

## CS212: Web Programming – Spring 2019

| Project | Points          | Announced | Due    |
|---------|-----------------|-----------|--------|
| #1      | 50 <sup>1</sup> | Feb-11    | Mar-10 |

### Introduction

This project tests your understanding of HTML and CSS. You will create files related to a recipe web site for a fictional pie company named Granny's Pies<sup>2</sup>. Some required features may have not been covered in detail in class; you will have to explore resources such as your textbook, lecture slides, or online references to learn how to complete these features.

### References

1. Chapters 2 and 3 of the textbook; Web Programming Step by Step
2. HTML: HyperText Markup Language; [MDN Web Docs](#)
3. HTML Element Reference; [W3Schools](#)
4. CSS: Cascading Style Sheets; [MDN Web Docs](#)
5. CSS Reference; [W3Schools](#)

### General Guidelines

Read the following guidelines carefully before working on this assignment.

1. This is an *individual* homework assignment. You may discuss ideas, ask questions or explain things to your colleagues. Nevertheless, you should solve the problem(s) independently.
2. You should submit your *own work*. Material brought from elsewhere (e.g. the Internet<sup>3</sup>, a classmate, submission at a previous offering...) is not acceptable.

### Submission Instructions

1. Submissions via email will not be accepted. The project should be submitted via BBLearn by the due date.
2. Upload index.html, pie.html, pie.css and any other files needed for your site such as images (including the provided images), to your CEFNS homepage inside a folder named proj1. If your CAS ID is id123, then navigating to (<https://cefns.nau.edu/~id123/proj1>) should display your index.html file.
3. Also, submit index.html, pie.htm, pie.css and any other files your pages use such as images (including the provided images), via BBLearn *and* include the link of your hw4 folder in the submission comment box. You **must** compress your files and upload a single archive. Only .zip archives are allowed.

In this project, you will create these files:

1. A required *index.html*, the first of two web pages; appearance is up to you
2. An optional *index.css*, that styles index.html.
3. A required *pie.html*, the second of two web pages; must match a particular specified appearance
4. A required *pie.css*, the style sheet of pie.html.

### **Index page:**

The first part of your project is to create a front page for this web site, stored in a file named index.html. Your front page must contain a link to pie.html. The file must also be at least 20 lines long and must contain at least 4 different HTML elements in its body. It also may not significantly borrow content from your pie.html. Otherwise, this front page can have any appearance you like. If you like, you may use an optional CSS file with this page

<sup>1</sup> This project will be graded out of 50 points, but it is worth 5% (i.e. 5 points) of the overall course score.

<sup>2</sup> This project was developed by Marty Stepp and Jessica Miller from the University of Washington and revised by Dr. Mohamed M. Elwakil of Northern Arizona University. Licensed under Creative Commons Attribution 2.5 License.

<sup>3</sup> Unless explicitly asked to do so.

named `index.css` and submit it with your other files. Be creative! We may show some students' pages in class.

### Pie recipe page:

The second part is to recreate a specific web page of a recipe for lemon meringue pie, stored in a file named `pie.html`. Unlike `index.html`, this page must exactly match the appearance specified in this document.

You must match in appearance the pie web page screenshot as shown in the attached `PiePage.png` file. The width of the screenshot is based on a browser window width of 1024px; if your screen is a different size, the width of your page may not exactly match. (*Firefox's Web Developer Toolbar add-on can help you resize your browser to any dimension; you could use 1024x768 to compare the images.*) Any line breaks shown are done automatically by the browser, except ones that are clearly much narrower than the page width, such as the line "One 9-inch pie":

You don't need to type in all of the text of the pie web page, only the HTML tags. There is a provided text file (`pie.txt` in `resources.zip`) that you can copy and paste into your code editor to get started. Then you can add the appropriate HTML tags to the file and save it as your `pie.html` page.

The appearance and behavior details of the pie recipe page should conform to the following requirements:

1. The pie web page's title text should be Grandma's Lemon Meringue Pie.
2. All headings on the page should use a foreground color of #A4A400 (red=164, green=164, blue=0) and a background color of #F0F0F0 (red=240, green=240, blue=240).
3. The font families for headings are Lucida Sans Unicode, Helvetica, Arial, or any sans-serif font available on the system (in that order).
4. The page's main heading is aligned to the center of the page body and uses a 22px bold font. Other headings on the page are left-aligned and appear in an 18pt normal font. All headings should be underlined.
5. The overall page's body should have a white background. Text in the body should have a foreground color of #404040 (red=64, green=64, blue=64) and use an 11px font. The font families for page text are Georgia, Garamond, or any serif font available on the system.
6. Any links on the page should use the color #A4A400 (red=164, green=164, blue=0), matching the color of the page headings.
7. In the Ingredients list, the underlined words "tbsp" and "tsp" are abbreviations for "tablespoons" and "teaspoon" respectively. When the user hovers the mouse over these abbreviations, the full word should appear as a tooltip.
8. At the end of the Directions, the deleted word "cake" with a strike-out line through it is replaced by the word "pie".
9. After the Links section, there is a short copyright notice that appears as a section of preformatted text in a monospace font. The text is spaced such that the last letter lines up on horizontally for each of the three lines.
10. The names of the four major steps of the recipe directions (such as "Preheat Oven") are strongly emphasized. The quotations from the users appear in an italic font as indented blocks with background color #FFFA8 (red=255, green=255, blue=168). Some words in the last quote are bolded for emphasis.
11. The page bottom has two links. The "Home" link should go to your `index.html` page. Use a relative URL and assume it is located on the same site and directory as `pie.html`. The "Search for other lemon meringue pie recipes" text, should link to the following web page: <http://www.google.com/search?q=lemon+meringue+pie+recipe&start=10>
12. Background: set the overall page to use a background image of `silverware.jpg` (provided in `resources.zip`). The image should repeat in both directions across the page and should not move when the page is scrolled.

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13. Favicon: set the page to have a "favorites icon" ("favicon"). Use pie-icon.gif (provided in resources.zip). Favicons are explained in Chapter 3. The icon may not work in Internet Explorer; you may ignore this.
14. Pie bullet: set all bulleted lists of items on the page to use an image for their bullet icon rather than the normal black circle. Use pie-icon.gif (provided in resources.zip).
15. Wide headings: Place 0.25em horizontal spacing between neighboring letters in all headings on the page.
16. Tight heading background: make it so that the gray background behind the headings on the page is only behind the text itself, not stretched across the entire width of the page.

In addition to the above requirements, your pie recipe page must conform with the following ones:

- As much as possible, you should implement these changes by modifying your CSS code rather than your HTML. Some of the CSS properties necessary will not have been covered in class, so you must learn them yourself. Try using the textbook or Google.
- Express your CSS concisely and without unnecessary or redundant styles. For example, if the page uses the same color or font family for multiple elements on the page, you must group those elements into a single CSS rule, so that it would be possible to change the page's color/font by modifying a single place in the CSS file.
- Choose appropriate HTML tags to match the structure of the content on the page. Do not express style information in HTML with inline styles or presentational HTML tags such as `<b>` or `<font>`. You may not use any HTML tables in your pie.html page.
- Format your HTML and CSS nicely so that it is as readable as possible, similarly to the examples shown in class. Also, place a comment header in each file containing your name and section and a brief description of the assignment and the file's contents.
- To keep line lengths manageable, do not place more than one block element on the same line or begin any block element past the 100th character on a line. For reference, our solution has 135 lines of HTML and 45 lines of CSS, though you do not need to match this exactly.

This project will be graded according to this rubric:

| Criteria / Component             | Points | Criteria / Component               | Points |
|----------------------------------|--------|------------------------------------|--------|
| Index.html page                  | 2 pts  | Pie recipe page – Requirement #9   | 3 pts  |
| Pie recipe page – Requirement #1 | 3 pts  | Pie recipe page – Requirement #10  | 3 pts  |
| Pie recipe page – Requirement #2 | 3 pts  | Pie recipe page – Requirement #11  | 3 pts  |
| Pie recipe page – Requirement #3 | 3 pts  | Pie recipe page – Requirement #12  | 3 pts  |
| Pie recipe page – Requirement #4 | 3 pts  | Pie recipe page – Requirement #13  | 3 pts  |
| Pie recipe page – Requirement #5 | 3 pts  | Pie recipe page – Requirement #14  | 3 pts  |
| Pie recipe page – Requirement #6 | 3 pts  | Pie recipe page – Requirement #15  | 3 pts  |
| Pie recipe page – Requirement #7 | 3 pts  | Pie recipe page – Requirement #16  | 3 pts  |
| Pie recipe page – Requirement #8 | 3 pts  | Page is inaccessible via CEFNS URL | -4 pts |

With best wishes  
Dr. Mohamed Elwakil