IS 312 Web Application Development
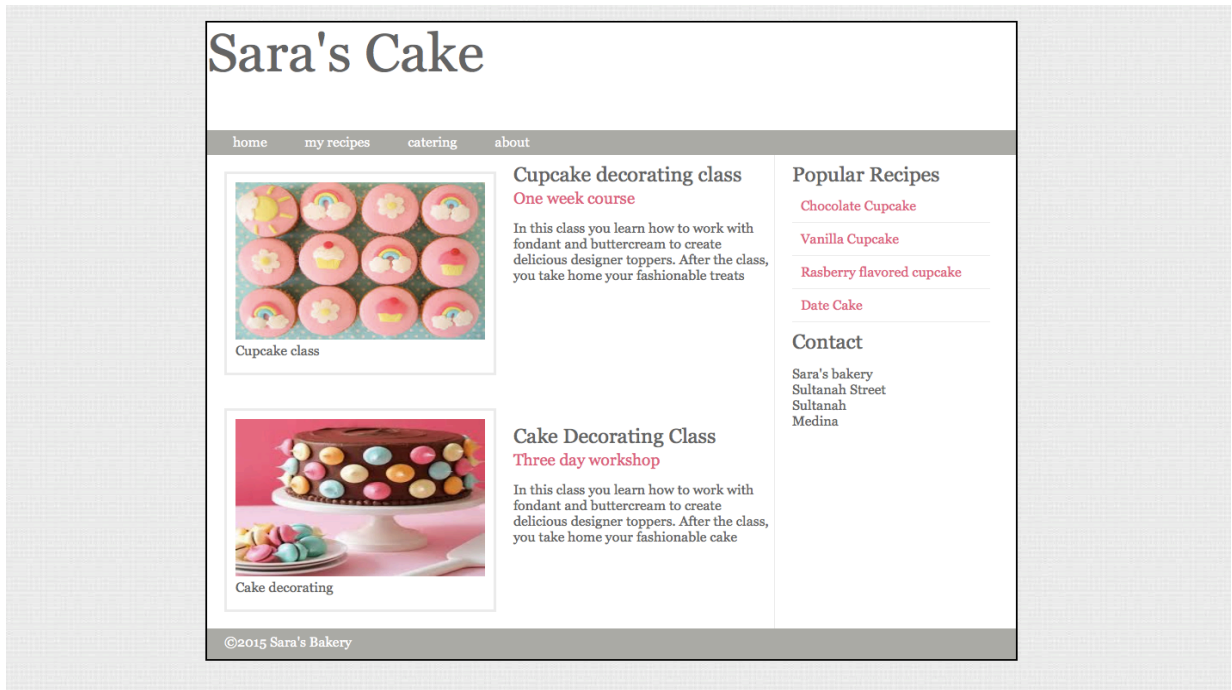
Lab sheet 4: Introduction to CSS (Part 2)

Objective

The objective of today's lab is to get you to use CSS to specify the layout of your website. The design that you will create today is similar to what you would normally see on the web.

Before attempting the exercises below, it might be a good idea to quickly revise the CSS materials we have covered in the lecture.
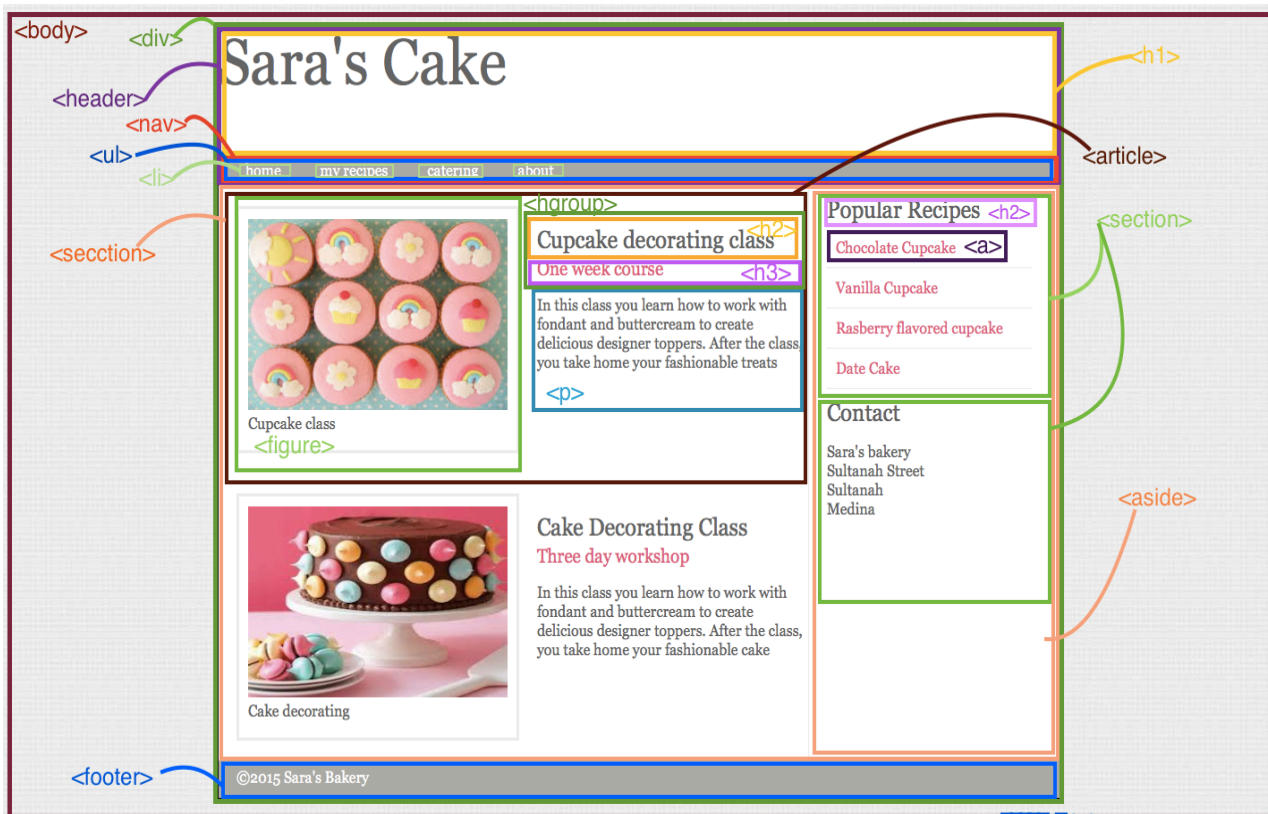
Exercise 1

Imagine that you have a friend named Sara who is starting a home-based business for making cakes, and who is interested in marketing herself online. She would like to create a website in which she can share recipes, promote her classes and advertise her services.. etc. The design of her website is shown below.

The design was created using one of the design applications such as Photoshop. As you are a front-end developer, you need to create the equivalent web page which looks similar to the one your friend asks for.

You know that everything on the web is boxes and the first thing you should do to approach her design is by cutting up the page into boxes (i.e. boxifying it). Start from the big boxes and work down to the smaller ones. You can use a pencil to do so.

To show you how that may look like, have a look at the boxified page below. Do not worry about the tags for now, just observe how the design was turned into a bunch of boxes. It is not complete yet, so you may want to add more boxes to it. Use a pencil or a pen to do so.

Creating the HTML

Now, you need to convert those boxes into a HTML document and style it using CSS to match the required design. Please note that some of the boxes represent some familiar elements such as h1, h2, p while others are grouping HTML elements so that they will be styled together using CSS. While you can use only <div> to group elements, it is good practice to use the new semantic layout elements such as <header>, <article>, <aside>, <section>, <hgroup>, <nav> (short for navigation) and <footer>..etc which indicate the type of content you will find in them.

Go ahead and create the HTML document which describes the boxes in the design above. Here is a skeleton of the document to help you get started, copy it and fill in the missing content. (Hint: look at the boxified page to know how to complete the HTML document).

```html
<!DOCTYPE html>
<html>
    <head>
        <title></title>
    </head>
    <body>
        <div>
            <header>
              <h1> </h1>
                <nav>
                    <ul>
                        <li><a href="">home</a></li>
                        <li><a href=""> </a></li>
                        <li><a href=""> </a></li>
                        <li><a href=""> </a></li>
                    </ul>
                </nav>
            </header>

            <section class="courses">

            <!--FIRST ARTICLE-->
                <article>
                    <figure>
                        <img />
                        <figcaption> </figcaption>
                    </figure>
                    <hgroup>
                        <h2> </h2>
                        <h3> </h3>
                    </hgroup>
                    <p> </p>
                </article>
            <!--END OF FIRST ARTICLE-->

            <!--SECOND ARTICLE-->
                <article>
                    <figure>
                        <img />
                        <figcaption> </figcaption>
                    </figure>
                    <hgroup>
                        <h2> </h2>
                        <h3> </h3>
                    </hgroup>
                    <p> </p>
                </article>
            <!--END OF SECOND ARTICLE -->

            </section>

            <aside>
                <section>
                    <h2> </h2>
                        <a href=""> </a>
                        <a href=""> </a>
                        <a href=""> </a>
                        <a href=""> </a>
                </section>
                <section>
                        <h2> </h2>
                        <p> </p>
                </section>
            </aside>

            <footer>&copy;2015 Sara's Bakery
            </footer>
        </div>
    </body>
</html>
```

When you are done filling in the content of the page, open it in the browser, it does not look nice, does it?!

Now we will create the cascading style sheet, which will describe how each element will be presented.

Creating the CSS

1. If you look at the page you will see that most of the elements share the same font and text color (gray). To specify such shared styles, declare them using the body selector so that they will be applied to all the contained elements (both font and color are inherited). The color is #666666 and the font is Georgia. Use more than one font as you have learned in the lecture.
Note that there is also a background image/texture (background.jpg) used in the body element so add that to the block of declarations. Write the rule set for that.

2. If you look at the boxified html page or the html document provided above, you will see that the <div> element wraps the whole content of the page. The content area is *white* and has *a width of 940px* (note that <div> is a block-level element and setting the width will prevent it from stretching out to the edges of its container which is the <body> here). You can clearly see that the content is surrounded with a border, which is a 2px solid and black border. The <div> also has a *20px margin* from up and bottom and auto from left and right (auto left and right margins horizontally centers the element within its container). Write the rule set for that.

3. Copy and paste the rest of the CSS given in the next page. Open the HTML document in the browser and it should look similar to the one given in the design. Understand every rule set given and what purpose it serves in the design. A good way to do that is by changing the value of each property and observing the effect it makes. Some of the properties were not covered in the lecture but you should be able to understand them.

Work on the following:

1. Use a pseudo-class to change the text color of the navigation links when you mouse over them.

2. Use a pseudo-element to change both the background color and the text color of the selected text. (hint: *::selection*)

```css
header {height: 160px;}

h1 { height: 130px;
margin: 0px;
font-size: 4em; }

nav, footer {clear: both;
color: #ffffff;
background-color: #aeaca8;
height: 30px;}

nav ul {margin: 0px;
padding: 5px 0px 5px 30px;}

nav li {display: inline;
margin-right: 40px;}

nav li a {color: #ffffff;}

section.courses {float: left;
width: 659px;
border-right: 1px solid #eeeeee;}

article {clear: both;
overflow: auto;
width: 100%;}

hgroup {margin-top: 40px;}

figure {float: left;
width: 290px;
height: 220px;
padding: 10px;
margin: 20px;
border: 3px solid #eeeeee;}

figcaption {text-align: left;}

img {width: 290px;
height:190px;}

aside {width: 230px;
float: left;
padding: 0px 0px 0px 20px;}

aside section a {display: block;
padding: 10px;
border-bottom: 1px solid #eeeeee;}

a {color: #de6581;
text-decoration: none;}

h1, h2, h3 {font-weight: normal;}

h2 {margin: 10px 0px 5px 0px;
padding: 0px;}

h3 {margin: 0px 0px 10px 0px;
color: #de6581;}

footer {padding: 7px 0px 0px 20px;}
```