CMPS 350 Web Development Fundamentals
Lab 3 – CSS Fundamentals

Objective

The aim of this lab is to equip you with the skills to:

- Incorporate internal and external **CSS styles** into your HTML pages.
- Understand and apply various CSS selectors, properties, and values effectively.
- Enhance the appearance of a web page by applying font, color, and image styles.
- Use the box model for styling margins and padding.
- Develop responsive web page layouts using flexbox and media queries.

Overview

This Lab has 2 parts:

- **In Part A**, focuses on practicing fundamental CSS selectors and declarations. Then apply them on a simple practice website.
- **In Part B,** requires you to apply your CSS skills to style a college journey blog to achieve the desired layout and presentation**.**

First sync to CMPS 350 Lab repository using **GitHub Desktop** Client then copy Lab3-CSS folder to your GitHub **repository**. At the end of the Lab sync your repo to push your work to GitHub.

Part A - CSS Basics Tutorial

1. Create a new project and named CSS Basics under YourRepo\Lab3-CSS
2. Within the new project, create a subfolder called "styles" and add a file named "styles.css". This file will be used to practice the following CSS features::

    a. Linking style sheet to your HTML page (Internal Stylesheet, External Stylesheet, Cascading Order)

      Complete the four exercises at the following link
      https://www.w3schools.com/css/exercise.asp?filename=exercise_howto1

    b. CSS-Syntax [selector {property : value}]

      Complete the four exercises at the following link
      https://www.w3schools.com/css/exercise.asp?filename=exercise_selectors1

    c. Border, Margins, Padding and the box model

      Complete the four exercise at the following link
      https://www.w3schools.com/css/exercise.asp?filename=exercise_border1

    d. Text styling

      Complete the four exercise at the following link
      https://www.w3schools.com/css/exercise.asp?filename=exercise_text1

e. Pseudo Classes [a: link, visited, hover, focus, active]

   Complete the four exercise at the following link
   https://www.w3schools.com/css/exercise.asp?filename=exercise_text1

f. Background [attachment, color, image, position, repeat]

   Complete the four exercise at the following link
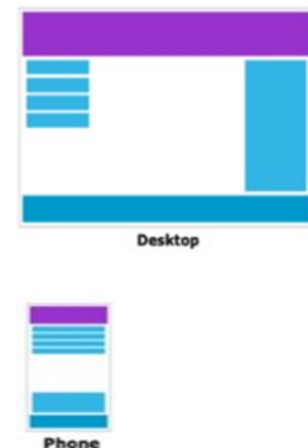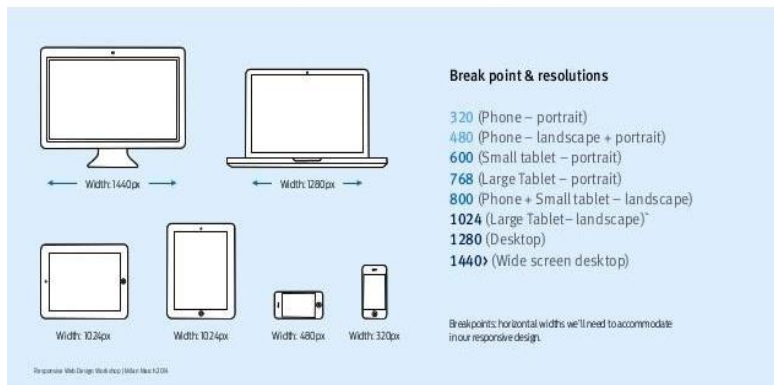   https://www.w3schools.com/css/exercise.asp?filename=exercise_backg round1

g. Font Awesome https://www.w3schools.com/icons/fontawesome_icons_text.asp

h. Flexbox https://css-tricks.com/snippets/css/a-guide-to-flexbox/

   Play this game -> https://flexboxfroggy.com

i. Media Queries : Open the web.dev website to understand what we mean by media queries

You can use the following links to further practice

- https://www.w3schools.com/css/default.asp
- https://htmlcheatsheet.com/css/

Design a CSS Practice Website

Your task is to recreate the given picture of a website layout using HTML and CSS. This project will help you apply the CSS concepts you've learned above, including selectors, the box model, responsive design, and theme toggling.
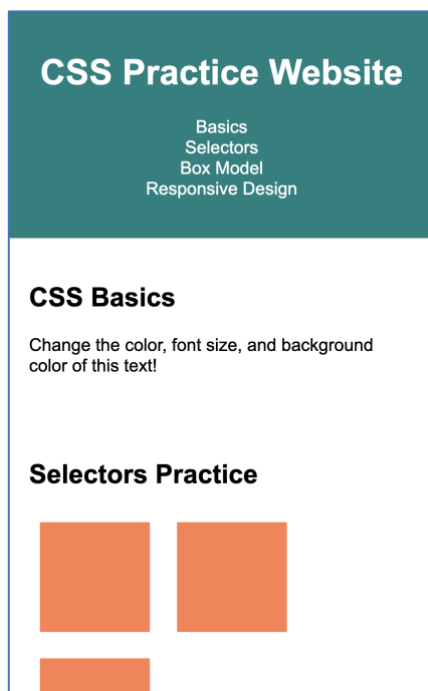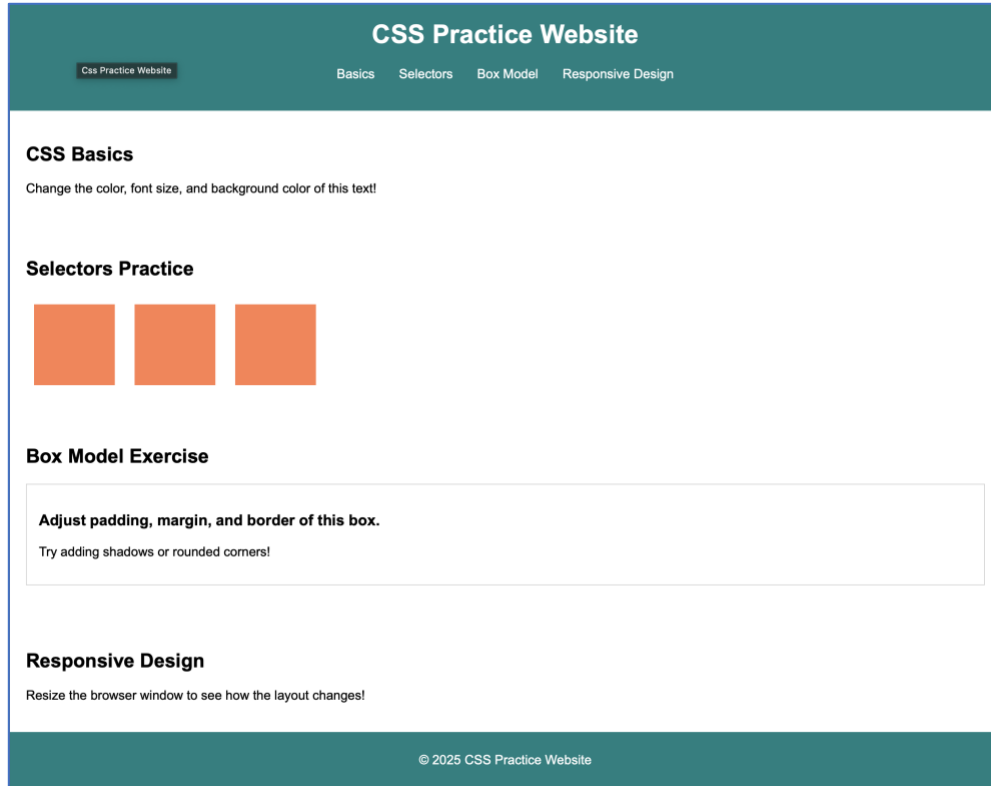
Instructions:

1. **Project Setup:**
   - Open the given project under Lab 3 named `css-practice-website`.
   - Inside this folder, create css/`style.css` file.
2. **Study very well the HTML Structure of the given index.html:**
3. **CSS Styling:**
   - Link the `style.css` file to `index.html` using `<link rel="stylesheet" href="style.css">`.
   - Apply global styles to the `body` (font-family, background color, text color).
   - Style the header and navigation bar with a background color and center the links.
   - Use CSS selectors to style the sections, headings, paragraphs, and boxes.
   - Implement hover effects on the boxes in the Selectors Section.
4. **Box Model Application:**
   - Add borders, padding, and margins to the article in the Box Model Section.
   - Experiment with rounded corners and shadows.
5. **Responsive Design:**
   - Use media queries to adjust the layout for screens smaller than 600px.
   - Ensure the navigation links stack vertically on small screens.
6. **Theme Toggle:**
   - Add a checkbox input to toggle between light and dark themes.
   - Use the `:checked` pseudo-class to change CSS variables for background and text colors.
7. **Final Touches:**
   - Compare your website with the provided picture above.
   - Adjust margins, paddings, font sizes, and colors as needed to match the design.

Bonus Challenge:

- Add smooth transitions when switching themes.
- Include animations on hover for the navigation links

Part B : Practice Exercise

In this section, you will enhance the My College Journey website you created in the previous labs by styling both the index and form HTML pages to match the desired layout and presentation. You can use your own code or utilize the provided code in Part B.

It's important to use Flexbox, the clamp unit, and other dynamic scaling units to ensure the website is responsive. To provide different layouts depending on the user's screen size, make use of media queries with the following breakpoints (>= 60rem for large screens).

Welcome to Zahra's College Journey at Qatar University

My Major | Campus Involvement | Internship Experience | Study Abroad | Future Plans

My Major

I am currently pursuing a degree in Computer Science at Qatar University. I chose this major because I have always been fascinated by technology and the potential it has to solve problems and make a positive impact on the world.

Fig 1. College of Engineering building at Qatar Universityy

Campus Involvement

I am actively involved in a number of clubs and organizations at Qatar University. Some of the clubs I am a member of include the Computer Science Club, the Robotics Club, and the Gaming Club.

1. Computer Science Club
2. Robotics Club
3. Gaming Club

Register here for QU Teams

Internship Experience

I have had the opportunity to gain valuable work experience through a number of internships while in college at Qatar University. Some of the internships I have had include:

Summary of My Internships		
Internship	Company	Duration
Software Developer	Qatar IT Solutions	Summer 2020
Data Analyst	Qatar Data Systems	Fall 2021
Full Stack Developer	Qatar Tech Innovations	Spring 2022

Study Abroad

I had the opportunity to study abroad in Tokyo, Japan for a semester. It was an amazing experience that allowed me to learn about a different culture and improve my language skills.

Fig 2. Tokyo , Japan

Future Plans

After graduation, I plan to pursue a career in software development. I am particularly interested in working on projects related to artificial intelligence and machine learning.

Resources

Career Center

Job Search

Internship Match

Copyright © 2023 My College Journey

Style **the application** form as shown below. You should create a separate stylesheet for the application form.

SMALL SCREEN	LARGE SCREEN

Club Application Form

To join one of our university clubs, please submit this application form and I will help you register

Personal Information:

First Name:

Last Name:

Email:

Gender: ○ Male ○ Female

Date of Birth:
mm / dd / yyyy

Phone Number:

College:

College:
Select your college

Department:

Experience:

Previous Clubs:

Years of Experience:

QU Clubs:

Select the club

Agreements:

☐ I confirm the information provided above is accurate

☐ I consent to my automatic enrollment in the selected club

Submit Query

Club Application Form

To join one of our university clubs, please submit this application form and I will help you register

Personal Information:

First Name:

Last Name:

Email:

Gender: ○ Male ○ Female

Date of Birth: mm / dd / yyyy

Phone Number:

College:

College: Select your college

Department:

Experience:

Previous Clubs:

Years of Experience:

QU Clubs:

Select the club

Agreements:

☐ I confirm the information provided above is accurate

☐ I consent to my automatic enrollment in the selected club

Submit Query

*Once you complete the above exercise, push your code to your GitHub repository under Lab-3 CSS Fundamentals.