

CSE 154 sample midterm 2

1. HTML / CSS Tracing

Draw a picture of how the following HTML/CSS code will look when the browser renders it on-screen. Assume that the HTML is wrapped in a valid full page with a head and body. Indicate a non-white background by shading lightly or by drawing diagonal lines like *this*.

a)

```
<div id="coffee">
  <p>*( 'O' ) *</p>
  <ul>
    <li>aaa</li>
    <li id="c">bbb</li>
    <li>ccc</li>
  </ul>
</div>
```

```
#coffee {
  width: 50%;
  background-color: pink;
  margin-left: auto;
  margin-right: auto;
}

div > li { background-color: white; }

li {
  display: inline;
  margin: 20px;
  border: black 2px dashed;
}

#c { width: 50%; }
```

b)

```
<div>
  <div>foo</div>
  <div class="bar">
    <div class="foo">b</div>
    <div>a</div>
    <div class="foo">r</div>
  </div>
  <div class="foo">baz</div>
<p>ant</p>
</div>
```

```
.bar { float: right; }
div { border: solid black 1px; }
.foo { background-color: yellow; }
div > div { width: 20%; }
```

2. HTML/CSS Coding

(Based on "Lily Pond" theme from <http://csszengarden.com/>)

Write the HTML/CSS necessary to recreate the following appearance. No manual line breaks have been inserted.



Most of the HTML code is given to you; the code given may not be modified. The only change you may make to the provided HTML code is that you may add any number of **div** and **span** elements, possibly with `id` and/or `class` attributes, as targets for CSS styling. Write **valid HTML and CSS code** that would pass the W3C validators. The HTML text shown would appear inside the `body` of the page.

- The image `header.gif` appears once at the top-left corner of the page. This image contains the vertical "Zen Garden" text seen in the image above. Other content is shifted right by 130px to avoid covering this background image. The page's usual Zen Garden header text should not be shown because the image replaces it.
- Text on the page uses a font named "Verdana", or if that font is not available, the default sans-serif font available on the system. Text on the page is displayed in the color #471C47. The overall default font size is 9pt.
- The "A demonstration of..." paragraph's text is in italic.
- There is a first column of content, 26em wide, that displays "The Road to Enlightenment" and "Select Design" and so on. Behind that content is the image `toad.jpg` aligned to the bottom-right corner of the area. 1em of space separates text in this area from the other column to its right. A 3px-thick solid border of color #A690AF separates the "Road to Enlightenment" content from the "Select a Design" content.
- The links in the "Select Design" area are in bold. (Other links on the page are not bold.)
- There is a second column of content, 21em wide, that displays "So What is This About?" and "Participation". It has a 2px-thick border of color #471C47 and a background color of #A690AF. It touches the right edge of the first column previously described. 1em of space separates text in this area from its border on all sides. If the page is resized to be wider than shown above, the columns remain in the same orientation, connecting on their edge.
- Headings in the second column are right-aligned.

You may not use absolute or fixed positioning when solving this problem.

Mark up the text on the next page with your `div/span` tags. If a tag can't fit in the space provided, write it in the margins and draw an arrow to where to insert it. Any elements not described use the default browser styles.

2. HTML/CSS Coding (writing space) - Mark up the HTML code below.

```
<h1>Zen Garden</h1>
```

```
<p>A demonstration of what can be accomplished visually through CSS-based design. <br />
  Download the sample <a href="">html file</a> and <a href="">css file</a>.</p>
```

```
<h3>The Road to Enlightenment</h3>
<p>Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible
...</p>
<p>Today, we must clear the mind of past practices. Web enlightenment has been achieved ...</p>
<p>The CSS Zen Garden invites you to relax and meditate on the important lessons of the ...</p>
```

```
<h3>Select a Design</h3>
```

```
<ul><li><a href="">Under the Sea!</a> by Eric Stoltz</li>  <!-- the link hrefs don't matter -->
  <li><a href="">Make 'em Proud</a> by Michael McAghon and Scotty Reifsnyder</li>
  <li><a href="">Orchid Beauty</a> by Kevin Addison</li>
  <li><a href="">Oceanscape</a> by Justin Gray</li>
  <li><a href="">Sakura</a> by Tatsuya Uchida</li></ul>
```

```
<h3>So What is This About?</h3>
<p>There is clearly a need for CSS to be taken seriously by graphic artists. The Zen...</p>
<p>CSS allows complete and total control over the style of a hypertext document. ...</p>
```

```
<h3>Participation</h3>
<ul><li>Graphic artists only please. You are modifying this page, so strong CSS skills are...</li>
  <li>Zen editors modify the style sheet in any way you wish, but not the HTML.</li></ul>
```

Write your CSS code here. Put your CSS in multiple columns if you need more writing space, or use scratch paper.

3. PHP

Write the PHP code for a self-submitting form page with two states:

When a **parameter is not passed**, output a form to select (from a dropdown box) an elevation profile to display. The options in the dropdown should be the names of **all files in the current directory** that end in `.dat`, as follows:

Elevate-It!

Select an elevation profile:

Ragnar Leg 25.dat

Elevate-It!

The form on this page should submit back to itself. When a **parameter called profile is passed**, load the file of the given name, and output its contents in a table. The data in the file will be in the following format:

```
0,7.1
49,7.1
68,7.2
...
```

Each line contains two numbers, separated by a comma. The first number represents a distance, and the second represents an elevation, both in meters. You should output these two numbers in a table as follows:

At the end of your page, you should print a **cumulative gain/loss** which indicates the total amount of elevation gained or lost, as follows:

Elevate-It!

Elevation data for Ragnar Leg 25.dat:

distance	elevation
0	7.1
49	7.1
68	7.2
88	7.4
107	7.4
127	7.4
146	7.5
166	7.5

802	11.4
820	11.6
838	11.8
855	11.9
878	12

Total gain/loss: 408.7

Your code doesn't need to output a complete XHTML page; assume that your output will be put inside the page's `body`. You will receive a small deduction if you use `print` or `echo` statements in your solution.

4. SQL

Write an SQL query to search the `imdb_small` database for the `id` and last/first name of all directors who have made at least two films and has covered at least two different genres. Show the directors in alphabetical order by last name ascending, breaking ties by first name in ascending order. Each director should be listed only once.

A genre is a category of film such as Action or Drama. For this problem, assume that a given movie is considered to be part of exactly one genre, corresponding to one row in the `movies_genres` table for that film. Recall the tables:

actors			
id	first_name	last_name	gender
433259	William	Shatner	M
797926	Britney	Spears	F
831289	Sigourney	Weaver	F
...			

movies			
id	name	year	rank
112290	Fight Club	1999	8.5
209658	Meet the Parents	2000	7
210511	Memento	2000	8.7
...			

roles		
actor_id	movie_id	role
433259	313398	Capt. James T. Kirk
433259	407323	Sgt. T.J. Hooker
797926	342189	Herself
...		

directors		
id	first_name	last_name
24758	David	Fincher
66965	Jay	Roach
72723	William	Shatner
...		

movies_directors	
director_id	movie_id
24758	112290
66965	209658
72723	313398
...	

movies_genres	
movie_id	genre
209658	Comedy
313398	Action
313398	Sci-Fi
...	

When run on the `imdb_small` database, your query would produce the following results (see explanation at right).

```

+-----+-----+-----+
| id    | last_name | first_name |
+-----+-----+-----+
| 11652 | Cameron  | James (I)  |
| 15092 | Coen     | Ethan     |
| 15093 | Coen     | Joel      |
| 58201 | Nolan    | Christopher|
| 78273 | Tarantino| Quentin   |
+-----+-----+-----+
5 rows in set (0.01 sec)

```

- Cameron directed *Aliens* (Action) and *Titanic* (Romance).
- The Coen brothers directed *Fargo* (Drama) and *O Brother, Where Art Thou?* (Adventure).
- Nolan directed *Memento* (Thriller) and *Batman Begins* (Action).
- Tarantino directed *Pulp Fiction* (Drama), *Reservoir Dogs* (Thriller), and *Kill Bill: Vol. 1* (Action).

If you join too many tables together that are not needed for the query, you will not receive full credit. You should solve this problem using only the SQL syntax shown in class and the textbook.
