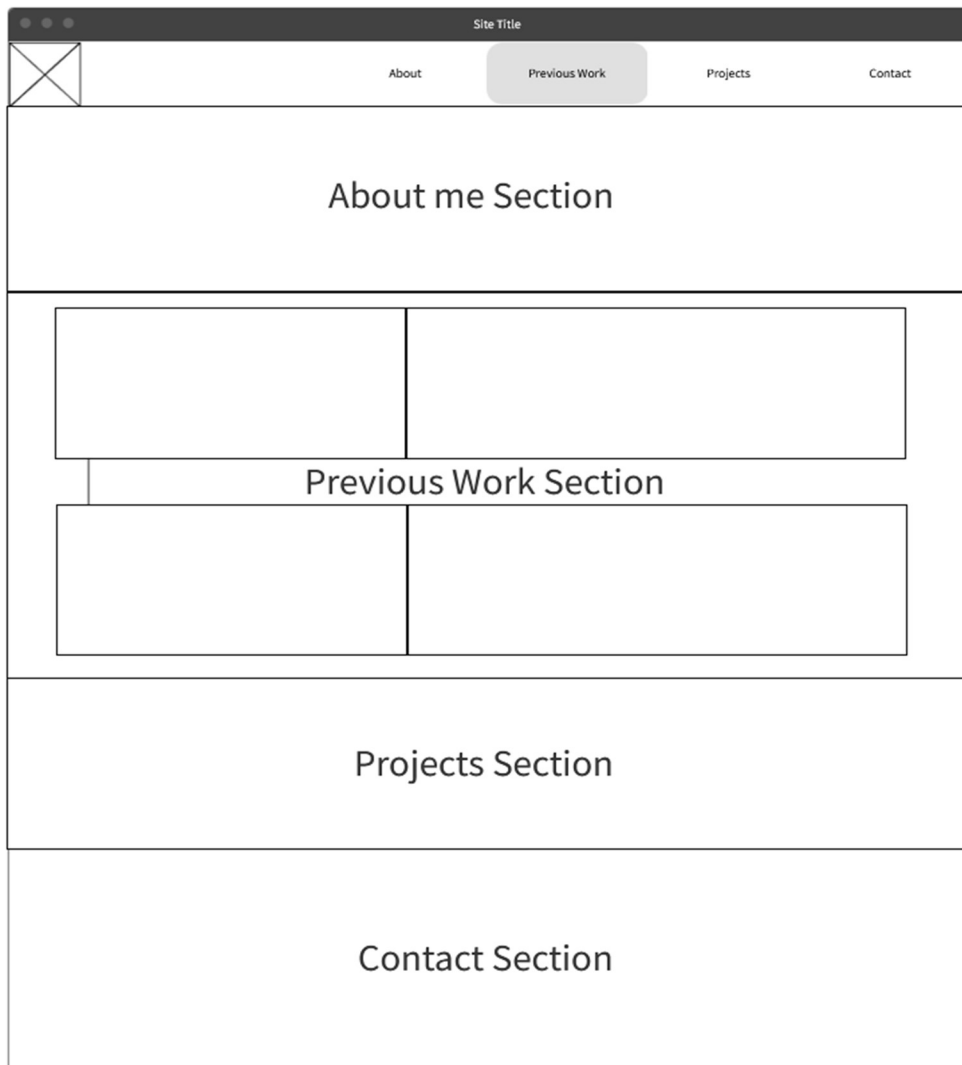
Created the basic HTML and CSS files to get started.

I failed multiple times while implementing to properly put things to perspective. I was frequently changing my mind in terms of design based on the issue I face and ending up with no progress.

So, I decided to outline the basic template of the UI that I had in my mind to put things into perspective and work towards no matter what, solve issues on the fly, and make UI changes if necessary to make it look good

Wireframe:

I have used an online wireframe prototyping tool called "wireframepro" from MockFlow.

May 28, 2022

Started building the website with above depicted wireframe in mind.

First step was to create Navigation Bar and populate it with links to different sections of the page.

Spent some time on selecting the color theme, chose **#f6ae84** and **#495fa6**

Created Navigation Bar and populated it with the links as described above and ended up as depicted below. At this point I used only HTML and CSS.

Fig 1

I tried hosting this on GitHub and discovered that the UI was not at all responsive. There was a total change of font sizes and the way UI looked (as shown in the below picture)

Fig 2

At this point I am not at all impressed with my UI, but I am positive that I am at least clear and zeroed in with my design and working on that path instead wandering around with my UI ideas and consequently wasting time.

To make my website streamlined, and make UI building process easier for myself, I decided to use Bootstrap. However, at the same time I wanted to tailor the bootstrap UI elements to my UI thoughts.

I was able to build a navigation bar in the top as depicted in my initial wireframe using Bootstrap and this looks lot better than the one depicted in the Fig 2.

Added "About Me" section. I faced some issue dealing with bootstrap attributes and classes. I have had zero experience in the field of Web Development, which is why I have taken this course. Although I had an opportunity to work on Bootstrap in the Week 4 and Week 5, I did not get used to it. So, I had some difficulty in handling Bootstrap. However, I am happy that I am getting habituated to using Bootstrap.

May 29, 2022

As I am done with the basic "navigation bar" and "About Me" as depicted in the wireframe, I have started building the Work Experience section. I had an idea of using different blocks for each company I have worked in and connecting those blocks with a line in-order to represent the work experience section something like a timeline. I decided to build the structure of one work-experience block first and use that block structure consistently across the work-experience section for the other work-experience block I intend to display.

At first, I faced some difficulty in aligning the image and using the correct bootstrap attributes in-order to ensure the UI is responsive when the screen size is reduced.

I was able to come up with a basic structure of the work-experience block. This somewhat looks naïve in designed, but nonetheless, I can get ahead with the next sections and can focus on the design aesthetic later. So used the same HTML structure for the second work-experience block and made sure they are responsive.

After a lot of experimenting while building the work-experience section, I realized that when I am using Bootstrap it is better to use the class attributes defined by the framework to make the site as smooth as possible, instead of using custom CSS styles especially for the aspects like alignment.

There is still scope for improvement in terms of UI aesthetics and I plan to work on this later.

My Past Work Experience

CYIENT

Software Development Intern
Dec 2019 - May 2020

Used transfer learning on YOLOv2 deep neural net to redeuce image annotation time of images with distortions and color imbalances from days to hours

Developed a tool for US Wells that automates the process of extracting sepcific regulatory data like API and Permit numbers from high volume of oil commision regulatory documents(pdf) usng pytessract's OCR, and export to CSV files helping reduce the overall execution time from 3 days to 4 hours

Developed an in-house RPA tool using PyQt GUI framework, Pywin32 and PyAutoGUI libraries, to enable the user to setup data control flows spanning across multiple windows applications and automate any volume of mundane repetitive tasks, which helps to improve the productivity of user by at least 2-3 hours per day
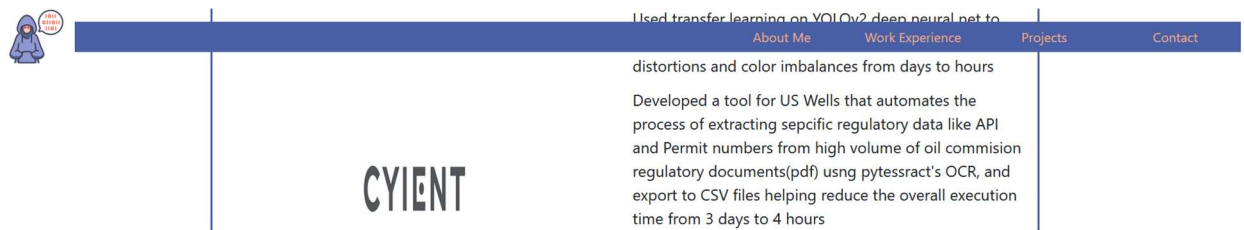
Keeping the header static

The main purpose of navigation bar is to let the user be able to always access different sections of the site, during the user's session on the site. I have also noticed this feature on many well-known websites that I regularly use or have used for general purposes like shopping. I wanted to implement this feature to my site as well.

Issue:

At first, I tried using the "fixed-top" attribute through CSS. Although I was able to make the navigation bar fixed to the top of the screen, it was glitchy and when I try to scroll down, after the "About Me" section the browser doesn't let me scroll down more. I will have to manually select the scroll bar and move a little downward from that point, and then it works normally. This behavior is not acceptable and should be smooth. Instead of using the CSS properties directly, I tried my hand at using JavaScript.

Initially I tried implementing the feature using JS just to get things started and with the hope that I will be able to modify the code appropriately as I try to debug and experiment. I was able to implement but the issue is persisting which in way a good sign as I expected it.

I experimented for a while and ended up nowhere. So, I decided to search on the web if I can find any information related to the issue. I ended up finding a way to implement this and got to know along the way that I can actually access some basic states of the site like how many pixels has the site been scrolled etc. using JS DOM methods.

Source - https://bootstrap-menu.com/detail-fixed-onscroll.html

May 30, 2022

Contact Form

Now that I have my Navigation Bar, About Me and Work Experience section done (there is scope for improvement in terms of some alignments, UI responsiveness and design aesthetic), I wanted to get ahead with building the two other sections namely "Projects" and "Contact Form".

I decided to start building the contact form first as I have had some experience building one, during one of the homeworks and then "Projects" section

Although it took some time, I was able to build the contact form and make the text fields and buttons all aligned as I envisioned. However, at this point the form is not responsive in terms of functionality and UI. I noticed that when the screen size is reduced although the buttons stack over each other, there is no gap/margin between the buttons. Decided to look at this issue later when all the sections are done.

Projects

I had lot of ideas going in my mind from the start of this project. This is the reason I did not specifically design the wireframes of individual project elements inside the "Projects" section. I couldn't agree with one idea, so I decided to think about it later in the site building process when I was designing the wireframe. Now that time has come, I have zeroed in two different ideas that I want to experiment.

First, I had envisioned of using something like a Bootstrap Carousel, where each slide is dedicated to one project and link each slide to the appropriate GitHub repo link. When I implemented it, I did not like the way it turned out. So, I decided to dump that idea and try the other idea that I had.

The second idea I had was using "cards" with an image that represents the project and some small description of what the project is about and make that card clickable. When clicked the card should ideally redirect to the appropriate GitHub site.

I started building on this idea and it turned out to be good. As this was my first time using the Bootstrap cards component, I took help from their official documentation to get started and to familiarize with the corresponding class attributes.

Source - https://getbootstrap.com/docs/5.0/components/card/

At this point, I was able to build the basic structure of the card and fill them up with my own picture that can be seen in the "About Me" section. I have done this to preview how the cards look with some image in them, because I plan to use appropriate images to that represent the respective projects. They looked good and this is the part that I liked most till now in the site.

Issue

One issue that I faced with cards is making them clickable. I envisioned of the card as a whole to be clickable, in the sense when the user hovers over any part of the card, it should indicate that the element is clickable and when clicked should redirect to the appropriate GitHub repository

The issue was I was able to make the image clickable and the text clickable, in the sense assigning "href" links to both elements (image has been placed inside <a> tags and using another <a> tag with text-decoration: none) separately. Even though it serves the purpose, parts of the card were still not clickable i.e., when hovered specifically over those parts, the card will not indicate that it is clickable. This wouldn't be good experience for the user.

As I could not find a way around this, searching about this issue on the web directed me towards a source and it helped me solve my problem.

Source - https://www.codeply.com/go/VfxYt2AVDL

June 1, 2022

At this point, the basic structure of the site is built but the cards I have designed yesterday in the projects yesterday had dummy content in them. I wanted that the images I use should be appealing and not fancy but at the same time represent the respective project.

I went on a search spree on the web to search for icons and images, and ended up finding these two sources very useful:

https://icons8.com/

https://www.flaticon.com/

However, in the end I realized there were good resources mentioned in the Bootstrap documentation itself.

https://getbootstrap.com/docs/5.1/extend/icons/

After finding these sources, replaced the dummy content of cards with appropriate description and images.

Also made some small UI changes like making the "About Me" section to occupy the whole screen space (of course apart from the header) at the first visit of the site. Used "vh-100" class attribute.

June 3, 2022

I ran a WAVE audit of my site and noticed three errors, all three of them of the same type i.e., Empty Links. Noted this down to address this later, as I didn't understand what the issue is in the first place.

Feedback from discussion group:

Good icons.

Good color theme

Need even space around descriptions in "Work Experience" section

The "About Me" section and "Work Experience" section overlap on their screens

Would be good if each Navigation Bar section gets highlighted as a whole instead of just the links itself.

Contact Me form buttons are not functional

There should be space/margin between the buttons under contact form.

June 5, 2022

One of UI patterns that I observed across all the well-known websites its they have a footer section, with quick access links to other section on the site and also links to their social media handles.

I wanted to implement this for my site and hence I added a footer. I made some research to seek some inspiration from any good footer examples that I might come across. I did not like any, as I felt they were too fancy. Hence, I decided to implement my go to minimalistic design.

When hovered over the text Bootstrap, the text color is changed to the peach color of the icons that can be seen on the right.

At this point, my main UI is complete, but I still felt my UI can be a lot better just by making some small tweaks. I remember I always liked rounded corners and elevated elements. I made some search on the current trends in the UI field and ended up on this source: https://userguiding.com/blog/ux-ui-trends/

The second trend on this blog is exactly what I was speaking about earlier, and I didn't realize this has been a trend. I wanted to try this for my site. Although, I am not sure if I will be able to make great progress in this path, I wanted to try my hand at it. I went through Dribbble for some inspiration and just witnessed a ton of creativity out there in the world and also realized I am too novice with the current skill level I have.

I tried my hand experimenting around it and added some shadows to my cards, and I believe they turned out really well, and have done the same for the Work Experience section as well.

Later, I wanted to make the contact form functional. In the sense, when the user gives some input, the user must receive some feedback. Something like a "Success" or "Failure". I headed over to Bootstrap components section to see if I can make use of any. Found the "alerts" component and that was my best bet most suitable for my need.

Source: https://getbootstrap.com/docs/5.2/components/alerts/

I envisioned something like, when the user clicks on the submit button without entering any details or any of the details, the site must convey an error to the user and when the user gives all the details appropriately, the site should give them an acknowledgement message. I was successfully able to implement them

Name

Ex: Ajay Babu Gorantla

Email

username@host.com

Message!

Feel free to be yourself :)

Please enter all the details. Drop a "Hi!" and your contact number if you have a time crunch. I will reach out to you at the earliest :) ✕

Send   Reset

Name

Ex: Ajay Babu Gorantla

Email

username@host.com

Message!

Feel free to be yourself :)

Thank you! Your message has been received. Will reach out to you at the earliest :) ✕
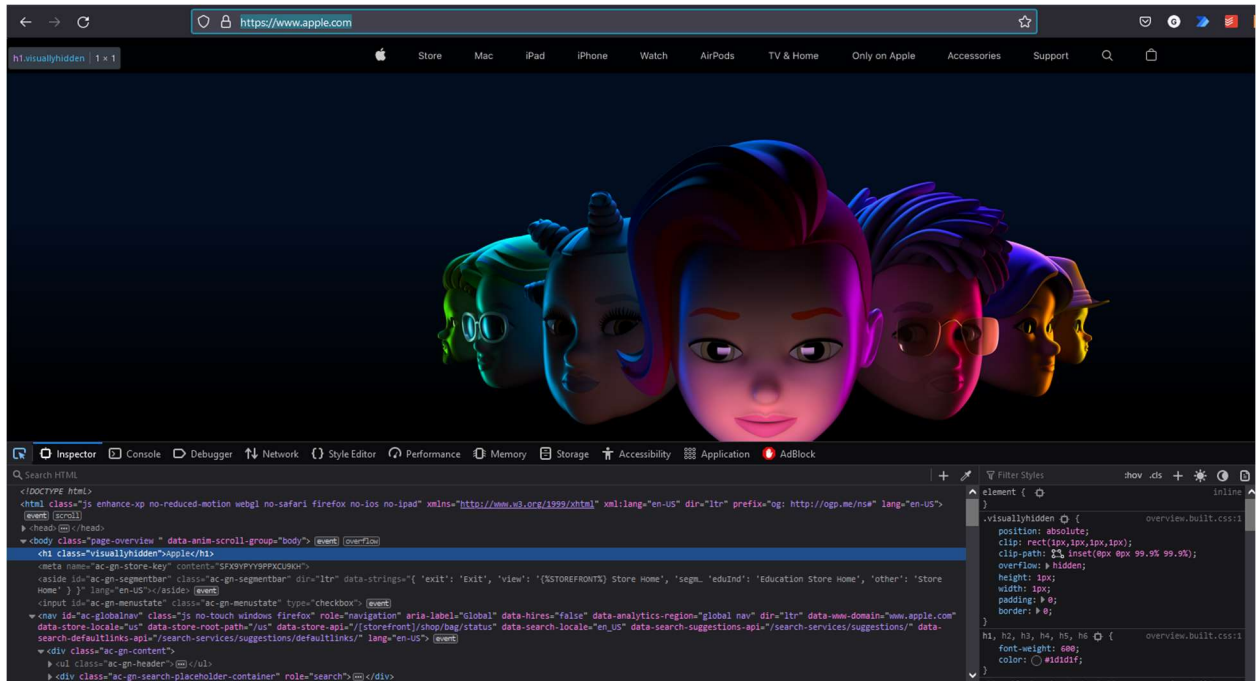
Send   Reset

Now that my UI was done, I wanted some feedback, and reached out to TA Yiming and got some valuable suggestions. I went ahead to follow those suggestions and address all of the feedback I received from my peers in the discussion group.
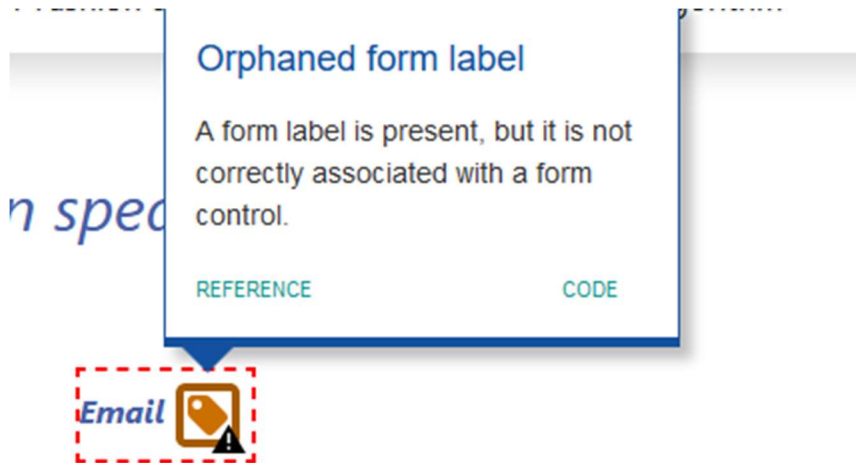
- Made the UI responsive for different screen sizes.
- Ensured there is margin/space between the buttons in the Contact Form section. Previously they were stacked one upon another without any space between them (this happens in reduced screen size)
- Resolved the overlap issue of "About Me" section and "Work Experience" section. This was happening due to the class attribute "vh-100" I added previously on June 1, 2022. So, I removed that class attribute. I added that class attribute in hope that it would improve the UI and the flow of the site for the user. It actually looked good if I didn't use that property.
- Made sure that when hovered, the Nav Bar section each one as a whole gets highlighted instead of just the nav links leaving the other space to still be blue. This happens when screen size is reduced. The Nav Bar is collapsed into a hamburger icon.
- Made sure there are even spaces around descriptions in the work experience section. Added some margins.
- Changed the semantic elements in my HTML structure. I got to know from the TA that it is a better practice to use proper sematic elements to represent the true

nature of the element. I first used <div>(s) for all sections except <header> and <footer>. So, I changed them to <section>

- Used headings wherever required i.e., till now I did not use any heading tags (<h1>....<h6> tags). and instead used paragraphs (<p>). I changed them. As it is a best practice to use the proper hierarchy, I used a <h1> tag that visually hidden. I also noticed that many prominent web sites use this as a hack. I took reference from Apple's [website](#) and they too used this trick. So, I have as well implemented that.
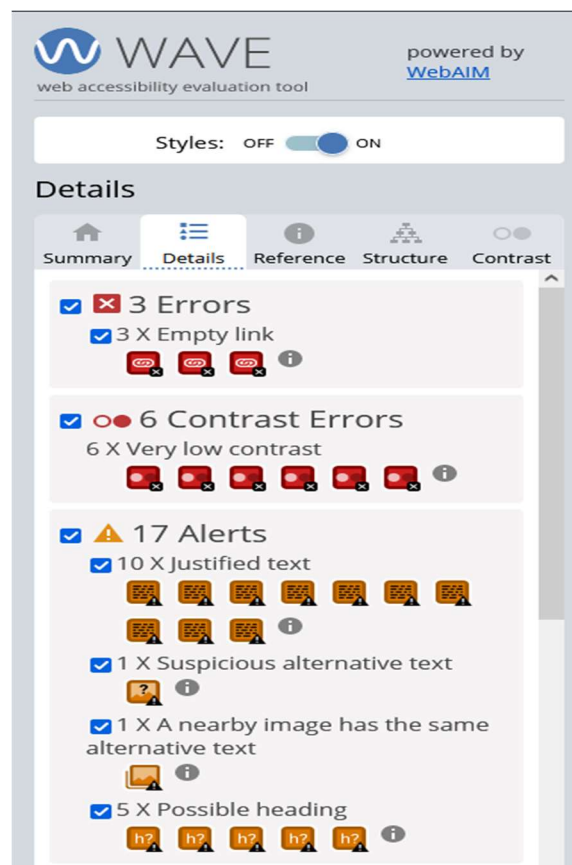

- In my JS code, for implementing the reset button functionality, I first implemented it by hardcoding the values to be assigning to empty strings. Being a computer science student, I knew this is not a good practice, I believed there must be some method for this that I can make use of. I made a google search and ended up 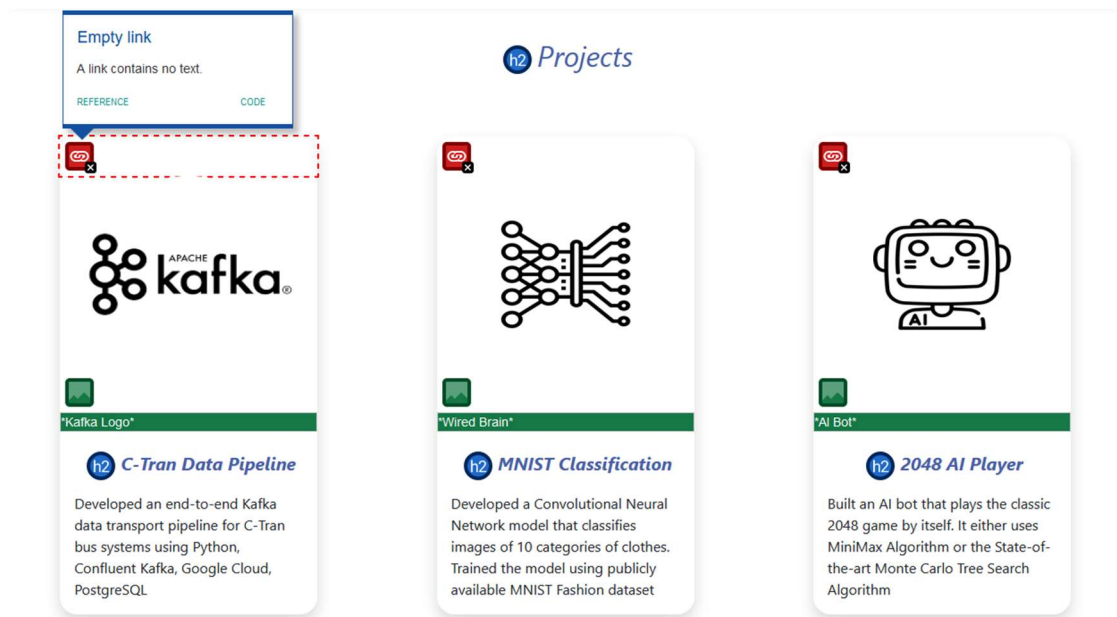at this resource and made use of the reset() method. Source: https://bobbyhadz.com/blog/javascript-clear-input-field-after-submit

- As suggested by the TA, I have given same values to the "for" attribute in the <label> element as the "id" value in its corresponding <input> element, and the issue got resolved.

June 6, 2022

Now, I ran a WAVE audit of the site and found myself with the following errors and warnings.

- I resolved three errors (Empty Link) by using a text inside the links and making their display "none".
- In the process of making the UI responsive for different screen sizes, I ended up "justify"ing the text. Apparently its not a good thing to do. I first did not understand the warning. Made a google search to get a better understanding of the warning and ended up at this

  Source:
  https://www.w3.org/WAI/GL/low-vision-a11y-tf/wiki/Supplemental_Guidance:_Text_Justification
- As I have used the NavBar starter code from the Bootstrap documentation, I did not pay much attention to changing the alternative text value of the NavBar icon on the left. The value remained "logo" as it came from the starter code. I changed it to the appropriate "alt" value

- As I have mentioned earlier in the journal for the "work experience" section, I used the same HTML structure of the first for the second block as well. Well, in the process of doing the I ended up not changing the alternative text value of the image. So, I changed it to the appropriate "alt" value.

Possible heading

Text appears to be a heading but is not a heading element.

REFERENCE   CODE

Cyient Logo

h? Software Development Intern

h? Dec 2019 - May 2020

process of extracting sepcific regulatory data like API and Permit numbers from high volume of oil commision regulatory documents(pdf) usng pytessract's OCR, and export to CSV files helping reduce the overall execution time from 3 days to 4 hours

Developed an in-house RPA tool using PyQt GUI framework, Pywin32 and PyAutoGUI libraries, to enable the user to setup data control flows spanning across multiple windows applications and automate any volume of mundane repetitive tasks, which helps to improve the productivity of user by at least 2-3 hours per day
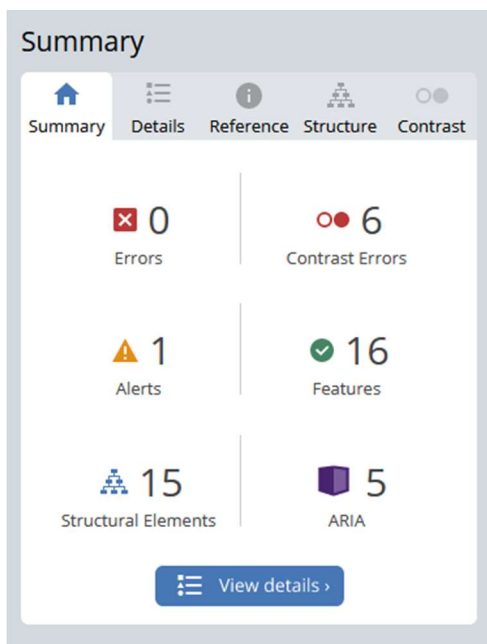
Tech Mahindra

Cyient Logo

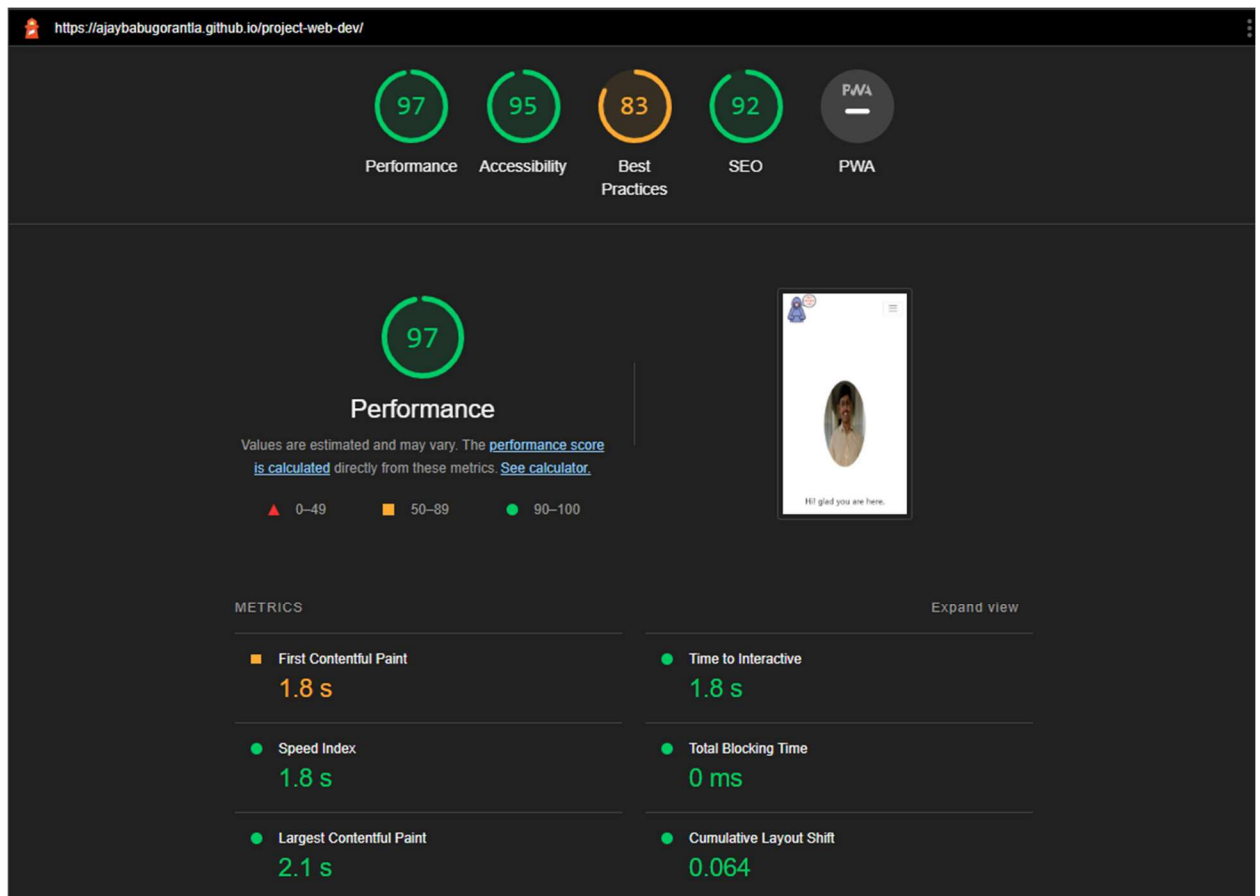h? Software Tester

h? May 2018 - July 2018

Implemented behavioral testing using Python and Selenium to improve the end user experience of Data Quality Tool for American Bureau of Shipping(ABS)

</> Code

- I used <p> elements before and hence changed them to appropriate <h>(heading) tags wherever required. The warnings got resolved.
  I ran the WAVE audit after resolving all of the above issues and found myself with

Summary

Summary   Details   Reference   Structure   Contrast

✖ 0
Errors

○● 6
Contrast Errors

⚠ 1
Alerts

✔ 16
Features

🔺 15
Structural Elements

🟪 5
ARIA

View details ›

I also ran a Lighthouse audit on Google Chrome and found myself with the following scores.

The 6 contrast errors are due to the color theme I chose. The background should be contrasting to the foreground colors for better readability. I would like to stick with the chosen colors as the accessibility score is considerably good except for that one color aspect.