Introduction to Multimedia

REPORT

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Overview

I chose to develop my website using React because I am familiar with the technology and it gives me the ability to create reusable components for the web page, giving me flexibility when it comes to designing. In addition, it also speeds up my development process as it reduces code duplication.

I used Create React App to create my working environment and to configure the build processes I required to get my app up and running.

I leveraged the power of React in a variety of ways, I used React Router so that I could create multiple pages that could be navigated around with ease. I then created a consistent navigation bar using my knowledge of CSS, JavaScript and HTML for all pages which allows the user to freely browse the site.

Figure 1 Navigation Bar (Desktop)

Figure 2 Navigation Bar (Mobile)

I made efforts to create a responsive web page so that no matter the screen the user is viewing the page on, the experience will remain consistent. To do this, I leveraged the power of CSS media queries as well as React to create a Hook which would allow me to access the device's viewport dimensions and adjust accordingly.

I also created a site-wide dark mode, which, when enabled by the user, will switch the styles of the site to a dark interface – see below.

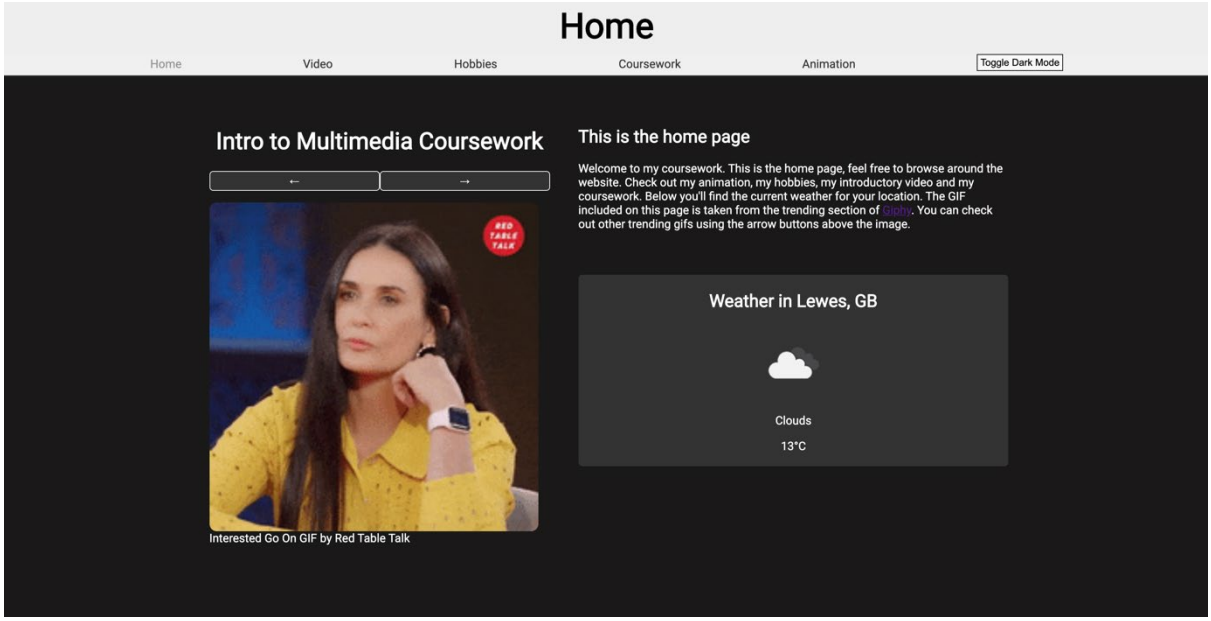

Figure 3 Dark Mode Enabled on the Home Page

Home

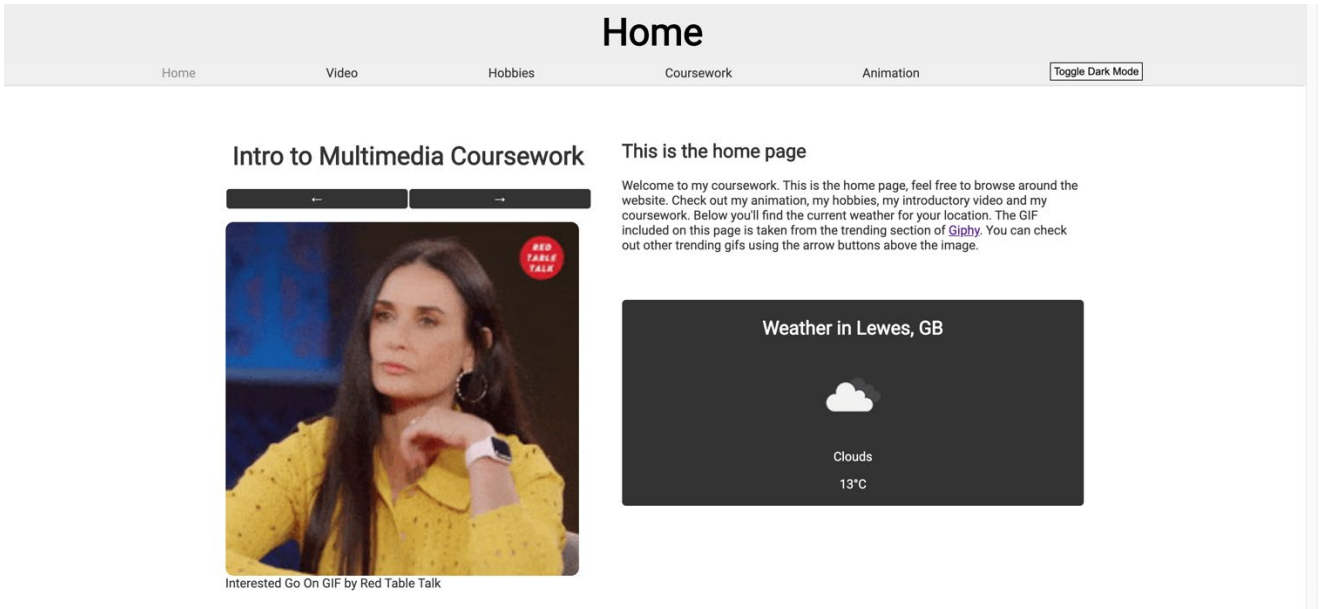

Figure 4 Homepage (Light Mode)

On the home page, I used JavaScript to consume two different API's. The first of which is the GIPHY API, which I used to retrieve the top 10 trending GIFS from the site and display them on the page, the user can then navigate between the GIFs using the arrow buttons above the image.

The second API I used is the OpenWeatherMap API, which I used to get the weather for the user's current location. To achieve this, I first had to use the JavaScript Geolocation API to estimate the coordinates of the user, then I send I request to the OpenWeatherMap API with the user's coordinates as input.

To style this page, I used CSS Flexbox which allows me to display content in a flexible and attractive way.

React allowed me to create a stateful home component, which will send requests using the useEffect Hook to make requests to APIs as well as useState to keep track of data received with API requests.

The home page has a responsive design created using CSS Media Queries, this means that when viewed on a phone, the page is still easy to navigate for the user.

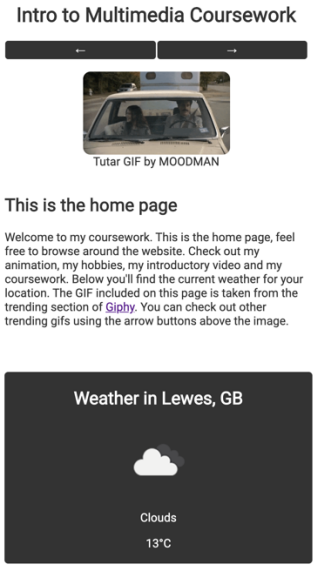

Figure 5 Home page (Mobile, navbar excluded)

Video

The video page uses a video that I created on the app TikTok to transition between multiple different photos.

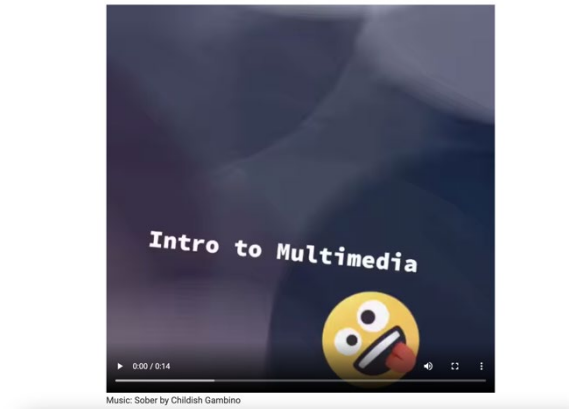

Figure 6 Video Page (Still, Desktop)

Hobbies

The hobbies page takes advantage of React reusable components to create a grid of ‘cards’ with my favorite pastimes on them.

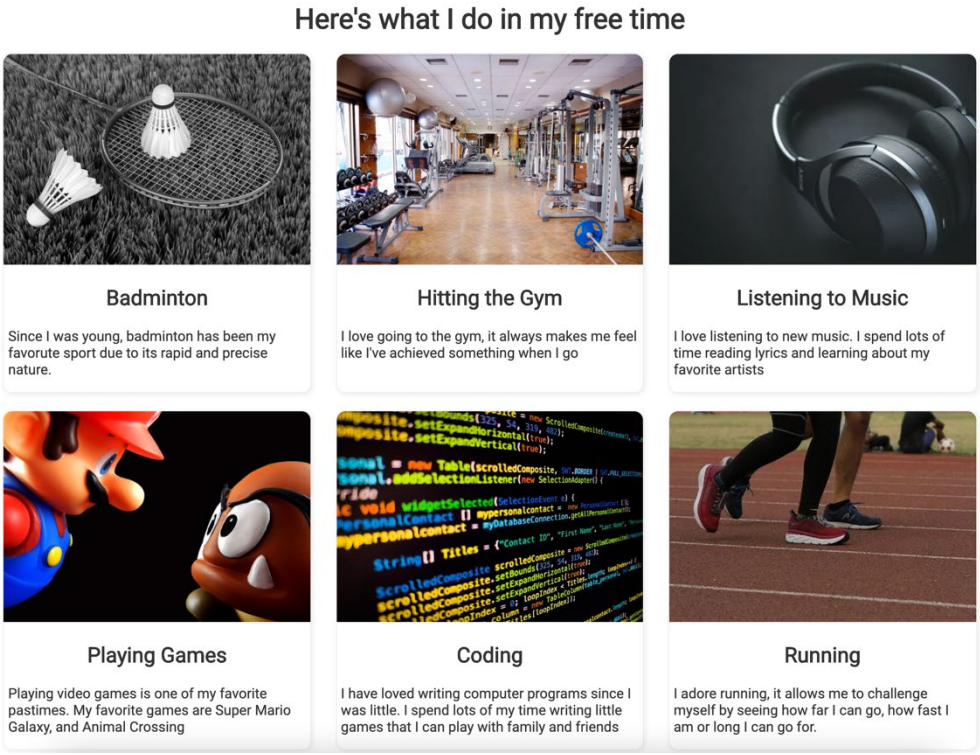

Figure 7 Hobbies Page (Desktop, Light Mode)

This page takes data from a JSON file which contains information about my hobbies and procedurally generates each card component at render time.

This page uses media queries to change the dimensions of the grid when the user is on a mobile device.

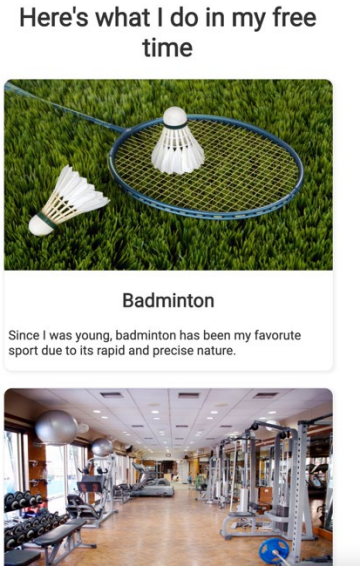

Figure 8 Hobbies Page (Mobile, Light Mode)

Coursework

Animation