

CS 416

Homework 1

1. Objectives

The purpose of this assignment is to get you familiar with web page development and improve your skills in the areas below:

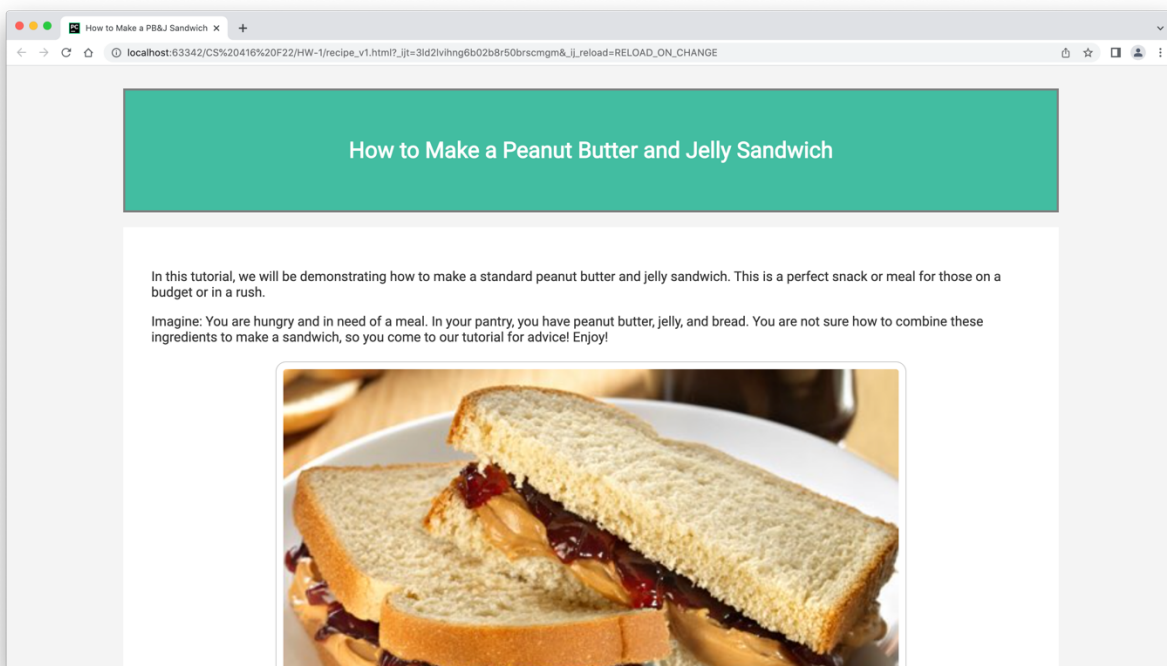
- Creating a web page using HTML
- Using CSS to style a web page

2. What to do?

In this assignment, you are given a screenshot, and a description of a particular web page to replicate. You will recreate this web page exactly as shown in the provided screenshot and a video below. In particular, you will create an HTML file named **recipe.html** that describes how to make a peanut butter and jelly sandwich. You will also create a CSS file named **recipe-styles.css** that contains the styles for this page.

2.1 Overall appearance

The image below shows a miniature screenshot of the website you need to recreate in this homework. A full-size screenshot of the entire page is attached with this assignment on Blackboard. You can also see a video on Blackboard showing the look of this page.



2.1.1 Content of the page

The content of the web page has been adapted from [this site](#) and you will also include a short description and link (see the acknowledgment section on the html page) in your page to indicate where this content was borrowed from. The text of the web page is in `recipe.txt`, which is attached with this assignment. Thus, you **do not need to type in all of the text** of this web page. You can copy and paste the text in `recipe.txt` into your text editor to create this page, and then add the HTML tags and necessary CSS styles. Links of images can be found in `image-links.txt`.

2.2 Appearance Details

Overall page:

- The overall page's **body** should have a background-color of `#f4f4f4`.
- Add a margin of 3% for top and bottom, and 10% for left and right sides, respectively.
 - Hint: you can enter only 2 margin values if top/bottom, and left/right are the same value (e.g., `margin: 5% 10%`; will give 5% margin to both top and bottom, and 10% for left and right).
- Set the font family to `Roboto` that you can get from Google Fonts by following the steps below:
 1. Go to <https://fonts.google.com/>
 2. Select the font style `Roboto`, and then page scroll down on the next and find regular 400. There should be a plus icon to the right of that. Click on that plus icon.
 3. Copy the given information under "Use on the Web" section
 4. Add the given `<link>` tag(s) into the `<head>` section of your page
 5. Add the given font name into your CSS so that this font style is applied to your overall web page.
 - Hint: Do not skip the last step, otherwise you do not see the effect at all.

Main Heading (How to Make a Peanut Butter and Jelly Sandwich):

- The page's main heading is aligned to the center of the page.
- This heading should have a background-color of `#44bca1`.
- The font color is white.
- It has a *gray solid* border that is *3px* thick.
- There should be 5% of padding on each side.

Sections:

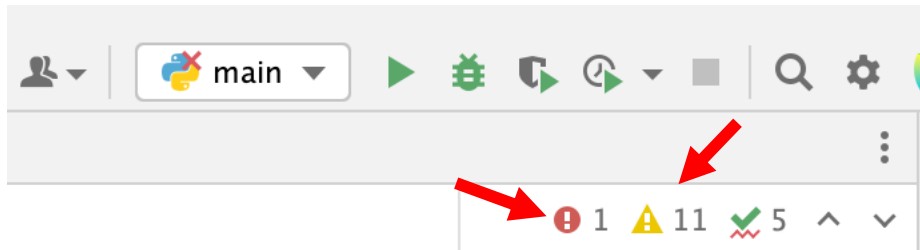
- Note that some sections are styled slightly differently than other sections explained below. So, you might need to apply the specific styles for that section, and the other styles explained below will be common to all other sections.
 - **First Section** (where the text starts with “in this tutorial”):
 - Add a padding of 3% for all sides.
 - **Step Sections** (where you see “Step-x” title):
 - Each of the step sections should have a heading that is not as large as the main heading (e.g., h2 can be used).
 - The font color for each of these headings is grey.
 - The phrase “Optional items” is underlined in Step-1 section.
 - **Tip Section:**
 - The phrase “Tip” is underlined and bold.
 - The font color is gray.
 - **User Comment Section:**
 - User Names:
 - Each user name is a middle size heading (e.g., h3)
 - Comments:
 - The font size is 0.9em.
 - The font color is gray.
 - There is a horizontal rule separating each comment.
 - The horizontal rules may appear darker in the screenshot provided (i.e., horizontal rules may look slightly different in different browsers). However, there is no expectation that you should match the darkness of those horizontal rules (i.e., no further styling is needed).
 - **Acknowledgment Section:**
 - The heading used for title should be small (e.g., h4).
 - The font size and color should be similar to user comments (i.e., 0.9em font size, and font color of gray)
 - Hint: Try to avoid redundancy in your CSS as much as possible.
- The background-color of each section is white.
- Each section should have a margin of 5% for top and bottom, and 10% for left and right sides, respectively.
- Each section should have 3% padding from all sides.

- **Paragraphs** in all of the sections (except user comment and acknowledgment sections) should have the following styles:
 - The font size is 1.2em.
 - The font color is #333333.
- **Images** in all of the sections should have the following styles:
 - The width of the images should be set 70%.
 - All the images should have a silver solid border that is 1px thick.
 - The images should have 15px border-radius.
 - The images should be aligned to the center of the page.
 - The images should have 10px padding and 5px padding.
- **Links** should have the following styles.
 - The first two items of the ingredient list are links. You can find the URL for each of them in `recipe.txt`.
 - The link color is #42b4e6.
 - The link is not bold, and the link is not underlined unless you hover over the link.
 - Hints:
 - When you hover over the link, the link becomes underlined. You can follow the steps below to achieve this,
 - To remove an underline for an anchor tag, you can use CSS property `text-decoration: none;`
 - To add an underline, you can use CSS property `text-decoration: underline;` with an appropriate selector `:hover`
- **Lists** should have the following styles:
 - The items in the ingredient list are list items with numbers. You should use appropriate html tag to produce these, rather than manually typing the numbers.
 - The option list items are bullet points without numbers. You should use appropriate html tag to produce these.

Please note that though the specifications above can be helpful, they may not cover all the details. Thus, you should design your page in accordance to the given full-size screenshot and the video on Blackboard.

2.3 Validate Your Page

While writing your code in PyCharm, PyCharm can help you identify the problems in your code. On the upper right corner, you can see an indicator something like below. Once you click on the warning icon or error icon, it can help you identify the issues, if any.



Furthermore, after writing your code, you should validate your code to receive full credit. To do so, you can check your HTML code using ["Nu Html Checker"](https://validator.w3.org/#validate_by_input)

- https://validator.w3.org/#validate_by_input

After opening the link above, you can copy and paste your HTML code, and then click "Check" button. The page will tell you if the code is valid. If it is valid, you can go ahead and submit your code to Blackboard. If not, the page will tell you specific issue(s), and you should fix them before uploading your code to Blackboard in order to avoid losing points.

A screenshot of the W3C Markup Validation Service website. The header is dark blue with the W3C logo and the text 'Markup Validation Service' and 'Check the markup (HTML, XHTML, ...) of Web documents'. Below the header are three tabs: 'Validate by URI', 'Validate by File Upload', and 'Validate by Direct Input'. The 'Validate by Direct Input' tab is selected. Below the tabs is a section titled 'Validate by direct input' with a text area for entering markup. The text area contains the following HTML code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Examples with CSS</title>
  <link rel="stylesheet" href="exercise-2-styles.css">
</head>
<body>
  <h1 class="my-heading">CS 416 Web Programming</h1>
  <h2>Section 01</h2>
  <h4>Fall 2022</h4>
</body>
```

Below the text area is a link 'More Options'. At the bottom right is a 'Check' button with a red arrow pointing to it.



This indicated that you are good to go. Here is an example message.



This indicates that you need to fix the issues. Here is an example message (intentionally removed the closing tag of h4 to demonstrate an example issue):

Document checking completed. No errors or warnings to show.

Source

1. <!DOCTYPE html>↵
2. <html lang="en">↵
3. <head>↵
4. <meta charset="UTF-8">↵
5. <title>Examples with CSS</title>↵

Check by text input CSS

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Examples with CSS</title>
  <link rel="stylesheet" href="exercise-2-styles.css">
</head>
<body>

<h1 class="my-heading">CS 416 Web Programming</h1>
<h2>Section 01</h2>
<h4>Fall 2022

<a href="#">Click here!</a>
```

Check

Use the Message Filtering button below to hide/show particular messages,

Message Filtering

1. **Error** Heading cannot be a child of another heading.

From line 18, column 1; to line 18, column 23

```
re!</a> <h1 class="my-heading">Lorem
```

Assignment Checklist:

The following is a checklist that you should refer to before submitting your assignment. This will prevent you making mistakes that you would otherwise lose points.

- Make sure that the web page you submit includes the html, head, title, body, and **doctype** tags.
- Make sure that your HTML file is well formed, meaning all the html, head, title and body tags are opened must be closed. For example, if you have `<body>` tag, you must have `</body>`.
 - You should check your HTML code using [“Nu Html Checker”](#)
 - https://validator.w3.org/#validate_by_input

- Try to avoid redundancy in your CSS as much as possible. You should not have too many redundant styles, if there are ways to use inheritance or special selectors to concisely define style rules. Points will be deducted if styles used for this page are too redundant.
- File names (e.g., html file, images, ccs file) should be all lower-case with no space to separate words, instead use - to separate words (e.g., recipe-styles.css).
- All the hyperlinks are working as expected.
- Make sure you follow the best HTML practices, which you can find under Lecture-2 on Blackboard.

What to submit?

Submit a zip file containing the following on Blackboard:

- Archive of the entire project (please include your first and last name in the file name)
 - This should contain the HTML file (**recipe.html**) and CSS file (**recipe-styles.css**)
- A screenshot (in PNG, JPG or JPEG format) showing your entire web page in your web browser -- (just like the image attached to this assignment. You can use **Firefox, Chrome or Opera** to take a screenshot of full page (see the tutorial under "Tutorials/Resources" section on Blackboard if you do not know how to do that)).
- Fill out the attached self-evaluation form and submit it along with the rest of the files

If for some reason you are still not able to submit your files, email your files to me before the deadline. Please attach your files to this email.

Getting help

Start your assignment early. If you need help, send an email to me or make an online appointment with me during my office hours.