



PROJECT REPORT

The Universe

CHARITHA PIERIS

BSCP|CS|62|114



CONTENT

CONTENT	1
ABSTRACTION	2
INTRODUCTION	3
PROJECT OVERVIEW	4
Design Challenges	4
Features and Functions	4
SITE MAP	5
THE CODING CONCEPT	6
HTML and CSS for Structure and Styling	6
Responsive Web Design with Media Queries	7
JavaScript for Interactivity	7
Integration of External Libraries	8
Video Embedding	8
3D Models and Simulations	9
Color Schemes and Dark Theme	10
Graphic Design and Visual Elements	11
Forms and stuffs	11
Content Structure and Navigation	12
THE FINAL WEBPAGE	13
PROJECT TIMELINE	15
The Request for Proposal timeline is as follows	15



ABSTRACTION

I propose to create a dynamic and engaging website titled "The Universe". This is an interactive website aimed at exploring the universe, space exploration, and celestial phenomena. It will be an evolving project, continuously updated with fresh content to keep users engaged. The aim is to ignite curiosity about the universe, inspiring the next generation of space enthusiasts and scientists. The website will provide a captivating experience for space enthusiasts, science enthusiasts, students, and anyone curious about the cosmos.



INTRODUCTION

"The Universe" is an online space that aims to educate and ignite curiosity about the universe. It is designed for everyone, from students to aspiring astronauts and admirers of the stars. The website offers an interactive experience with stunning images, videos, and stories, making space exploration accessible and enjoyable. It blends science and creativity, transporting users to distant galaxies, planet surfaces, and deep space depths. The website uses HTML to transport users to distant galaxies, allowing them to explore the mysteries of the cosmos and make learning about space an informative and thrilling experience.

PROJECT OVERVIEW

The website "The Universe" was designed to address several key challenges while incorporating unique features and functions to create an engaging and educational platform for users. Here's an overview of the design challenges and the features/functions of the system.

Design Challenges

Content Presentation: Presenting complex astronomical information in an easily understandable and visually appealing manner was a significant challenge. The system needed to offer scientifically accurate content that appeals to a diverse audience.

User Engagement: Engaging users and fostering their curiosity about the universe was another challenge. The website had to be more than just informative; it needed to be interactive and visually captivating.

Accessibility: Ensuring that the website is accessible to a broad range of users, including science students, educators, space enthusiasts, and the general public, required careful design consideration.

Features and Functions

Informative Content: The system offers a wealth of scientifically accurate information about celestial objects, space missions, and cosmic phenomena. Content is structured to cater to both educational and enthusiast needs.

Visual Extravaganza: Breathtaking images, videos, and animations are used to bring the universe to life. These visuals serve the dual purpose of educating and evoking a sense of wonder and awe.

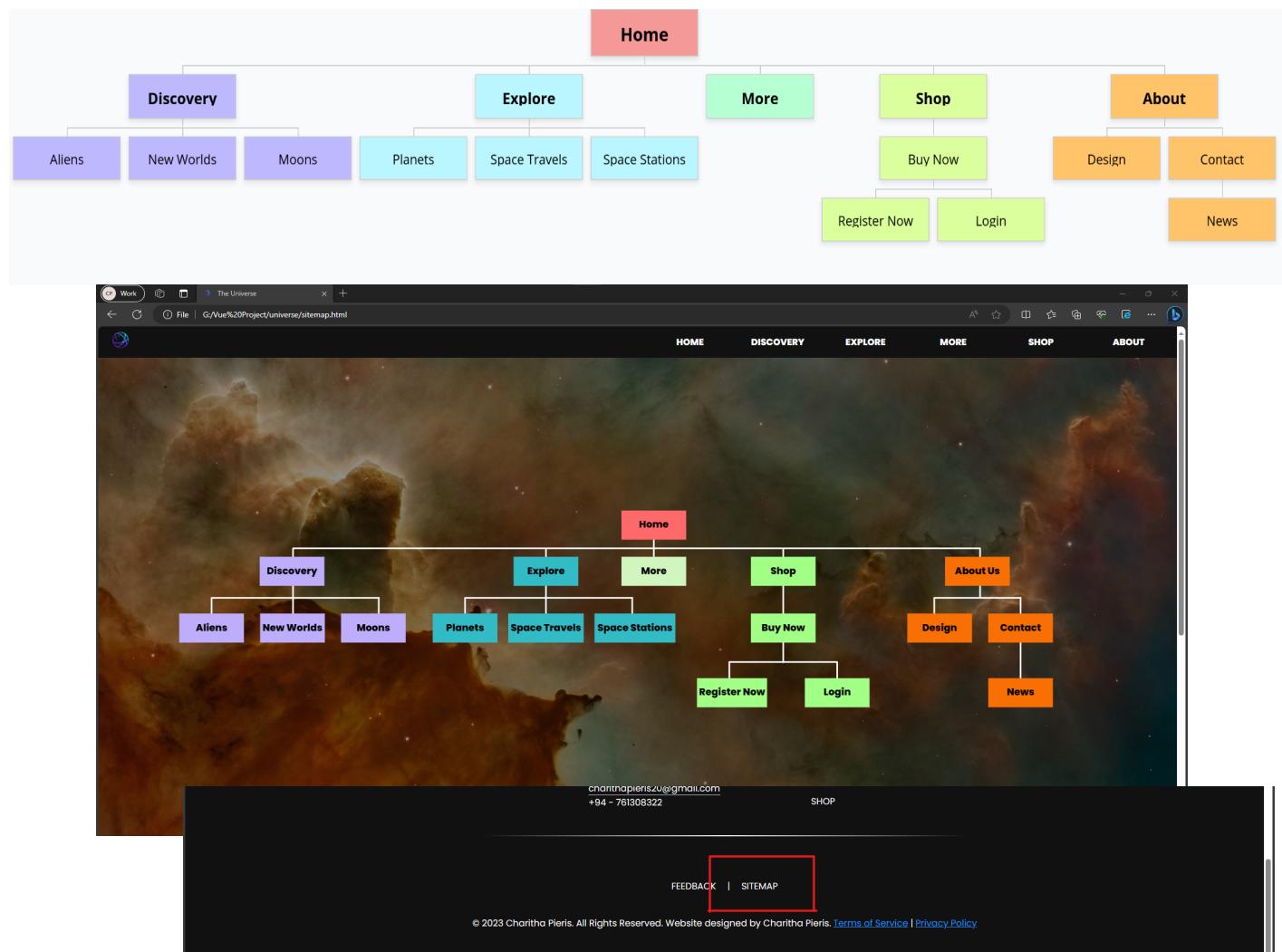
Interactive Learning: The system integrates interactive elements, including 3D celestial object explorations, quizzes, and simulations. These features actively engage users and help them gain a deeper understanding of complex space-related concepts.

Immersive Design: To create an immersive experience, the website employs a dark-themed background reminiscent of the cosmos. This design choice transports users into the depths of space, setting the stage for an exploratory journey.

Innovative Visualizations: Creative data visualizations, such as interactive 3D models of planets, stars, and galaxies, allow users to interact with celestial bodies in novel and informative ways. This innovation simplifies the understanding of complex astronomical data.

Unique Interactive Experiences: The system offers unique features like a "Virtual Planetarium" for real-time constellation exploration and an "Extraterrestrial Life Simulator" for speculating about life on other planets. These unexpected elements provide novelty and entertainment.

SITE MAP



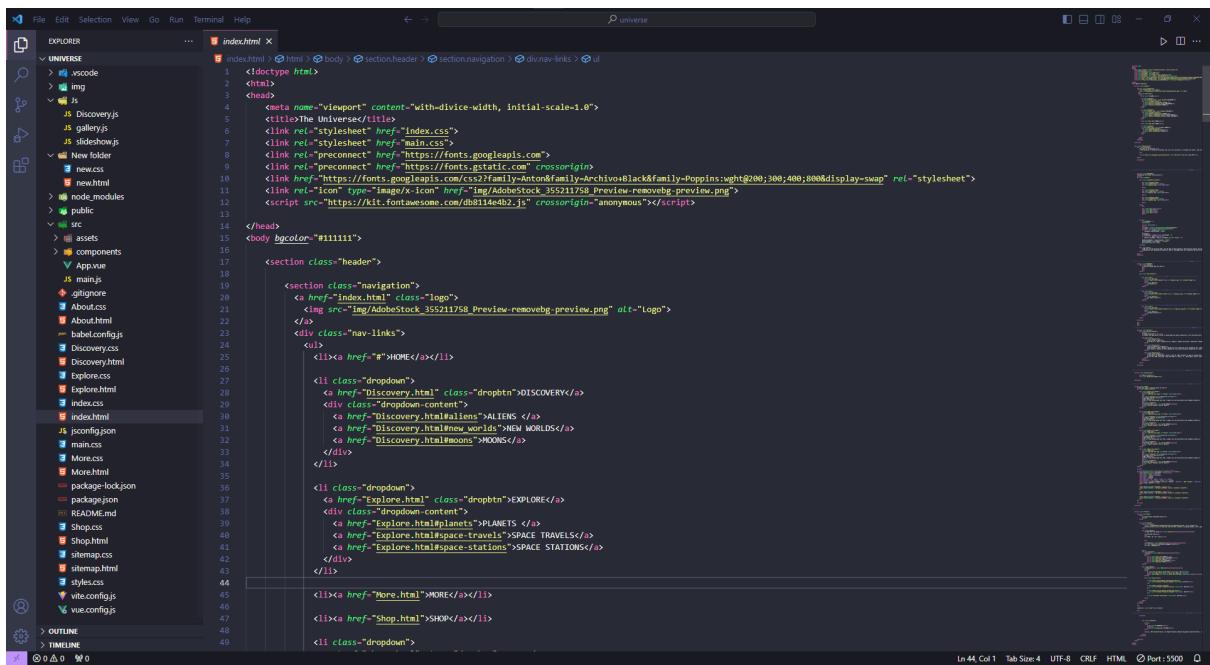
Added the site map to the footer & the site map also linked to the pages

THE CODING CONCEPT

HTML and CSS for Structure and Styling

HTML and CSS were chosen to provide the foundational structure and styling of the website. HTML was used for content structuring, while CSS was employed for design and layout. This choice allowed for clear separation of content and presentation, making the website more maintainable and customizable.

This is the html and css overview of the website

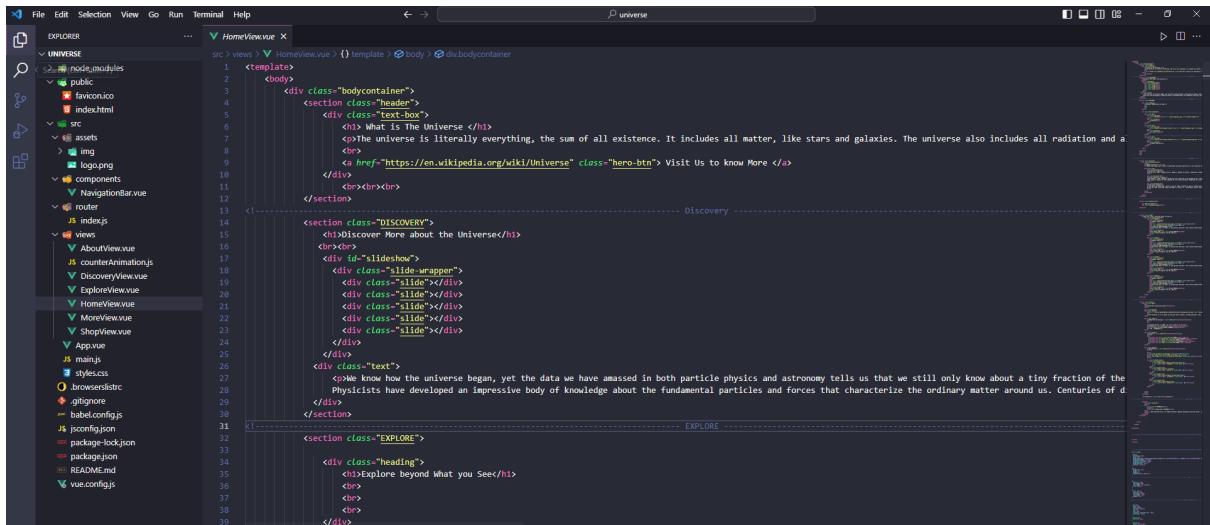


```

<!DOCTYPE html>
<html>
  <head>
    <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
    <title>The Universe</title>
    <link rel="stylesheet" href="index.css"/>
    <link rel="stylesheet" href="main.css"/>
    <link rel="preconnect" href="https://fonts.googleapis.com"/>
    <link rel="preconnect" href="https://fonts.gstatic.com"/>
    <link href="https://fonts.googleapis.com/css2?family=Black+Fly+Doppin:wght@200,300,400,800&display=swap" rel="stylesheet"/>
    <link rel="icon" type="image/x-icon" href="img/AdobeStock_355211758_Preview-removebg-preview.png"/>
    <script src="https://kit.fontawesome.com/db8114e4b2.js" crossorigin="anonymous"></script>
  </head>
  <body bg-color="#111111">
    <section class="header">
      <section class="navigation">
        <a href="#">HOME</a>
        
      </section>
      <div class="nav-links">
        <ul>
          <li><a href="#">HOME</a></li>
          <li class="dropdown">
            <a href="Discovery.html" class="dropdownn">DISCOVERY</a>
            <div class="dropdown-content">
              <a href="Discovery.html#aliens">ALIENS</a>
              <a href="Discovery.html#new-worlds">NEW WORLDS</a>
              <a href="Discovery.html#moons">MOONS</a>
            </div>
          </li>
          <li class="dropdown">
            <a href="Explore.html#planets">PLANETS</a>
            <a href="Explore.html#space-travel">SPACE TRAVEL</a>
            <a href="Explore.html#space-stations">SPACE STATIONS</a>
          </div>
        </ul>
        <li><a href="More.html">MORE</a></li>
        <li><a href="Shop.html">SHOP</a></li>
        <li class="dropdown">
      </div>
    </section>
  </body>

```

This is the Structure overview in .vue



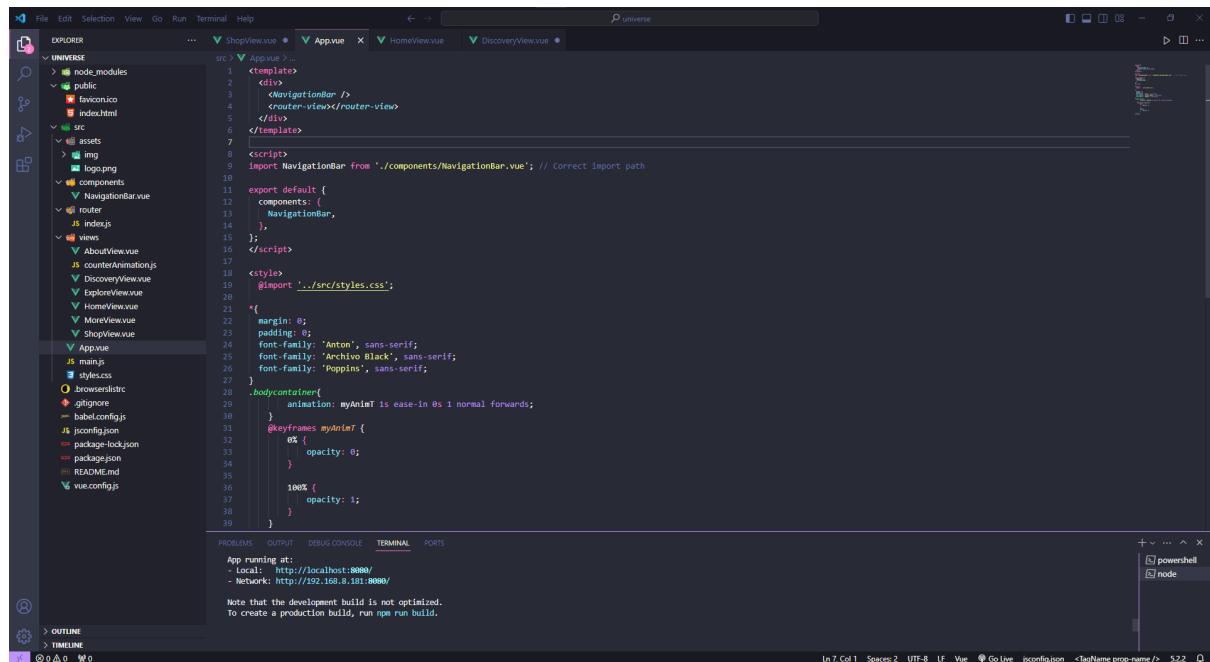
```

<template>
  <div>
    <div class="bodycontainer">
      <section class="header">
        <div class="text-box">
          <h1> What is The Universe </h1>
          <p>The universe is literally everything, the sum of all existence. It includes all matter, like stars and galaxies. The universe also includes all radiation and a</p>
          <a href="https://en.wikipedia.org/wiki/Universe" class="hero-btn"> Visit Us to know More </a>
        </div>
        <br><br>
      </section>
      <section class="DISCOVERY">
        <h2>Discover More about the Universe</h2>
        <div id="slideShow">
          <div class="slide-wrapper">
            <div class="slide"></div>
            <div class="slide"></div>
            <div class="slide"></div>
            <div class="slide"></div>
            <div class="slide"></div>
          </div>
        </div>
        <div class="text">
          <p>We know how the universe began, yet the data we have amassed in both particle physics and astronomy tells us that we still only know about a tiny fraction of the Physics have developed an impressive body of knowledge about the fundamental particles and forces that characterize the ordinary matter around us. Centuries of d</p>
      </section>
      <section class="EXPLORE">
        <div class="heading">
          <h2>Explore beyond What you See</h2>
        </div>
        <br>
        <br>
        <br>
      </div>
    </div>
  </div>

```

Responsive Web Design with Media Queries

To ensure accessibility on various devices, I implemented responsive web design using media queries in CSS. This way, the website adapts its layout and styling based on the user's device, whether it's a desktop, tablet, or smartphone.



```

<template>
  <div>
    <NavigationBar />
    <router-view></router-view>
  </div>
</template>

<script>
  import NavigationBar from './components/NavigationBar.vue'; // Correct import path
</script>

<style>
  import '../src/styles.css';

  * {
    margin: 0;
    padding: 0;
    font-family: 'Anton', sans-serif;
    font-family: 'Archivo Black', sans-serif;
    font-family: 'Poppins', sans-serif;
  }

  .bodycontainer {
    animation: myAnimT ease-in 0s 1 normal forwards;
  }

  @keyframes myAnimT {
    0% {
      opacity: 0;
    }
    100% {
      opacity: 1;
    }
  }
</style>

```

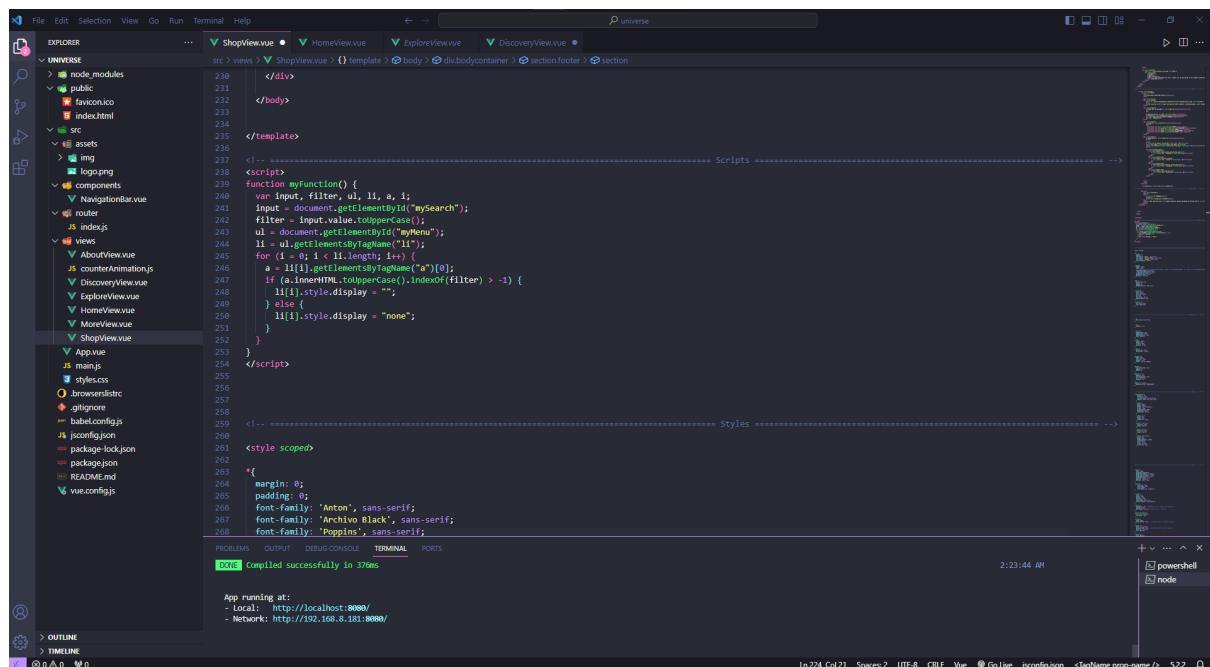
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

App running at:
- Local: http://localhost:8080/
- Network: http://192.168.8.181:8080/

Note that the development build is not optimized.
To create a production build, run `npm run build`.

JavaScript for Interactivity

JavaScript was essential for creating interactive elements. For instance, the 3D celestial object explorations and simulations were made possible through JavaScript. It added dynamism to the content and improved the user experience.



```

<template>
  <div>
    <input type="text" v-model="mySearch" />
    <ul id="myMenu">
      <li v-for="i in 10" :key="i">Item<i></i></li>
    </ul>
  </div>
</template>

<script>
  function myFunction() {
    var input, filter, ul, li, a, i;
    input = document.getElementById("mySearch");
    filter = input.value.toUpperCase();
    ul = document.getElementById("myMenu");
    li = ul.getElementsByTagName("li");
    for (i = 0; i < li.length; i++) {
      a = li[i].getElementsByTagName("a")[0];
      if (a.innerHTML.toUpperCase().indexOf(filter) > -1) {
        li[i].style.display = "";
      } else {
        li[i].style.display = "none";
      }
    }
  }
</script>

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

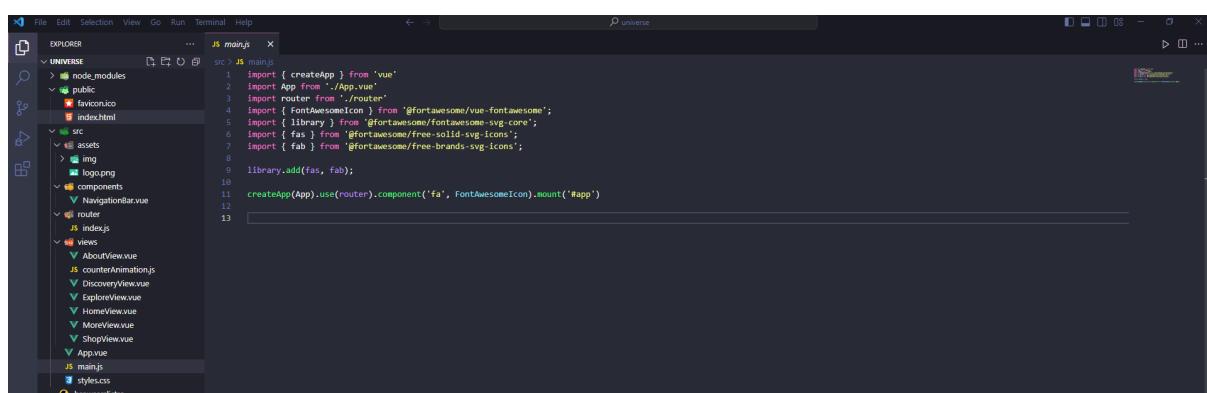
DONE Compiled successfully in 37ms 2:23:44 AM

App running at:
- Local: http://localhost:8080/
- Network: http://192.168.8.181:8080/

Integration of External Libraries

I utilized external libraries like Font Awesome and Google Fonts for additional design and functionality enhancements. Font Awesome icons were used to integrate social media links, while Google Fonts allowed for a wide variety of font choices to enhance the aesthetics of the website.

```
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>The Universe </title>
  <link rel="stylesheet" href="Explore.css">
  <link rel="stylesheet" href="main.css">
  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link href="https://fonts.googleapis.com/css2?family=Anton&family=Archivo+Black&family=Poppins:wght@200;300;400;800&display=swap" rel="stylesheet">
  <link href="img/AdobeStock_355211758_Preview-removebg-preview.png" type="image/x-icon" href="img/AdobeStock_355211758_Preview-removebg-preview.png">
  <script src="https://kit.fontawesome.com/db8114e4b2.js" crossorigin="anonymous"></script>
</head>
```



Video Embedding

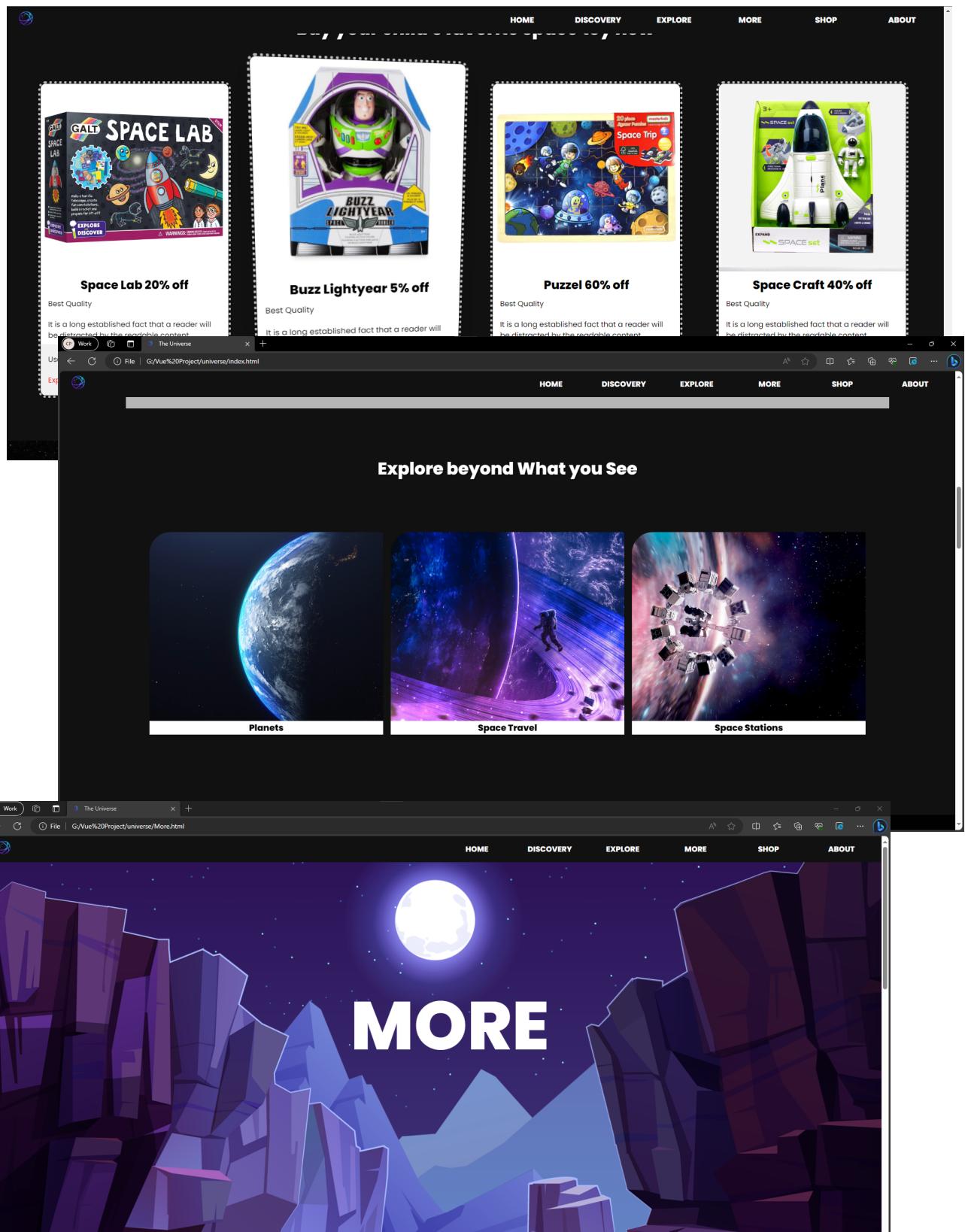
Video content was an important part of the website to showcase astronomical phenomena. HTML5 video elements with embedded videos from external sources were used to seamlessly integrate video content, enhancing the visual appeal of the site.



```
<section class="video">
  <iframe class="myvideo" width="560" height="315" src="https://www.youtube.com/embed/oLrOnEmy_GA"
    title="How does the International Space Station work?" frameborder="0" allow="accelerometer; autoplay;
    clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share" allowfullscreen></iframe>
</section>
</section>
```

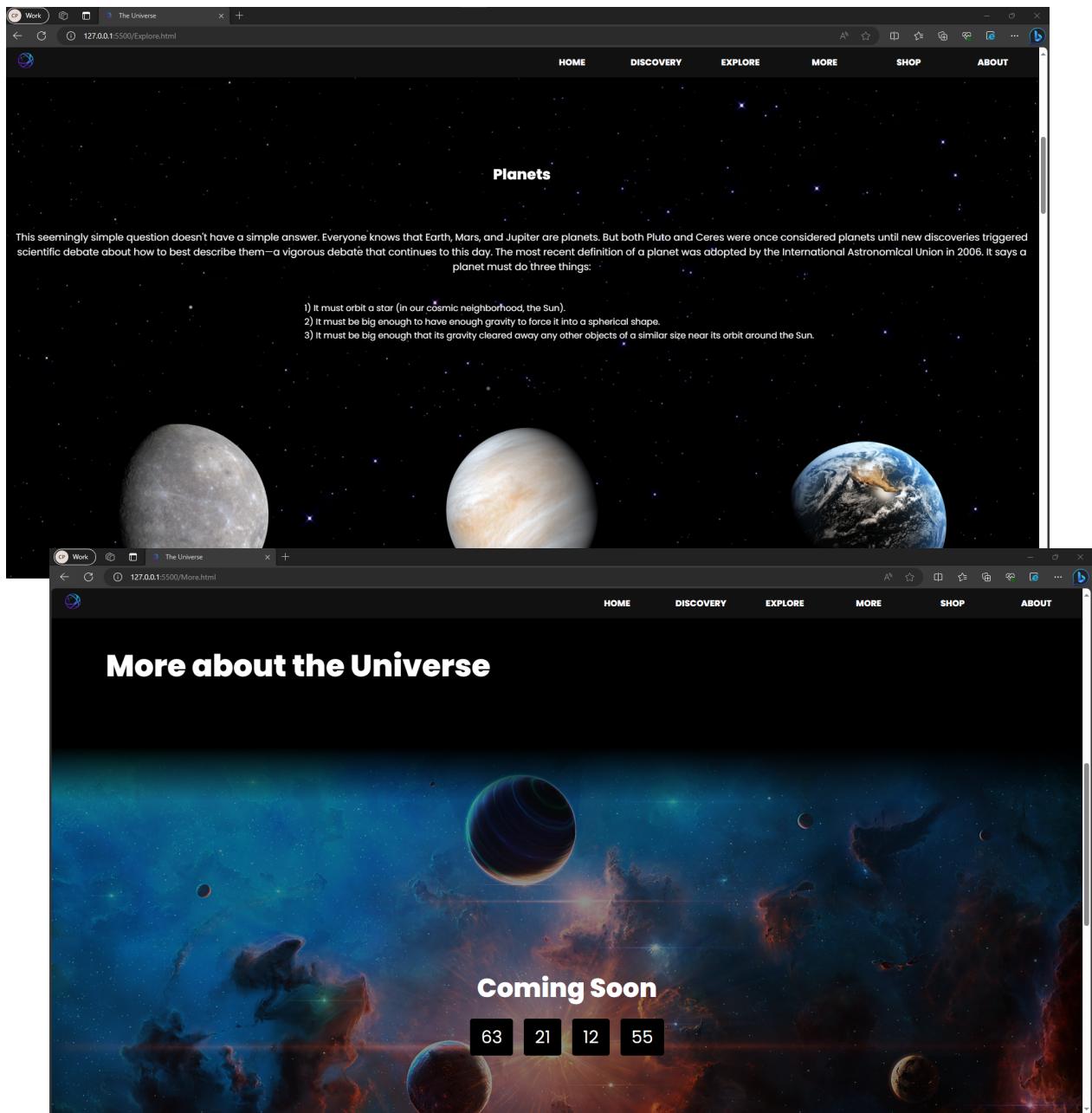
3D Models and Simulations

To simplify the understanding of complex astronomical data, I incorporated 3D models and simulations using JavaScript libraries or frameworks. These features allowed users to interact with celestial bodies in an innovative and informative way.



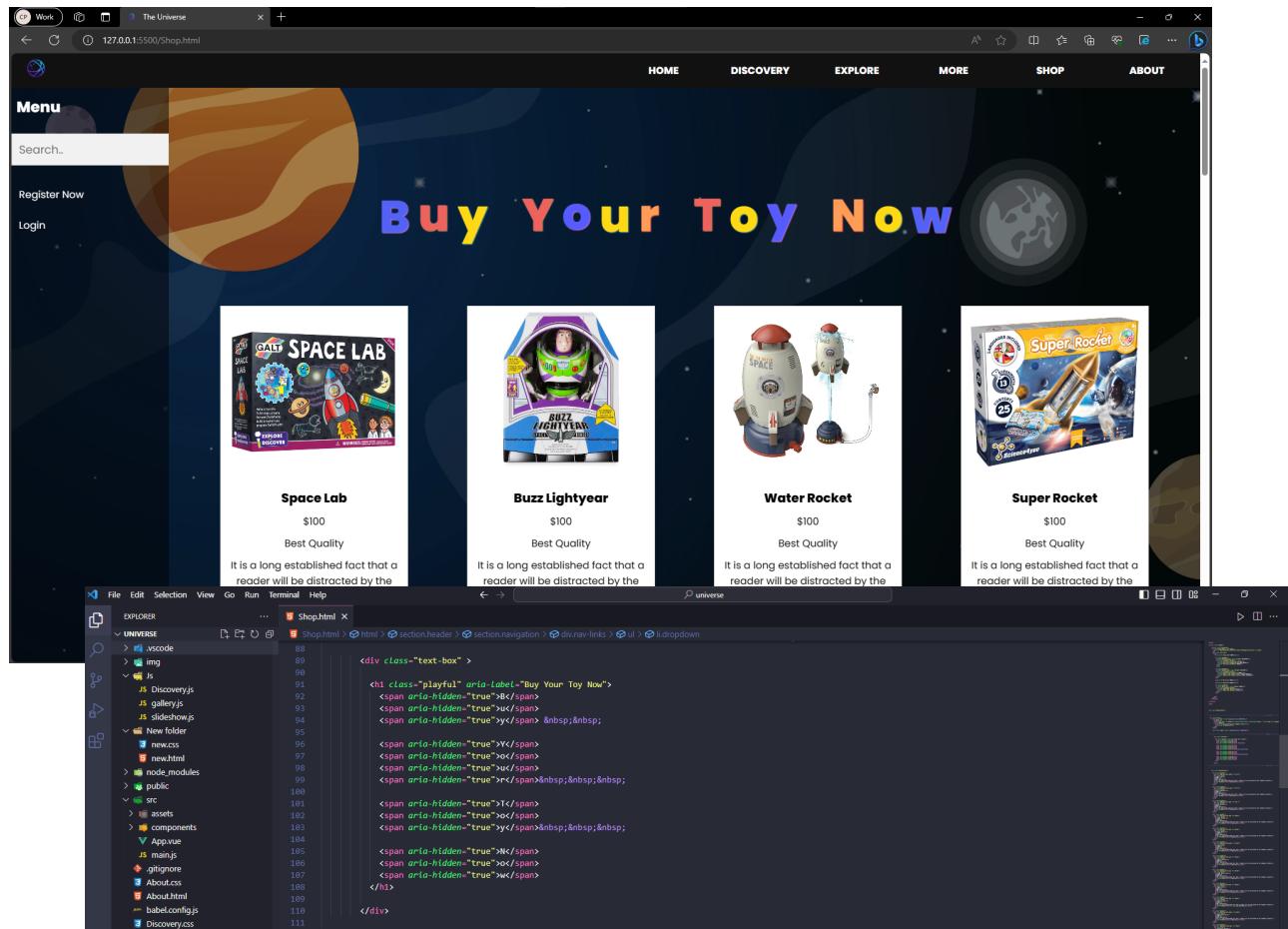
Color Schemes and Dark Theme

The choice of a dark-themed background, reminiscent of the cosmos, was a creative decision to immerse users in the experience. It aligned with the theme of exploring space and added an aesthetic appeal to the site.

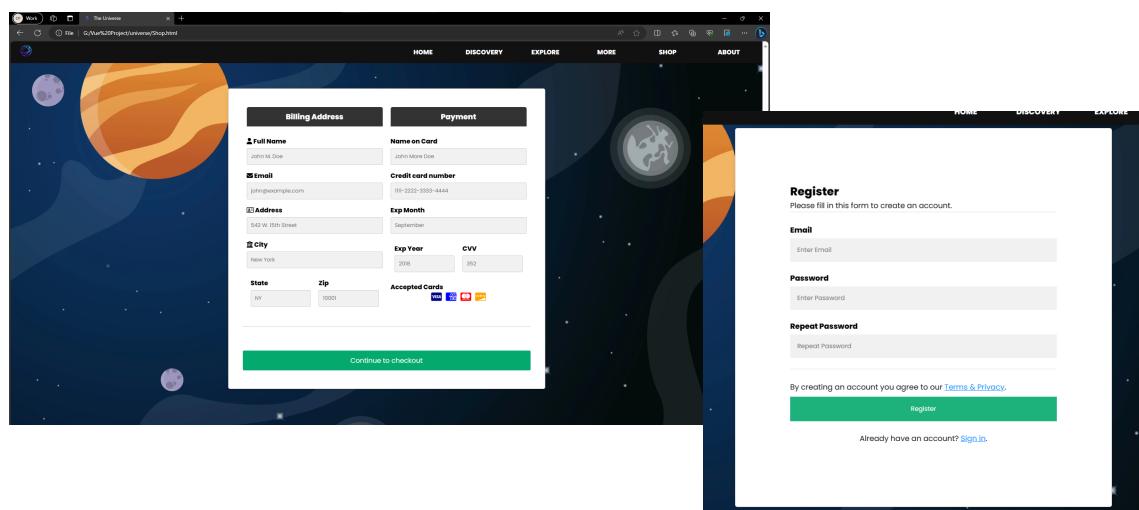


Graphic Design and Visual Elements

Design elements, including background images, diagrams, and animations, were carefully selected and integrated to create a visually engaging experience. For example, images of celestial objects were used to complement the content and evoke a sense of wonder.



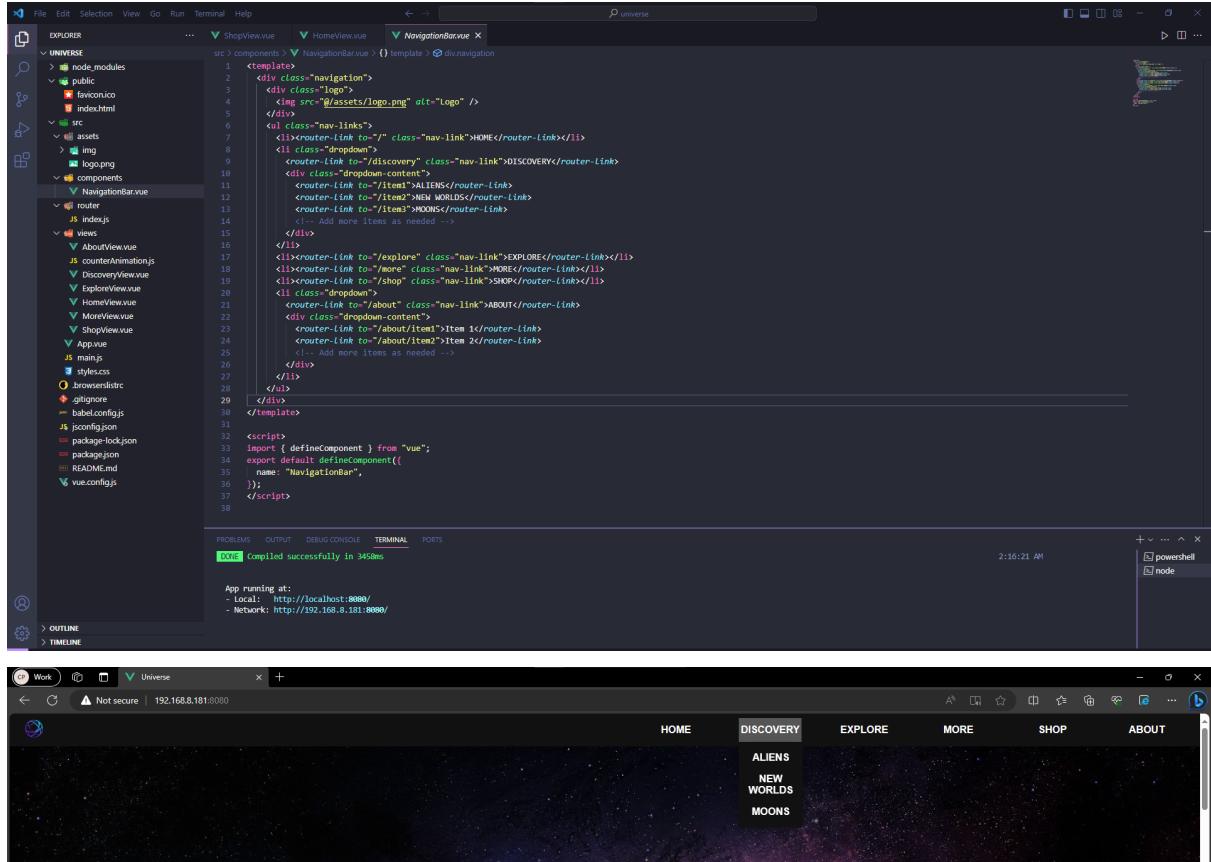
Forms and stuffs



Content Structure and Navigation

Proper HTML structuring with navigation links ensured a user-friendly experience with the site map. Users could easily explore different sections of the website, fostering a smooth and logical flow of content.

This is the Navigation bar with the router links in .vue



```

<template>
  <div class="navigation">
    
    <ul class="nav-links">
      <li><router-link to="/" class="nav-link">HOME</router-link></li>
      <li><router-link to="/discovery" class="nav-link">DISCOVERY</router-link></li>
      <li><router-link to="/explore" class="nav-link">EXPLORE</router-link></li>
      <li><router-link to="/more" class="nav-link">MORE</router-link></li>
      <li><router-link to="/shop" class="nav-link">SHOP</router-link></li>
      <li><router-link to="/about" class="nav-link">ABOUT</router-link></li>
    </ul>
  </div>
</template>
<script>
import { defineComponent } from "vue";
export default defineComponent({
  name: "NavigationBar",
});
</script>

```

THE FINAL WEBPAGE

The image displays three screenshots of a website titled "The Universe" across different sections: Home, Discovery, and Explore.

Home Page:

- Header:** A dark background featuring a starry space scene with nebulae.
- Title:** "What is The Universe"
- Text:** "The universe is literally everything, the sum of all existence. It includes all matter, like stars and galaxies. The universe also includes all radiation and all other forms of energy. No matter where or when you exist, you are a part of the universe, as is everything you experience. There is nothing outside the universe, because anything that exists is automatically included in the definition of the universe."
- Call-to-action:** "Visit Us to know More"
- Footer:** "Stay Connected" with social media icons for Facebook, Twitter, LinkedIn, and YouTube.
- Contact Information:** Charitha Pieris, BSCP | CS | 62 | I14; charithapieris20@gmail.com; +94 - 761308322.
- Navigation:** HOME, DISCOVERY, EXPLORE, MORE, SHOP, ABOUT.

Discovery Page:

- Header:** A dark background featuring a large planet Earth.
- Title:** "Stay Connected"
- Text:** "The universe is all of space and time and their contents, including planets, stars, galaxies, and all other forms of matter and energy."
- Footer:** "Page Edit and Design" by Charitha Pieris, BSCP | CS | 62 | I14; "Links" to HOME, DISCOVERY, MORE, EXPLORE, SHOP; "Newsletter" input field; "Contact" information: charithapieris20@gmail.com; +94 - 761308322.
- Navigation:** HOME, DISCOVERY, EXPLORE, MORE, SHOP, ABOUT.

Explore Page:

- Header:** A dark background featuring a starry space scene with nebulae.
- Title:** "Discover The Universe"
- Text:** "The universe is literally everything, the sum of all existence. It includes all matter, like stars and galaxies. The universe also includes all radiation and all other forms of energy. No matter where or when you exist, you are a part of the universe, as is everything you experience. There is nothing outside the universe, because anything that exists is automatically included in the definition of the universe."
- Statistics:**
 - Confirmed Discoveries:** 3222
 - Candidates:** 5370
 - Planetary Systems:** 2685
- Navigation:** HOME, DISCOVERY, EXPLORE, MORE, SHOP, ABOUT.

The Universe

[HOME](#) [DISCOVERY](#) [EXPLORE](#) [MORE](#) [SHOP](#) [ABOUT](#)

Space Stations

The International Space Station is a large spacecraft in orbit around Earth. It serves as a home where crews of astronauts and cosmonauts live. The space station is also a unique science laboratory. Several nations worked together to build and use the space station. The space station is made of parts that were assembled in space by astronauts. It orbits Earth at an average altitude of approximately 250 miles. It travels at 17,500 mph. This means it orbits Earth every 90 minutes. NASA is using the space station to learn more about living and working in space. These lessons will make it possible to send humans farther into space than ever before.

 [Watch on YouTube](#)

The Design

The purpose of a website focused on the universe and space. Many space-related websites aim to educate the public, particularly students and the curious, about astronomy, astrophysics, and space exploration. My aim is also to provide educational resources, articles, videos, and interactive content to promote learning about the universe. My website have a diverse range of target audiences, including: Astronomy Enthusiasts, Students and Educators, Scientists and Researchers, Space Industry Professionals, Space Travel Enthusiasts, Media and Journalists etc.

Stay Connected

Page Edit and Design
Charitha Pieris
BSCP | CS | 62 | II4
Contact
charithapieris20@gmail.com
+94 - 761308322

Links
[HOME](#) [DISCOVERY](#) [EXPLORE](#) [MORE](#) [SHOP](#)

Newsletter
 [→](#)

[Feedback](#) | [Sitemap](#)

© 2023 Charitha Pieris. All Rights Reserved. Website designed by Charitha Pieris. [Terms of Service](#) | [Privacy Policy](#)



PROJECT TIMELINE

The Request for Proposal timeline is as follows

Creating "The Universe" website was a thrilling experience. It's more than just code; it's about sparking curiosity and sharing the wonders of space. I wanted this site to be for everyone, from space lovers to those simply curious about the cosmos, and I'm happy with how it turned out. Designing the website was a mix of creativity and logic. I aimed to make it visually appealing and educational. I chose colors that remind us of space and added interactive 3D models and simulations to make learning fun. The website's design is meant to make you feel like you're exploring space from your screen. The dark theme and high-quality images bring the universe closer. Features like the "Virtual Planetarium" and "Extraterrestrial Life Simulator" are there to surprise and entertain.

In short, "The Universe" is a project born out of my passion for space. It's a place for learning and joy, where I hope users discover the wonders of the universe. It's not just a website; it's an invitation to an amazing journey through space.