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Final Project Report: ColorFun Learning Site

My final project website is a site called ColorFun. The goal of this site is to help people learn about colors and have fun playing around with them. There is a page for finding out what color suits your personality and a page for playing around with colors to get to see just how many colors there are out there. The main goal of the site is for having fun and enjoying the variety of colors and maybe coming away with a new understanding of which colors you connect with most.

There are three main pages of the website. The first page is the Homepage, this is the page where there is a personality quiz that determines which color may best fit your personality. The reason this is the homepage is because it gives a user the chance to see if they can connect with a color on a deeper level. Additionally, the color that the quiz determines then becomes the background color for the whole website as a user continues to explore it.

When a user finishes the quiz, they are given two options. First they are asked to save the data. When they click this button, it executes the function that determines the color that best fits their responses. This same function sets to a variable in local storage that is then utilized (if defined) to set the website background color when each page is loaded.

While quiz result is determined with this Javascript function - it isn't actually submitted to the SQL database until the user hits the next button - the 'Submit Data' button. This button

submits the form and processes the PHP code which sends the information to the SQL database, where all the answers as well as user info is stored. This way, if there is any later analysis to be done about user answers, say whether users from certain countries are more likely to identify with certain personality traits, the data is backed up for analysis.

When the information is successfully sent, the page simply reloads. On each load of the page there is a conditional to check if the favorite color is stored in local storage. If it is, the quiz does not show up. Instead, the homepage showcases some information about what the user's color result may mean about their personality. This information was sourced from a different website, cited on the page. I stored it in the codebase using a Javascript object; the colors being the keys and the information being the values. This page also includes a button that lets a user retake the quiz; it functions by removing the variable from local storage and reloading the page.

The next page on the website is the Color Learning page. The goal of this page is to help people learn more about colors in a fun and interactive way. The page explains what a color wheel is and then shows six distinct colors and their complementary colors which are opposite them on the color wheel. When a user hovers over one of these 6 colors it shows the opposite color.

The next part of this page is a table showcasing 25 different random colors. The purpose of this is to show users just how many colors are available even just within HEX codes. When reloading the page again and again, new colors are shown each time, really showcasing the variety of colors and patterns and the wide variety of ways colors can be mixed and matched together. Below the table is the option to input a color with a color picker and fill any table cell

with that chosen color on-click. I added the on click function to each of the cells using the foreach method. This way it is done in only a few lines of code.

The final page of the website is the About page. The goal of this page is to tell the user a little bit about my purpose in making this website and encourage them to seek out more information. It includes a Youtube TedEd video focused on color, which was added to the webpage using an Iframe tag. This page also links to several articles encouraging users to read more about color theory and the science of color.

The way that the pages in this website connect with each other is through a navigation bar at the top of each page. For each HTML file, I added a nav element. This element contains the links to each page. It is customized for each of the files so that the page the user is currently on shows up as bolder with a lighter color in the navigation bar so that the user can be sure of which page they are on. The navigation bar also has the name and logo for the web page, and if a user clicks either of these, it will also redirect them back to the homepage.

The most difficult part about creating this website was finding a solution for having the form answers impact the page. Since the goal of this form was twofold: to collect data in SQL and to also immediately use that data to make changes to the DOM, the submission function for the form was a bit more complicated than usual. It took me a while to figure out that it would be best to use two separate buttons. One was to save the data and immediately calculate a user's best color and set it in local storage, and the other to submit the data to a SQL database using code implemented by PHP.

I have a current internship where I use React daily, so I am used to creating states and utilizing them throughout the page. I think a good next step for this project would be to move it

over to react to utilize states and components. That way, local storage wouldn't really be

necessary and the data for a user's color could be passed via props to all the components.

   While I don't think using vanilla JS with HTML/CSS is the most efficient way for

implementing this particular project, I am still glad I had the challenge of making it work and

figured out how to do it using localstorage. I believe what I learned in this project was useful and

it was a great chance to be creative with these skills. Upon sharing the website with friends and

family they all seemed to find it enjoyable to play around with the details of it. I hope to build on

what I have learned about PHP in this class and to figure out how I could deploy something like

this so that it can be shared more easily. I am proud of the work I did to create the ColorFun

Learning website and I believe the skills I've gained from this class will be truly useful for future

personal projects I work on.