CS 171/CSCI E-64: Visualization
Homework 4, Problem 3: HTML/CSS

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1. At a high level, what is the purpose of HTML and CSS? How do the two differ?

   HTML is meant for displaying content and to give it structure. CSS is meant for presenting that content with a defined style and appearance.

2. What is the purpose of assigning a "class" to an HTML element? What is the difference between a "class" and an "id"? How would one select a division (div) element with class "box" using CSS?

   The class attribute allows for the application of a CSS style to an array of HTML elements. Class attributes can be applied to multiple HTML elements. ID attributes, or selectors, can only be applied to one unique element at a time. To select a div element with a class 'box' the syntax would be:

   ```
   div.box {
        …
   }
   ```

3. List 5 different HTML elements and provide a short description of the function of each.
   - **h1**: a block level element (one of six) that help users read a page by calling out a key identifier.
   - **p**: defines a paragraph of text . Space is usually added around each p element, though this can be modified with CSS.
   - **a**: an inline element that defines a hyperlink. The href attribute sets the URL or email address the link goes to. In HTML5 the a element is always a hyperlink. In HTML 4.01 it can also be used as an anchor.
   - **br:** defines a line break.
   - **header:** a HTML5 element that specifies a heading section for a document. Usually contains introductory text or navigational links. More than one header is allowed per document.
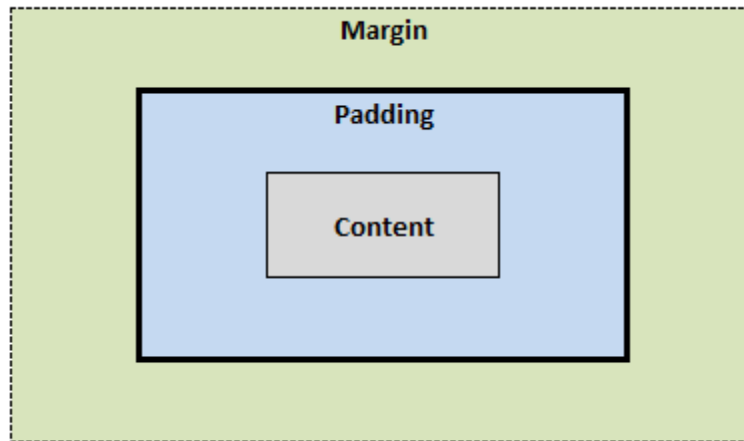
4. What is the difference between margin and padding?

   Both margin and padding apply space to improve the legibility of elements. The main difference is that the margin is on the 'outside' of the element and padding adds space to the inside of the element. In the image below the element would consist of the gray and blue boxes. The border of the element is the thick black outline around the blue box.

5. Consider the Gmail Inbox interface. How is the site functionally divided? Create a nested list representing this functional division. Don't worry about extremely fine details; this should help you start:

```
page

    top bar

            links to Google sites

    header bar

            Google logo

            search field

            search button

            user name, share button, user button

    sub-header bar

            Gmail/Contacts/Tasks button

            Select, refresh, more buttons, paging, tools

    Left navigation

            Compose button

            Email folders

            Contacts
```

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```
Center pane

        Ad banner

        Email listing

                Checkbox

                Star

                From

                Subject

                Date/Time

Footer

        Ad banner

        Usage data

        Google Terms & Privacy

        Account activity
```