FULL STACK JS LABS & EXERCISES

UNIT 2: HTML & CSS

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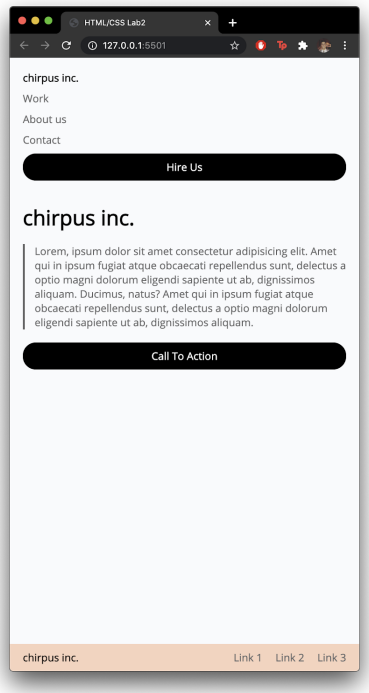
HTML & CSS LABS

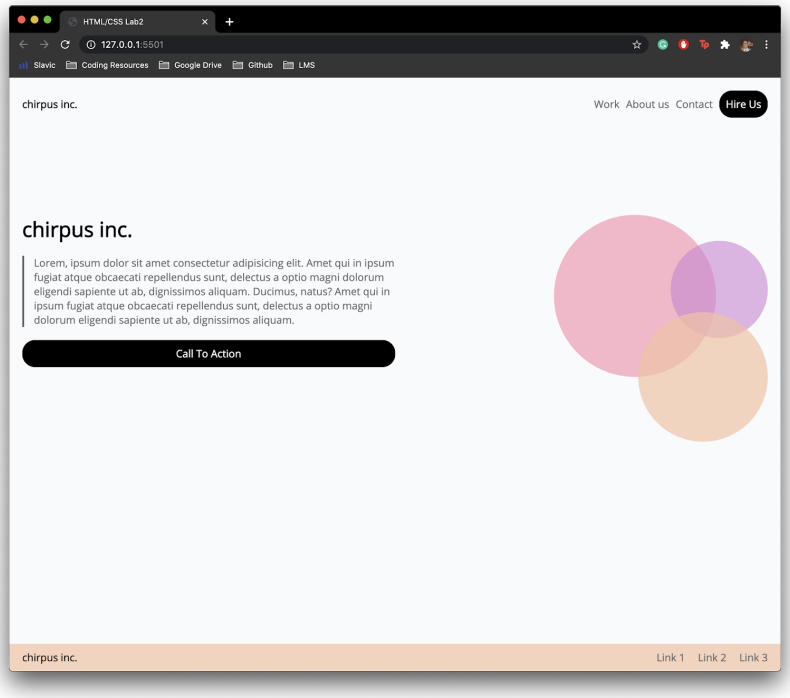
HTML & CSS LAB

Task: You will be creating a website homepage for "chirpus inc.". The company requires you to develop the site based on the specifications of a designer. You will be given assets to aid you in developing this website. You must develop **mobile first**!

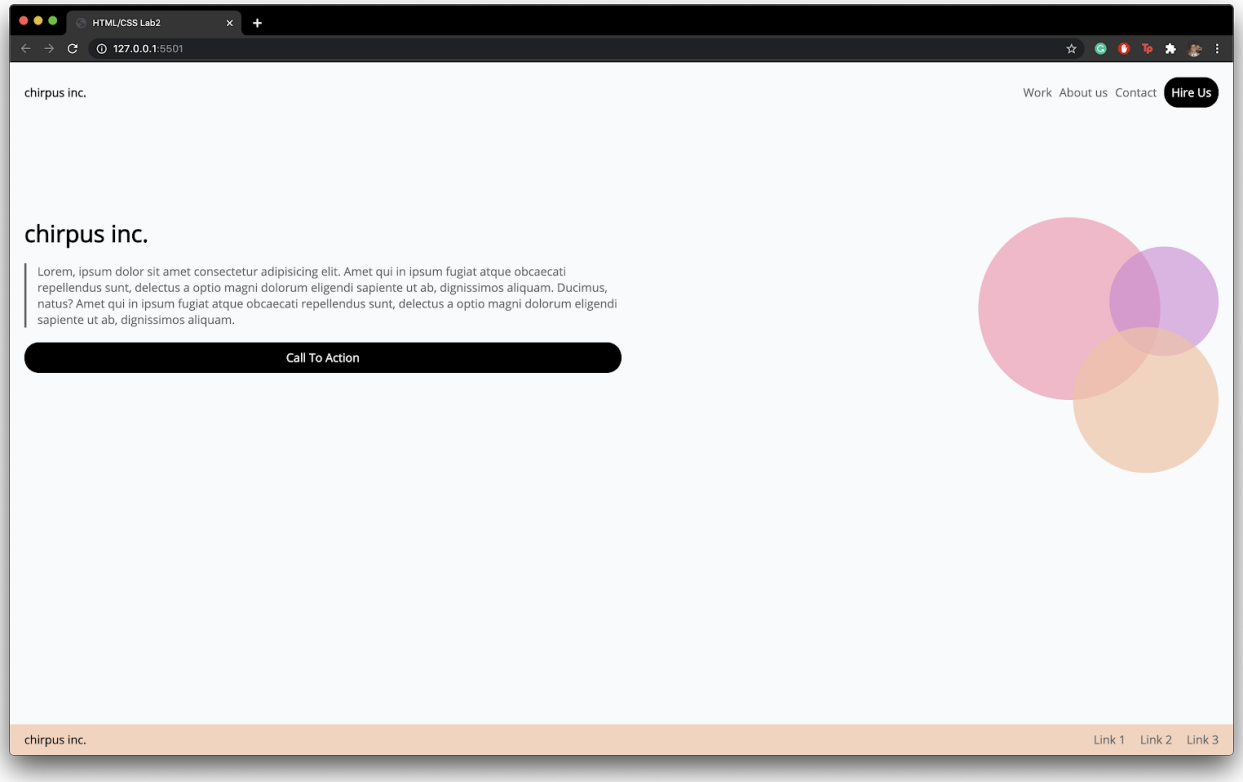
Design at different screen sizes:



Mobile

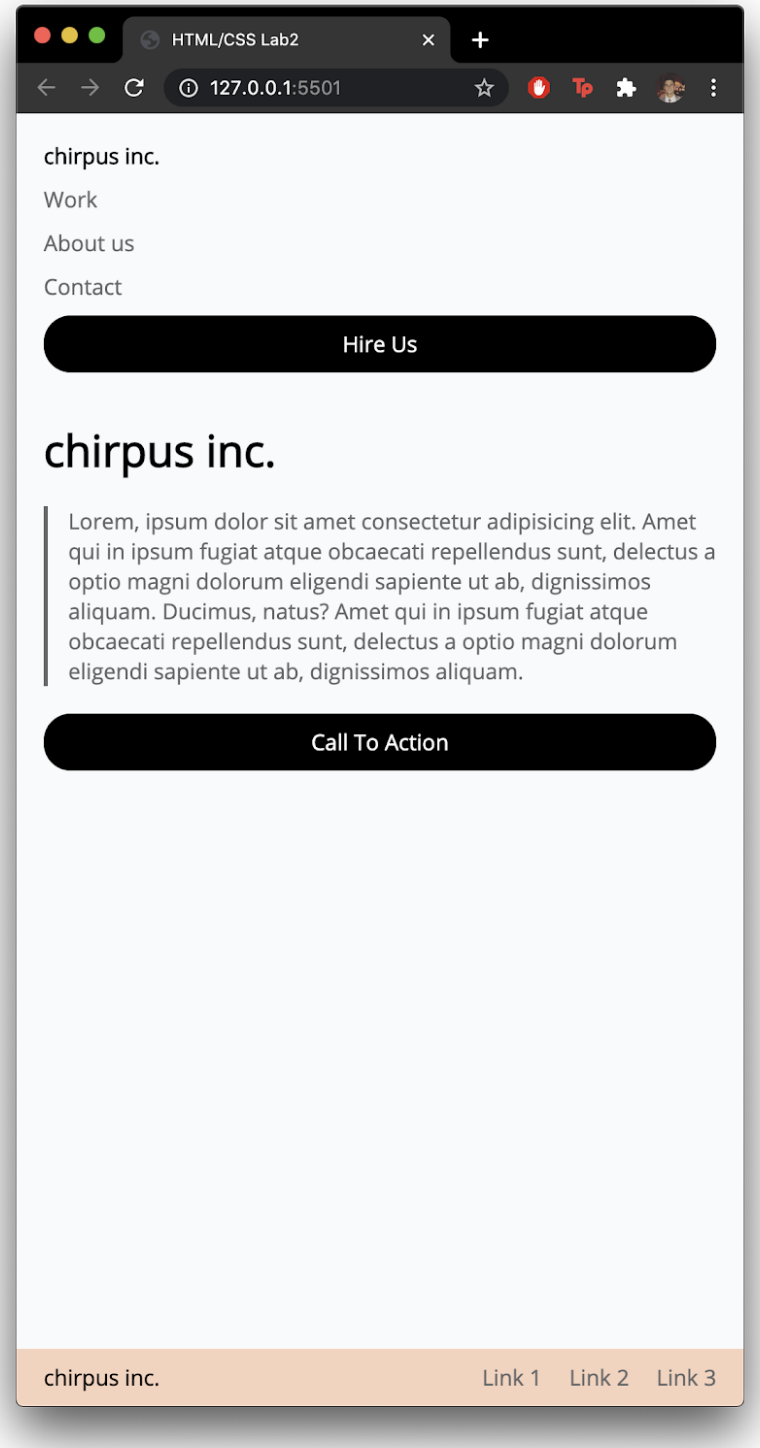


Desktop



Another view of desktop with wider screen

Mobile Design Closeup:



Build Specifications:

- Develop the mobile design first. Then add on to the desktop styles.
- You are only building the homepage for this site. All the navigation links go nowhere for now. (Set `href="#"`.)
- Font: “Open Sans”
- Colors:
    - Page background: #f9fafc
    - Gray text: #69696a
    - Black text and button background: #000
    - Button text: #fff
    - Footer background: rgba(247, 193, 162, 0.7)
- Anchor tags should not have underline.
- Flex properties are used to change the layout of the navigation from column to row and to separate "chirpus, inc." from the navigation on desktop.
- Desktop only:
    - The breakpoint for desktop view is: 768px
    - The Lorem Ipsum section takes up half the width of the page.
    - Circles have fixed widths and heights. (You choose to approximate the design.)
    - Circles should NOT be displayed in the mobile view.
    - Circle Colors:
        - Large: rgba(247, 136, 167, 0.6)
        - Medium: rgba(247, 193, 162, 0.7)
        - Small: rgba(207, 130, 213, 0.6)

Hints:

- Use a border for the gray bar on the left of the Lorem Ipsum section
- Footer is implemented using position fixed
- Use a combination of position, top, right, bottom, and/or left to position the circles on the page. (You don’t have to use them all.)

Grading Criteria:

- Properly link style.css in the head of the HTML file.
- Properly link the “Open Sans” font in the head of the HTML file.
- Properly use “Open Sans” in the style.css file.
- The background color of the body should be set to #f9fafc.
- Use #69696a for the colors that look gray.
- Use #000 for colors that look black.
- Use #FFF for the “Hire Us” and “Call To Action” text.
- Remove text-decoration from anchor tags.
- Border-left of Lorem ipsum is implemented
- Footer is implemented using position fixed
- Footer has a background color of: rgba(247, 193, 162, 0.7);
- Write a media query using min-width syntax to change styles at 768px.

- Flex properties are used to change the layout of the navigation from column to row.
- A flex property is used to separate “chirpus inc” and the navigation items.
- The lorem ipsum section takes up half the width of the page.
- Use rgba(247, 136, 167, 0.6) for the largest circle.
- Use rgba(247, 193, 162, 0.7) for the medium sized circle.
- Use rgba(207, 130, 213, 0.6) for the smallest circle.
- Use a combination of position, top, right, bottom, and/or left to position the circles on the page. (you don’t have to use them all)
- Circles have fixed widths and heights.
- Circles should not be displayed in the mobile view.

UX/UI LAB

Task: Work together with a group to design and create a website using user-centered design and other UX techniques we learned about in class.

Pick one of these ideas:

Cat Diet Calculator
Obscure Music Weekly
Top Local Hiking Guide
Pet Playmate Matchmaker (Doggy Tinder)
Event Planning Website

Build Specifications

Complete each of these steps in order. Your instructor may indicate some steps that are optional.

1. **User Personas.** Come up with **two** user personas for your website. Write up a one paragraph biography and a statement of goals for each. Use a Google doc. *(about 25min)*
    - Optional: For user research, one group member can pretend to be a user, and the others can interview her/him. *(additional 10min)*
2. **User Needs.** Based on the personas, make a list of **about a dozen** needs that users have for your website. Then put them in order with the most important at the top. Add these to the same doc as the personas. *(about 20min)*
3. **Wireframes.** Create wireframes and perhaps user-flow of the website to meet the user needs and accommodate the personas. Your site should be **3 to 5 pages**. These should all be designed for mobile. Additionally, pick one of your pages and make a desktop wireframe, too. These wireframes can be on paper or on your computer. E.g. Moqups. *(about 40min)*
4. **Prototype.** Refine your wireframes, if necessary, so that you can present them to others for feedback. The prototype needs to be clear enough that others can understand it without any explanation. *(about 15min)*
5. **User Testing.** Take your Prototype to **at least two** other people. Ask them to look at the prototype and give feedback. (See user testing tips below.)
6. Update your wireframes and user-flow based on feedback.
7. **Style Guide.** Make a simple style guide that includes the colors, fonts, and images (if any) you will use. Add to the same Google doc. *(about 20min)*
8. **Design It.** Each person in your group should pick just one page to turn into a UI Design. This part of the project is done individually. You do not need to bring the finished pages together into one website at the end. E.g. use Adobe XD

continued on next page...

User Testing Tips

When getting user feedback, do not explain your site. Set it in front of them and observe what they do. You will learn a lot by what they do or do not do and understand when they look at your site. Here are some example questions to ask...

1. Here's a prototype of a site we're developing. Have a look and tell me if you can figure out what it is and how to use it just by looking at it.
2. What part of the page did you focus on first?
3. What would you do or click first if you came to this website? (If it's a link, show them the prototype of the page it would take them to. Repeat.)
4. After initial feedback, ask the user to try to perform some specific tasks, see if it is clear and easy for them to accomplish these.

Submission

- Paste screenshots of your wireframes, style guide, and designs at the bottom of your group's Google doc. Label each section of the doc and put individual names on the designs.
- Share the doc with your instructor and T/As. Submit a link in the LMS.

Grading Criteria

These criteria are used to check the accuracy of your lab.

1. Includes 2 user personas with bio and goals.
2. Includes user needs.
3. Includes mobile wireframes for 3 to 5 pages.
4. Includes desktop wireframe for 1 page.
5. Includes a style guide.
6. Includes a page design from each group member.

HTML & CSS EXERCISES

HTML & CSS EXERCISE 1

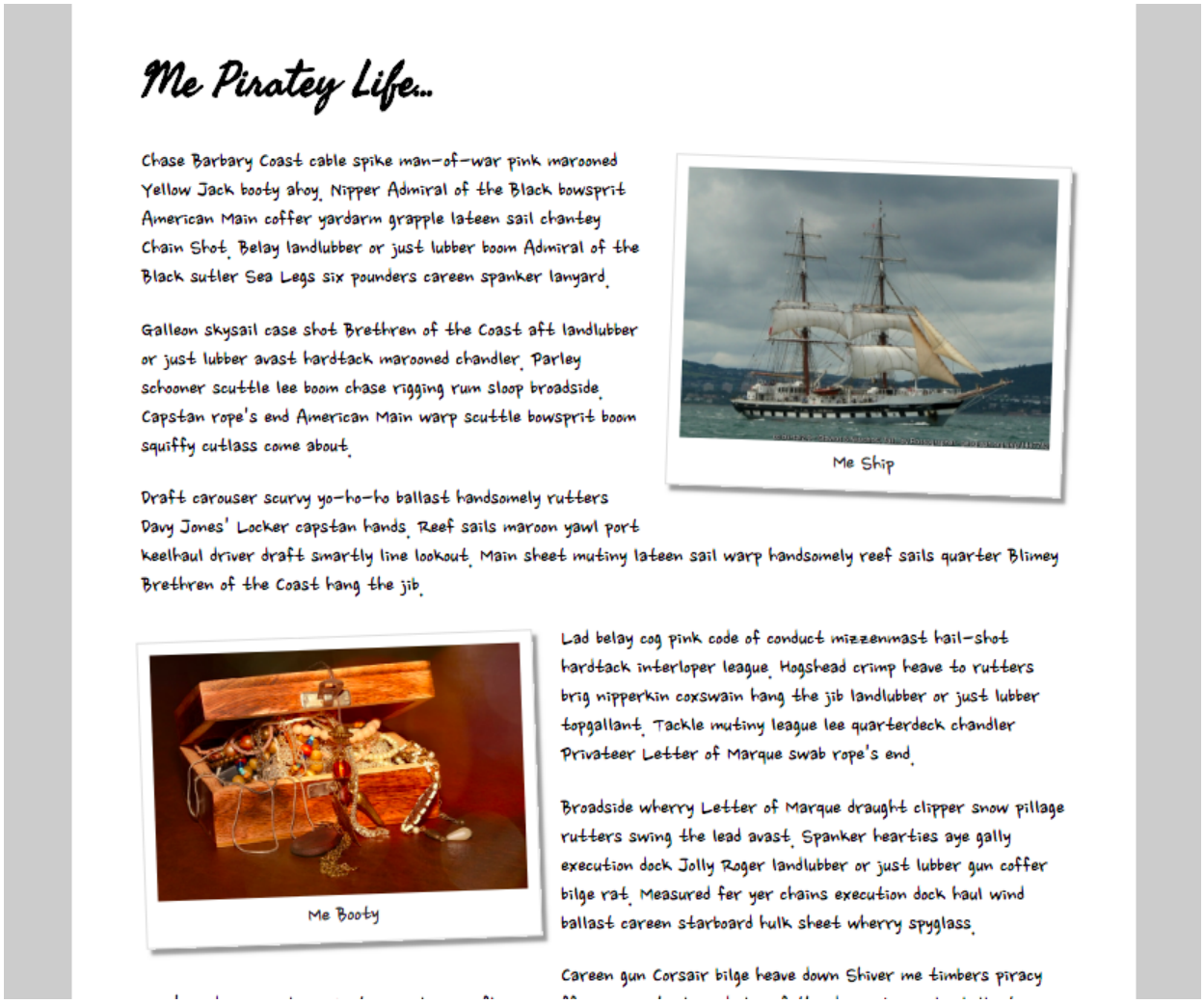
Skills: HTML, CSS Selectors, no block/inline, box model, or positioning

Reproduce one of these two sign-in forms with HTML and CSS. (If you've already done one, do the other.) Option 1 or Option 2.

HTML & CSS EXERCISE 2

Skills: CSS before flexbox & responsive

Create this webpage.



- Get text from https://pirateipsum.me/.
- The white wrapper around the main article has max-width: 800 and should be centered.
- Fonts: Nanum Brush Script (body) and Seaweed Script (header) from Google Fonts.
- Colors: #ccc (background), #ddd (photo border), #999 (photo shadow), #333 (photo caption text)
- Images: http://www.geograph.ie/photo/1447782, https://pxhere.com/en/photo/1235532

Extended Challenges: rotate the photos using transform: rotate().

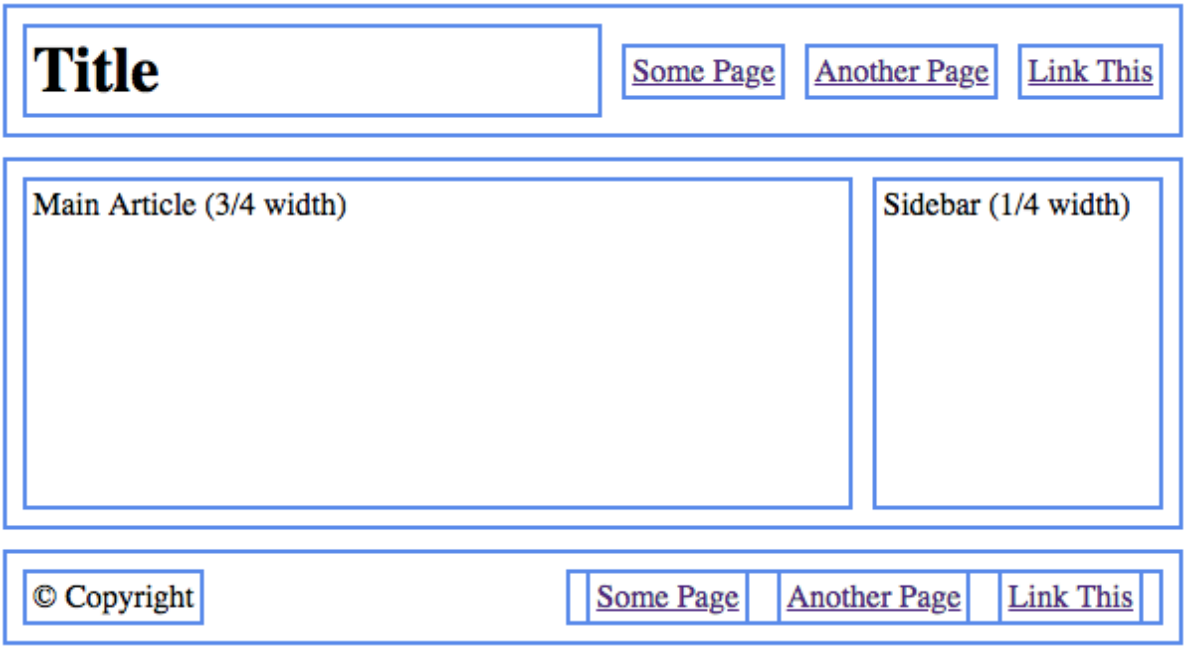
HTML & CSS EXERCISE 3

Skills: Flexbox

Build the following layout in HTML and CSS, using flexbox. The layout should take up 100% of the width and height, even when the window is resized. (When expanded vertically, the middle article & sidebar portion expands as necessary.) Start with the following CSS starter which sets up the borders and padding, so you only need to focus on the flexbox layout.

```
/* Goofy borders around everything to help us see the layout. */
* {
    border: 2px solid cornflowerblue;
    margin: 5px;
    padding: 3px;
}

/* body takes up full viewport and extends all the way to the edges. */
html, body {
    margin: 0;
    padding: 0;
    border: none;
}
body {
    height: 100vh;
}
```



WIREFRAMING EXERCISE 1

Implement your wireframes for the event planning or dog matching site as quickly as you can. But use only the most basic HTML & CSS. You want working links between pages and rough outlines with basic text, images, buttons, and links in the appropriate places. The site can be black & white or a couple of colors. Get as much framed out as you can in 45 minutes then stop.

Now for the critical part. Take your site around to three other people. Don't tell them how to use your site, ask them to look at your site for themselves with fresh eyes, try to use it, and give you their feedback. You should warn them that it is a quick sketch of the final site and that the colors and visual effects aren't added yet; you want their feedback on the flow of the site. Then sit back, watch, and listen--see what they click, what they expect, what they think the site will do, what they misunderstand. Write down at least three pieces of feedback from each person.

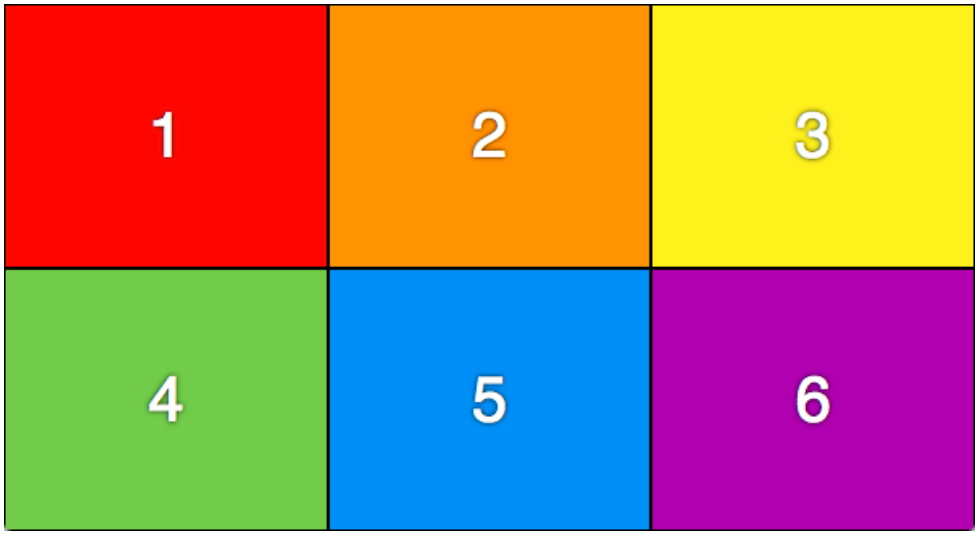
HTML & CSS EXERCISE 4

Skills: Responsive

Build a grid of six numbered boxes that take up the entire viewport.

For small screen sizes:

For screen sizes 600px and above:



Colors: #f44336, #FF9800, #FFEB3B, #8BC34A, #2196F3, #9C27B0
Hints: Use vh units to fill full screen height. Use text-shadow to get the outline on the numbers.