Assignment Report

Table of Content

1. PRIOR PLANNING AND RESEARCH

1.1 Prior planning

In the beginning, I first chose one of the seven topics, which was relatively simple, because I didn't have a deep understanding of web production. Finally decided the theme is ‘A beginner’s guide to CSS’.

There are several reasons for choosing this theme. First, I have a great interest in web design. Second, it also involves the application of aesthetics. I can learn a lot of useful design methods with this project. Third, through this project, you can have a deeper understanding of the front-end design.

After deciding on the theme, I was thinking about how to design six pages. My initial idea was the homepage, introduction page, recommended book and useful URL page, CSS page, CSS3 page, help page (some knowledge that might be helpful).

After determining the idea, I drew a draft of the homepage (Picture 1). Provide links to visit other web pages.

Picture1

1.2 Research

During the investigation phase, I referred to Hexo's personal blog webpage[1] and learned how to make the webpage concise and easy to understand. Then learn top web design from Awwwards[2].

After looking at these designs, I understand that designing a webpage must first have a clear theme. The entire website revolves around this theme, before the web design, it is necessary to clarify what the purpose of the website and what it is used for. All pages are made around this content. Clear content has a very important role in ranking. Second, you need to understand the customers in your website's industry and which category your page belongs to.

2. AIMS AND AUDIENCE

2.1 Aims of website

The main purpose of my web page is to introduce CSS and give new web designer an opportunity to learn about CSS. Make it easier for new designer to learn CSS later.

If developer want to learn web design, you must first understand the basics of web design. Web design must understand layout, color matching, image processing, and html5 code. This website is to provide some useful books to help developers learn to master various layout layouts, design styles, html, CSS styles, web page production methods, learn custom production methods, master practical skills, and understand each through web design concepts, the appearance structure, functional layout and layout rules of the webpage. Understand and master the picture design and form design, so that the picture layout can be reasonable and not dull, do not make users disgusted, the page element specification is simple, the font style is unified, the visual effect is unified, and the effect meets the user's habits.

2.2 Target Audience

The audience of this page is mainly for designers who are just starting to learn Html or are interested in html and CSS and want to learn more. Because the

content of the website is very simple, it is mainly about the general theory of CSS. If users want to learn more professionally and systematically, they can study in w3schools, other websites and read related books, which will be more helpful to designers.

3. DESIGN AND CONTENT

This chapter is mainly the embodiment of the design process.

3.1 Web design

In order to make the web page more beautiful I used bulma framework[3] and font-awesome. Code as follow in Picture2:

```
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.1/css/all.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/bulma/0.9.1/css/bulma.min.css">
```

Picture2

The first step is to build the navigation bar and title, the implementation code snippet is as follows Picture3 and Picture4:

```
<header id="header" class="bgc">
    <p class="nav">A beginner's guide</p>
    <p class="nav">to CSS</p>
    <a href="css3.html"> <img id="headerLogo" src="images/cssLogo.png" alt="css header logo image" width="80" height="80">
</header>
```

Picture3

```
<nav>
    <div class="nav-wrapper">
        <div class="spoofer"></div>
        <a class="blue" href="index.html">HOME</a>
        <a class="blue" href="introduction.html">INTRODUCTION</a>
        <a class="blue" href="css.html">CSS</a>
        <a class="blue" href="css3.html">CSS3</a>
        <a class="blue" href="bookandweb.html">BOOK AND WEB</a>
        <a class="blue" href="help.html">HELP</a>
    </div>
</nav>
```

Picture4

The actual effect is as follows picture5:

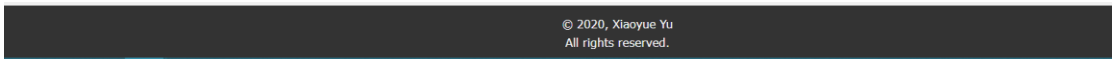
Picture5

The source code of the footer is as follows(Picture6):

```
<footer>
    © 2020, Xiaoyue Yu
    <br>
    All rights reserved.
</footer>
```

Picture6

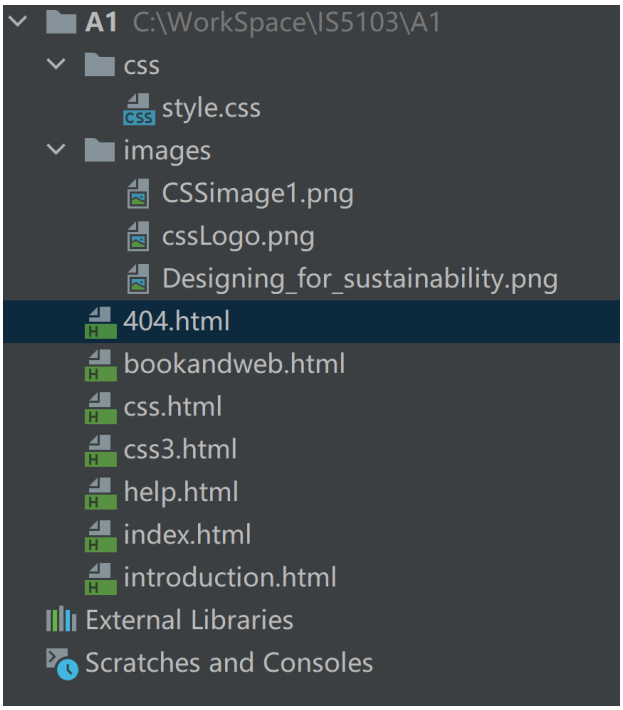
The footer is designed as shown in the figure below in Picture7:



Picture7

The above is a template for handling webpages. All webpages are developed based on this template. Simple pages and careful color selection are conducive to improving the user's perception.

Next is the detailed part of each page. I divided the page into seven pages (the 404 page has not been added yet). The structure of the project is shown in the following figure(Picture8):



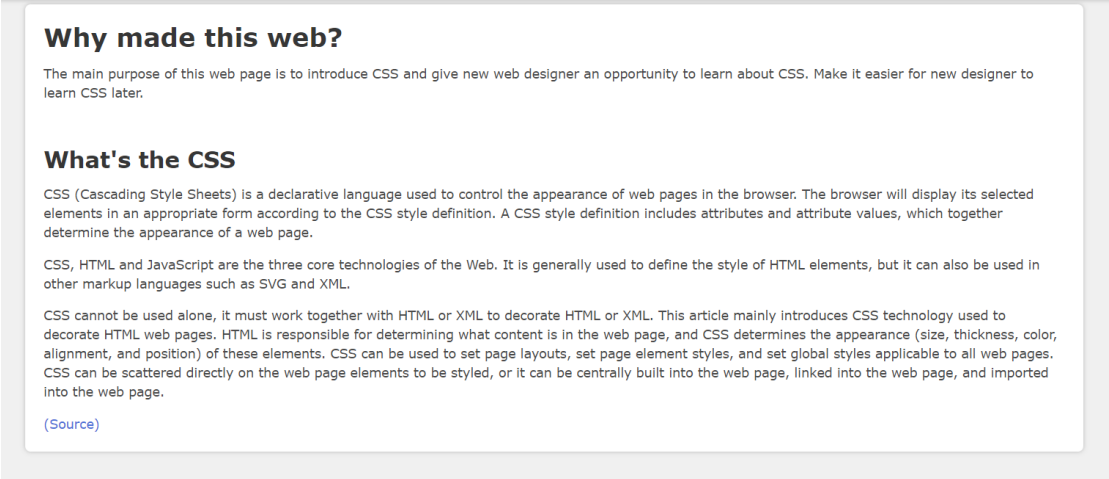
Picture8

Code abbreviation for homepage in Picture9:

```
<div class="section">
    <div class="box">
        <div class="content">
            <a><h1><strong>Why made this web?</strong></h1></a>
            <p...>
        </div>
        <div class="content">
            <h2><strong>What's the CSS</strong></h2>
            <p...>
            <p...>
            <p...>
            <a href="https://en.wikipedia.org/wiki/CSS">(Source)</a>
        </div>
    </div>
</div>
```

Picture9

The display effect is as follows(Picture10):



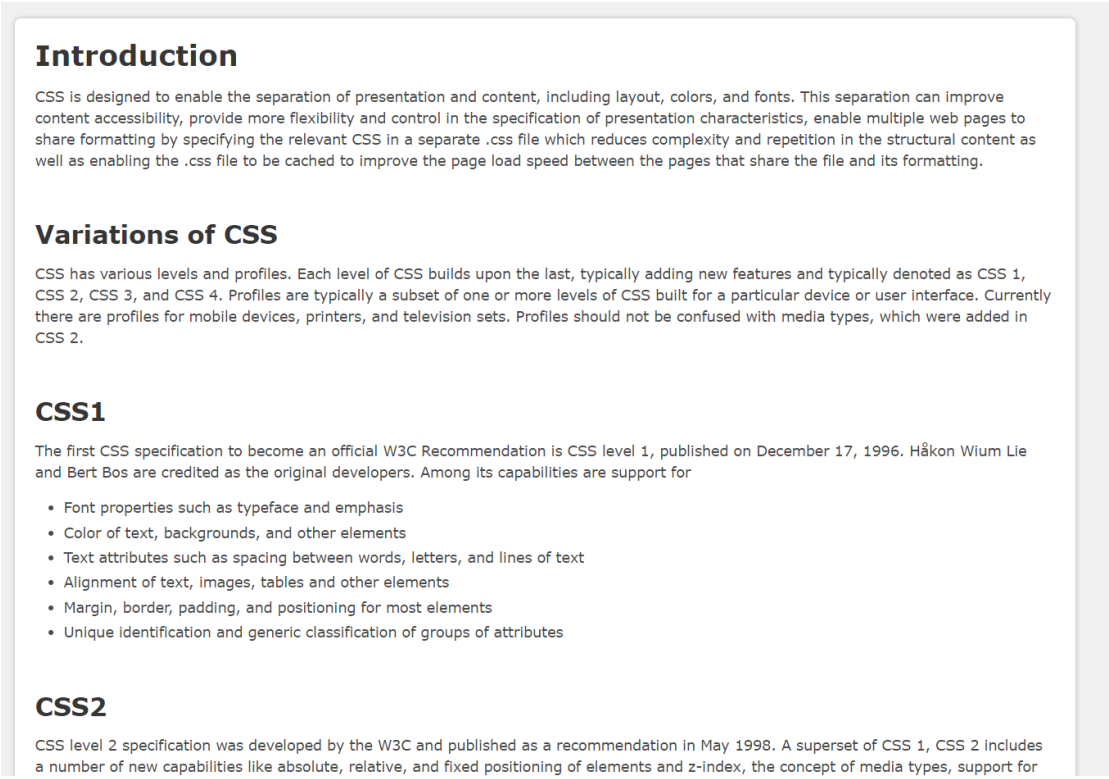
Picture10

Code abbreviation for introduction in Picture11:

```
<div class="tile is-vertical is-parent is-10">
    <div id="box2">
        <div class="box">
            <div class="content">
                <h1><strong>Introduction</strong></h1>
                <p...>
            </div>
            <div class="content">
                <h2><strong>Variations of CSS</strong></h2>
                <p...>
            </div>
            <div class="content">
                <h2><strong>CSS1</strong></h2>
                <p...>
                <ul...>
            </div>
            <div class="content">
                <h2><strong>CSS2</strong></h2>
                <p...>
            </div>
            <div class="content">
                <h2><strong>CSS2.1</strong></h2>
```

Picture11

The display effect is as follows(Picture12):



Introduction

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

Variations of CSS

CSS has various levels and profiles. Each level of CSS builds upon the last, typically adding new features and typically denoted as CSS 1, CSS 2, CSS 3, and CSS 4. Profiles are typically a subset of one or more levels of CSS built for a particular device or user interface. Currently there are profiles for mobile devices, printers, and television sets. Profiles should not be confused with media types, which were added in CSS 2.

CSS1

The first CSS specification to become an official W3C Recommendation is CSS level 1, published on December 17, 1996. Håkon Wium Lie and Bert Bos are credited as the original developers. Among its capabilities are support for

- Font properties such as typeface and emphasis
- Color of text, backgrounds, and other elements
- Text attributes such as spacing between words, letters, and lines of text
- Alignment of text, images, tables and other elements
- Margin, border, padding, and positioning for most elements
- Unique identification and generic classification of groups of attributes

CSS2

CSS level 2 specification was developed by the W3C and published as a recommendation in May 1998. A superset of CSS 1, CSS 2 includes a number of new capabilities like absolute, relative, and fixed positioning of elements and z-index, the concept of media types, support for

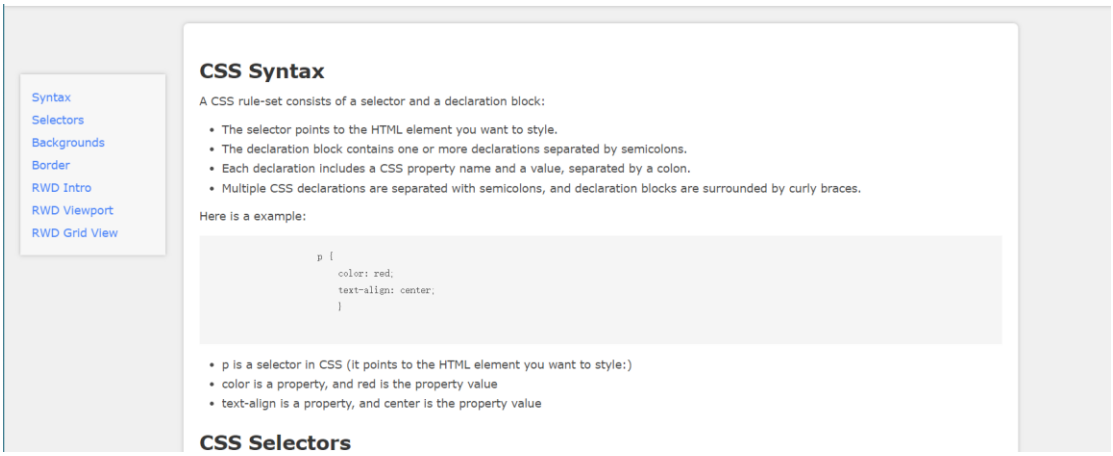
Picture12

Code abbreviation for CSS page in Picture13:

```
<div class="tile is-vertical is-parent is-10">
    <div id="box2">
        <div class="box">
            <article class="content">
                <div id="Syntax">
                    <h2><strong>CSS Syntax</strong></h2>
                    <p>A CSS rule-set consists of a selector and a declaration block:</p>
                    <ul...>
                    <p>Here is a example:</p>
                    <pre...>
                    <ul...>
                </div>
                <div id="Selectors"...>
                <div id="Backgrounds"...>
                <div id="Border"...>
                <div id="RWD-Intro"...>
                <div id="RWD-Viewport"...>
                <div id="RWD-Grid-View"...>
                <a href=https://www.w3schools.com/css/default.asp>(source)</a>
            </article>
        </div>
    </div>
```

Picture13

The display effect is as follows(Picture14):



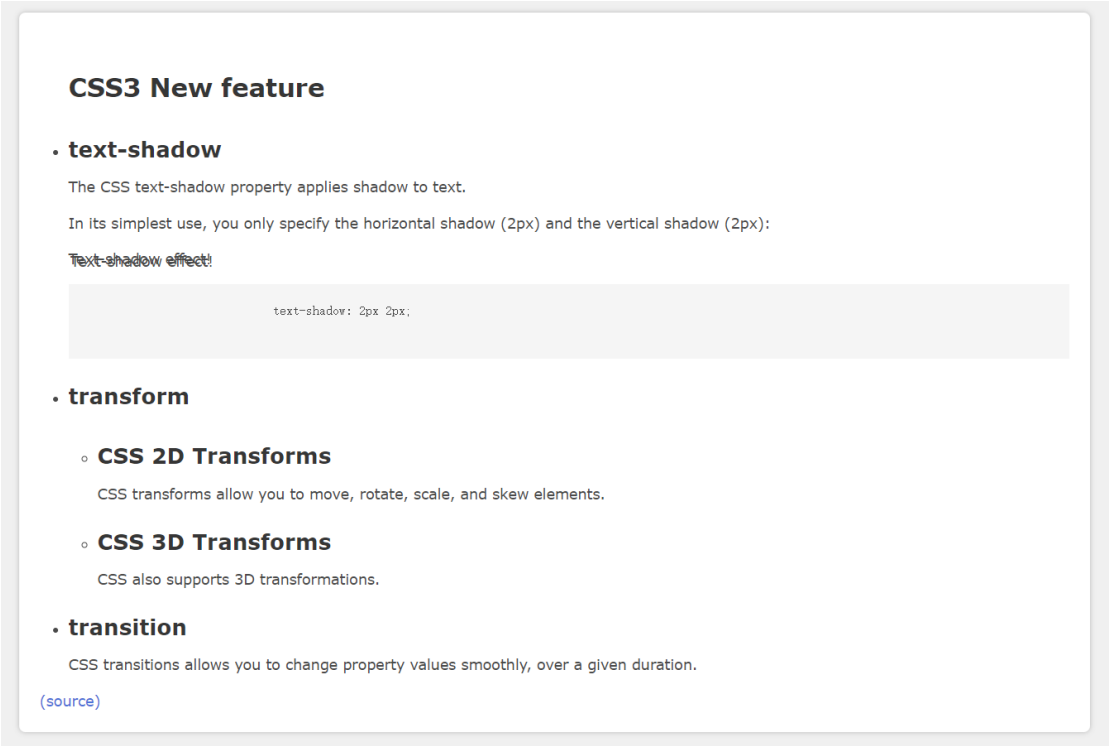
Picture14

Code abbreviation for CSS3 page in Picture15:

```
<div class="tile is-vertical is-parent is-10">
    <div id="box2">
        <div class="box">
            <div class="content">
                <ul>
                    <h2><strong>CSS3 New feature</strong></h2>
                    <li...>
                    <li...>
                    <li...>
                </ul>
                <a href=https://www.w3schools.com/css/default.asp>(source)</a>
            </div>
        </div>
    </div>
</div>
```

Picture15

The display effect is as follows(Picture16):



CSS3 New feature

- **text-shadow**

  The CSS text-shadow property applies shadow to text.

  In its simplest use, you only specify the horizontal shadow (2px) and the vertical shadow (2px):

  Text-shadow effect!

  ```
  text-shadow: 2px 2px;
  ```

- **transform**

  - **CSS 2D Transforms**

    CSS transforms allow you to move, rotate, scale, and skew elements.

  - **CSS 3D Transforms**

    CSS also supports 3D transformations.

- **transition**

  CSS transitions allows you to change property values smoothly, over a given duration.

(source)

Picture16

Code abbreviation for Book and web page in Picture17:

```
<div class="section">
    <div class="container">
        <div class="tile">
            <div class="tile is-vertical is-parent is-10">
                <div id="box2">
                    <div class="box">
                        <div class="content">
                            <h2><strong>Useful Book for developer</strong></h2>
                            <ol>
                                <li...>
                                <li...>
                            </ol>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
</div>
```

Picture17

The display effect is as follows(Picture18):

Useful Book for developer

1. **Designing for Sustainability : A Guide to Building Greener Digital Products and Services**

Pixels use electricity, and a lot of it. If the Internet were a country, it would be the sixth largest in terms of electricity use. That's because today's average web page has surpassed two megabytes in size, leading to slow load times, frustrated users, and a lot of wasted energy. With this practical guide, your web design team will learn how to apply sustainability principles for creating speedy, user-friendly, and energy-efficient digital products and services. Author Tim Frick introduces a web design framework that focuses on four key areas where these principles can make a difference: content strategy, performance optimization, design and user experience, and green hosting. You'll discover how to provide users with a streamlined experience, while reducing the environmental impact of your products and services. Learn why 90% of the data that ever existed was created in the last year Use sustainability principles to innovate, reduce waste, and function more efficiently Explore green hosting, sustainable business practices, and lean/agile workflows Put the right things in front of users at precisely the moment they need them--and nothing more Increase site search

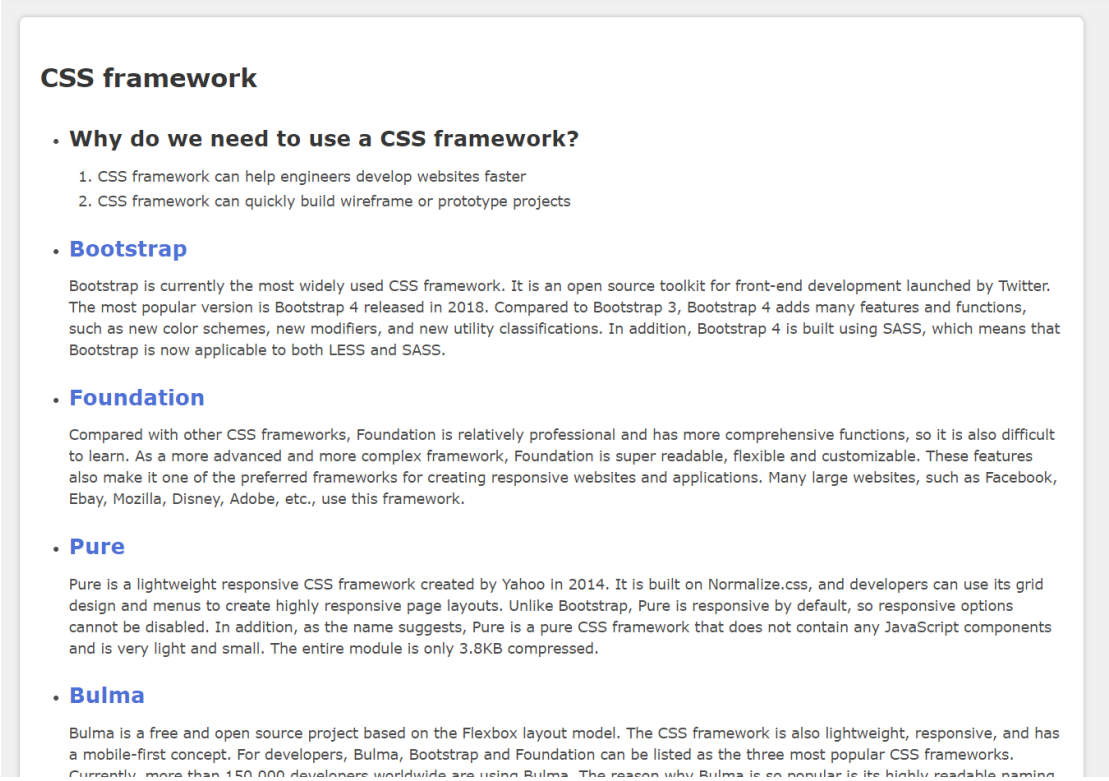
Picture18

Code abbreviation for help page in Picture19:

```
<div class="tile is-vertical is-parent is-10">
    <div id="box2">
        <div class="box">
            <div class="content">
                <h2><strong>CSS framework</strong></h2>
                <ul>
                    <li...>
                    <li...>
                    <li...>
                    <li...>
                    <li...>
                    <li...>
                </ul>
            </div>
        </div>
    </div>
</div>
```

Picture19

The display effect is as follows(Picture20):



CSS framework

- **Why do we need to use a CSS framework?**
  1. CSS framework can help engineers develop websites faster
  2. CSS framework can quickly build wireframe or prototype projects
- **Bootstrap**

  Bootstrap is currently the most widely used CSS framework. It is an open source toolkit for front-end development launched by Twitter. The most popular version is Bootstrap 4 released in 2018. Compared to Bootstrap 3, Bootstrap 4 adds many features and functions, such as new color schemes, new modifiers, and new utility classifications. In addition, Bootstrap 4 is built using SASS, which means that Bootstrap is now applicable to both LESS and SASS.
- **Foundation**

  Compared with other CSS frameworks, Foundation is relatively professional and has more comprehensive functions, so it is also difficult to learn. As a more advanced and more complex framework, Foundation is super readable, flexible and customizable. These features also make it one of the preferred frameworks for creating responsive websites and applications. Many large websites, such as Facebook, Ebay, Mozilla, Disney, Adobe, etc., use this framework.
- **Pure**

  Pure is a lightweight responsive CSS framework created by Yahoo in 2014. It is built on Normalize.css, and developers can use its grid design and menus to create highly responsive page layouts. Unlike Bootstrap, Pure is responsive by default, so responsive options cannot be disabled. In addition, as the name suggests, Pure is a pure CSS framework that does not contain any JavaScript components and is very light and small. The entire module is only 3.8KB compressed.
- **Bulma**

  Bulma is a free and open source project based on the Flexbox layout model. The CSS framework is also lightweight, responsive, and has a mobile-first concept. For developers, Bulma, Bootstrap and Foundation can be listed as the three most popular CSS frameworks. Currently, more than 150,000 developers worldwide are using Bulma. The reason why Bulma is so popular is its highly readable naming

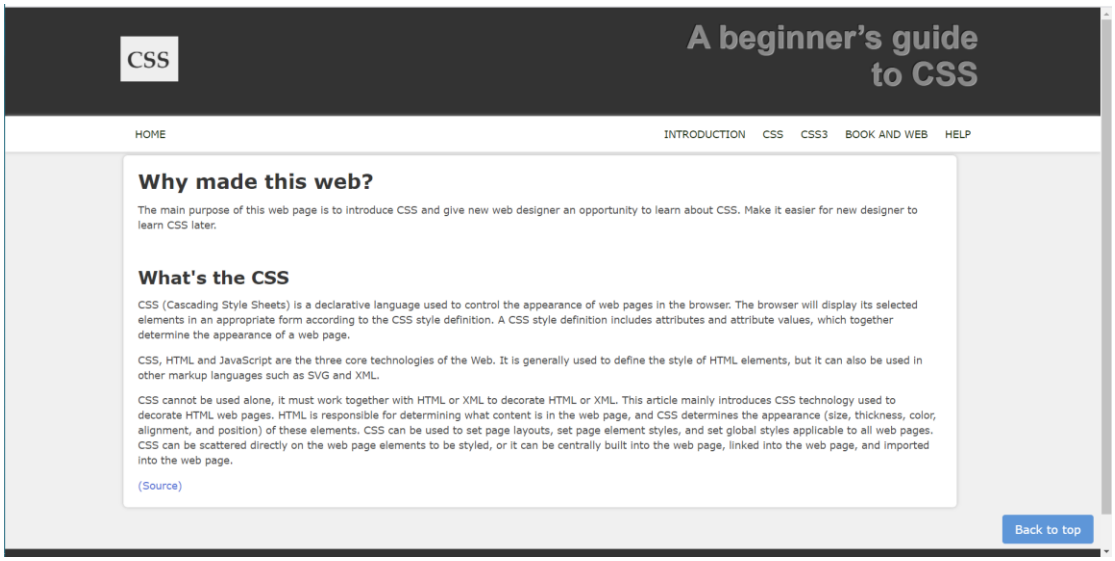
Picture20

3.2 Web content

The main content of the page is quoted from Wiki[4] and w3school[5]. Mainly look for some more useful knowledge and information for beginners.

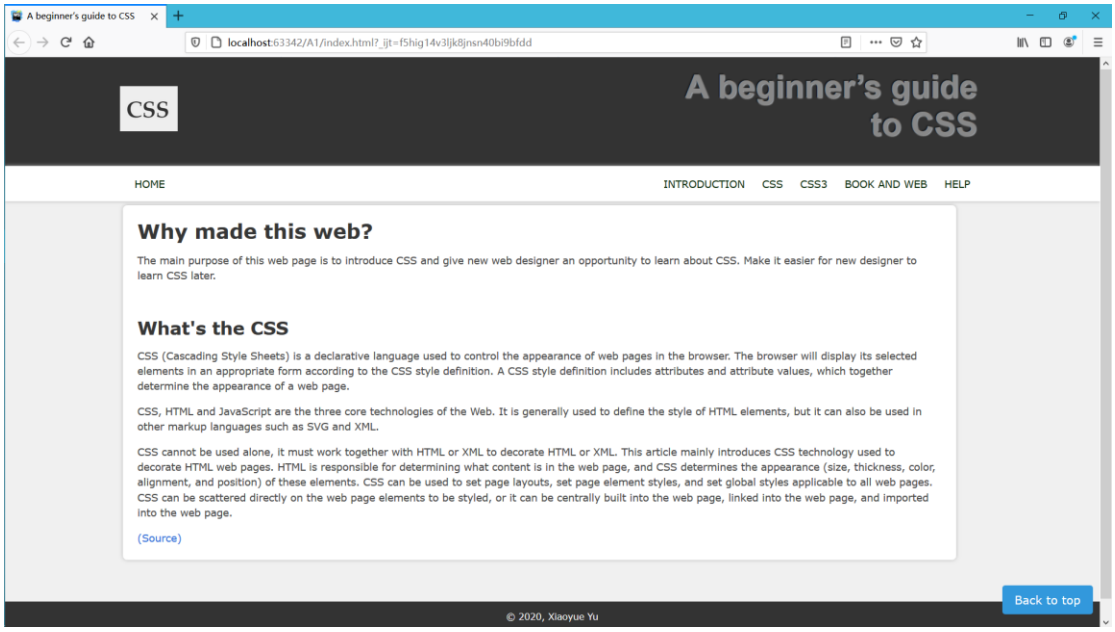
4. ACCSEEIBILITY

4.1 Google Chrome



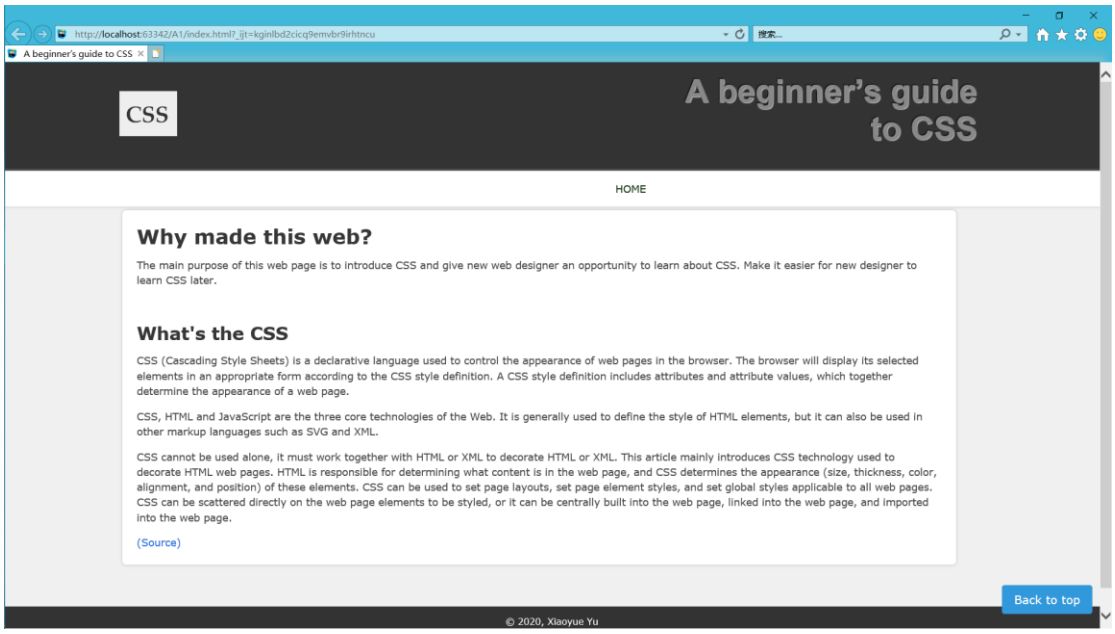
Picture21

4.2 Firefox



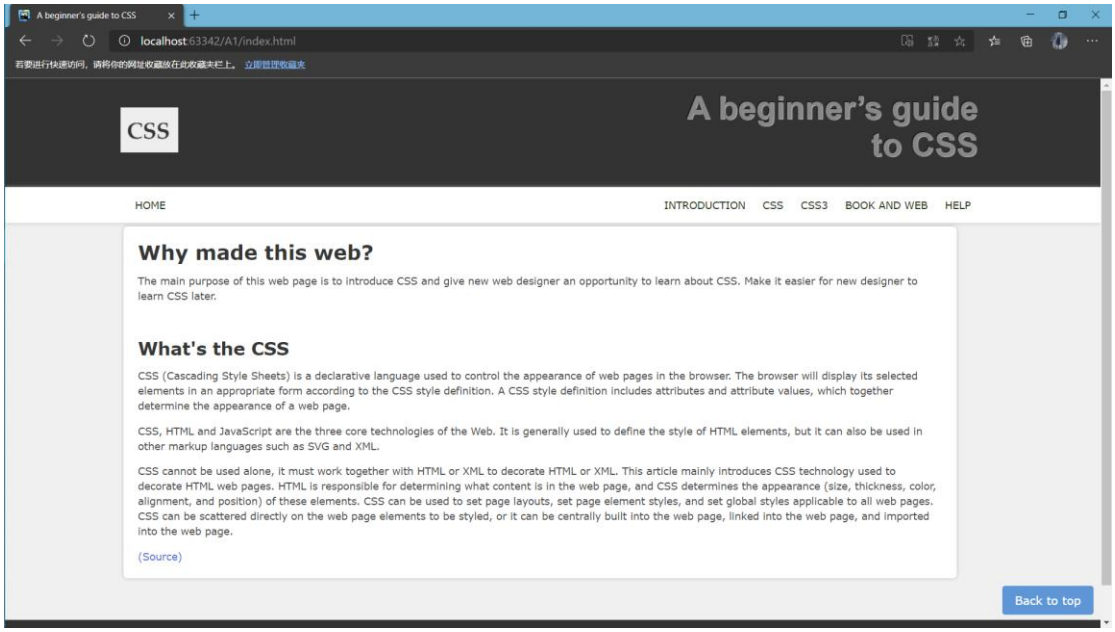
Picture22

4.3 IE



Picture23

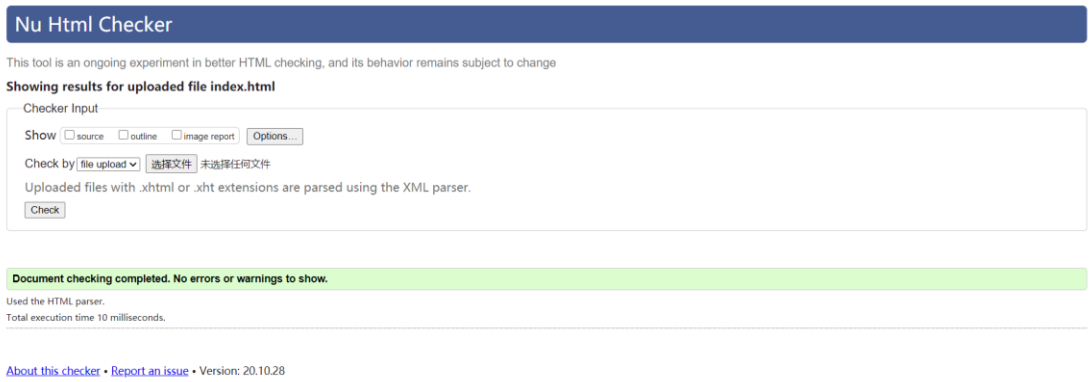
4.4 Edge



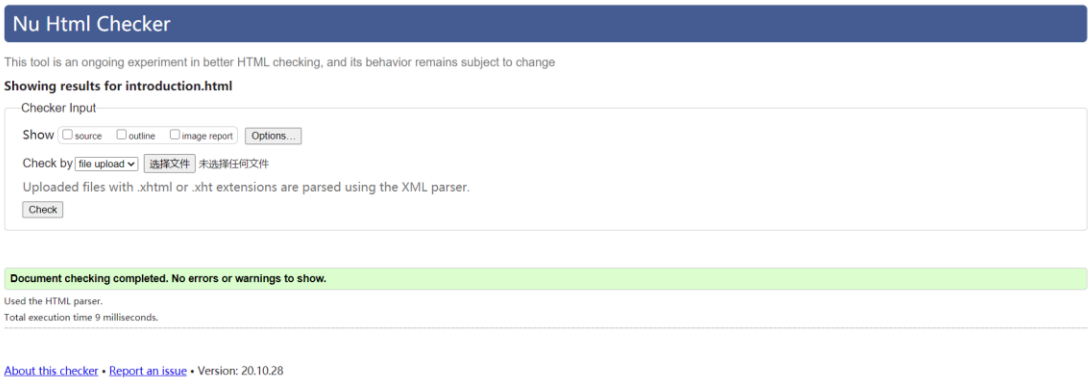
Picture24

5. TESTING

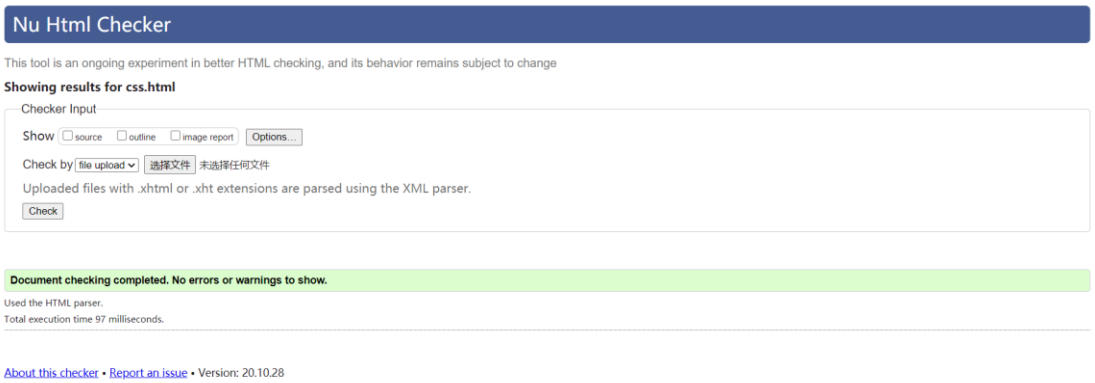
5.1 Code legality testing



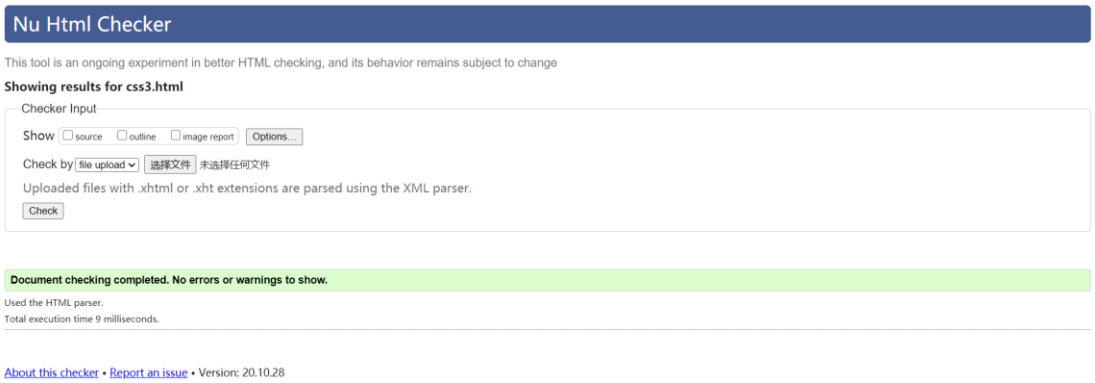
Picture25



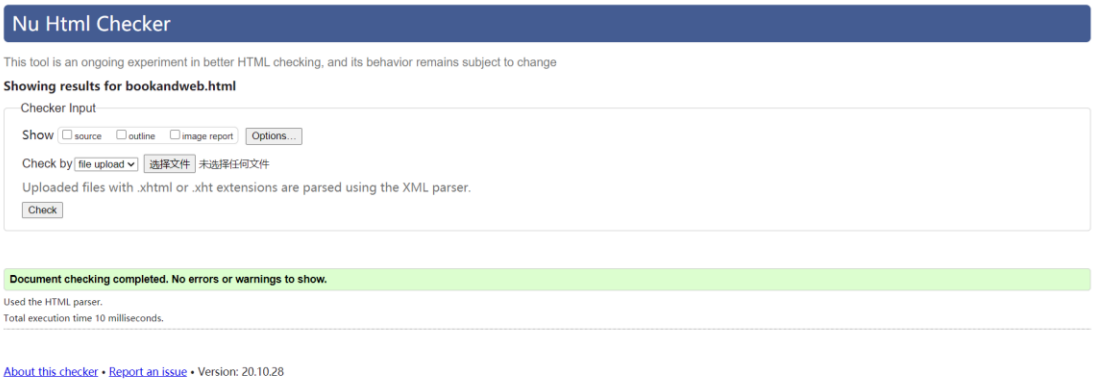
Picture26



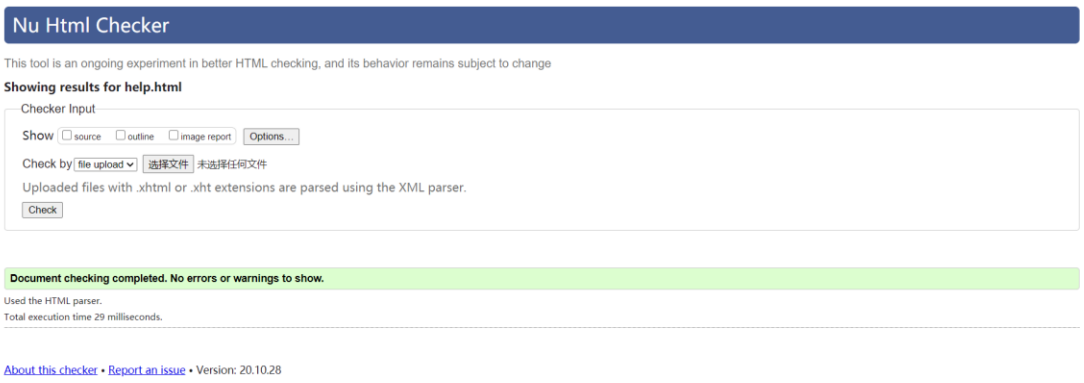
Picture27



Picture28

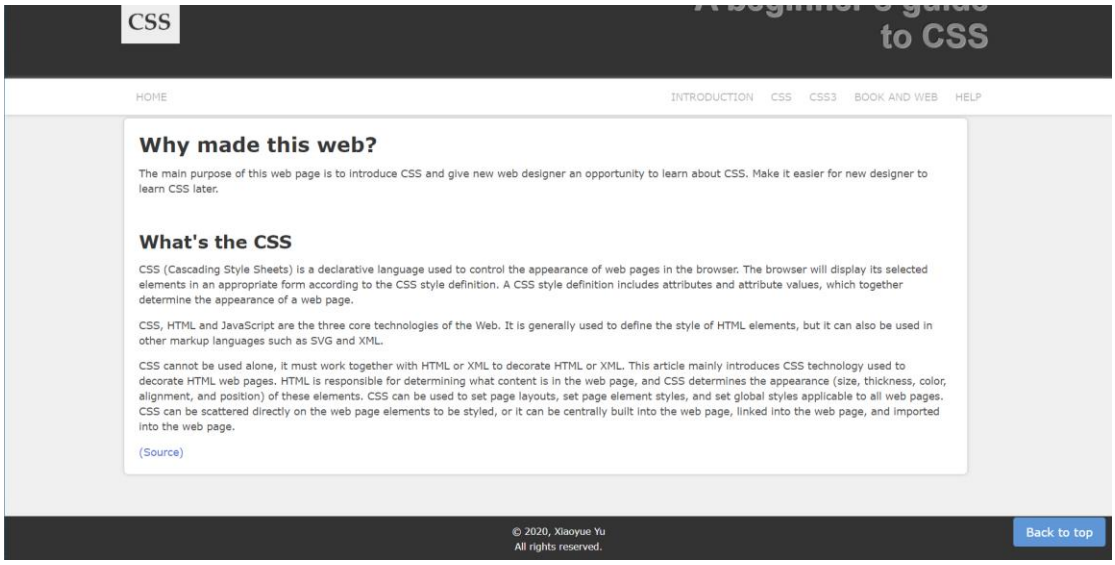


Picture29

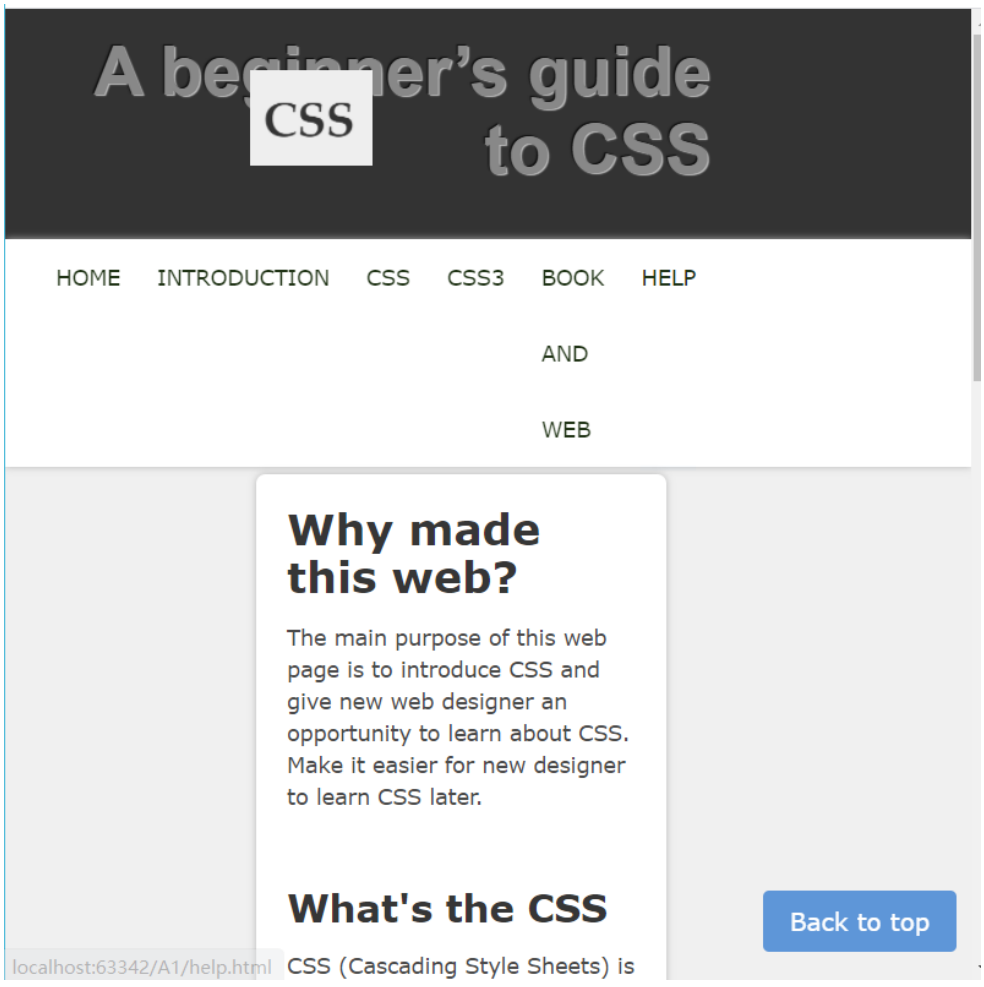


Picture30

5.2 Scaling test



Picture31



Picture32

6. APPENDICES

6.1 Reflection

I learned a lot of knowledge through this project. The next step is to make specific content by hand, select the theme, select the frame, and then start to fill in the content on the homepage.

If it is a personal homepage, capable people can create all the content on their own. Most people's method is: collect relevant information from newspapers, magazines, CD-ROMs and other media, plus some editing. Another good method is to collect it from the Internet. You can find a lot of information as long as you search for the corresponding keywords on the search engine. When preparing materials, we can use some small animations and dynamic pictures. Flash provides full-featured drawing and editing graphics tools. You can draw directly in the editing area, and the editing and modification is very flexible. Its other major feature is its strong "interactivity". During animation playback, you can use the mouse or keyboard to control the animation playback, and the effect can be reflected intuitively. Then began to make the homepage formally.

Generally speaking, the learning of web design through this project has yielded and regretted. However, I have already stepped into the door of web design. As long as I study hard and learn more about making web pages in my spare time in

the future to improve my own skills, I firmly believe that the web pages I design will be even better in the future. Professional, more gorgeous, making it a skill of its own.

6.2 REFERENCES

[1]hexo [Internet].[cited 2020 10 28]. Available from: https://hexo.io/

[2]Awwwards [Internet].[cited 2020 10 28]. Available from: https://www.awwwards.com/

[3] Bulma [Internet].[cited 2020 10 28]. Available from: https://bulma.io

[4]Wiki [Internet].[cited 2020 10 28]. Available from: https://en.wikipedia.org/wiki/CSS

[5]w3school[Internet].[cited 2020 10 28]. Available from: https://www.w3schools.com/css/default.asp