CSE 190 M, Summer 2010
Final Exam, Part 1 (LAB), version A
Thursday, August 19, 2010

Name: _____

Section: _____ **TA:** _____

Student ID #: _____

Rules:

- You have **60 minutes** to complete this part of the exam.
  You may receive a deduction if you keep working after the instructor calls for papers.
- This test is open-book/notes.
- You may not use any computing devices, including calculators, cell phones, or music players.
- Unless otherwise indicated, your code will be graded on proper behavior/output, not on style.
- Please do not abbreviate code, such as writing ditto marks ("") or dot-dot-dot marks (...).
- If you enter the room, you must turn in an exam and will not be permitted to leave without doing so.
- You must show your **Student ID** to a TA or instructor for your submitted exam to be accepted.

Good luck!

Problem	Description	Earned	Max
1	HTML/CSS Tracing		15
2	HTML/CSS Coding		15
3	JavaScript/DOM		15
TOTAL	**Day's Total Points**		**45**

Problem	Description	Earned	Max
4	?		?
5	?		?
6	?		?
TOTAL	**Day's Total Points**		**55**

TOTAL	**Exam Total Points**		**100**

1. HTML/CSS Tracing

Draw a picture of how the following HTML and 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 background coloring by shading lightly or by drawing repeated diagonal lines like this . If you can't clearly write *italic* text, circle it instead.

HTML:

```
<div id="b">
    <p>Hello</p>        <p>Goodbye</p>
</div>

<div id="a">
    <em>Happy</em>      <em>Sad</em>
</div>

<div class="a c"> Monday Tuesday Wednesday </div>
<div class="b">    Thursday Friday Saturday </div>

<div>
    <div id="d" class="c">
        <p><em>SUNDAY</em></p>
    </div>
</div>
```
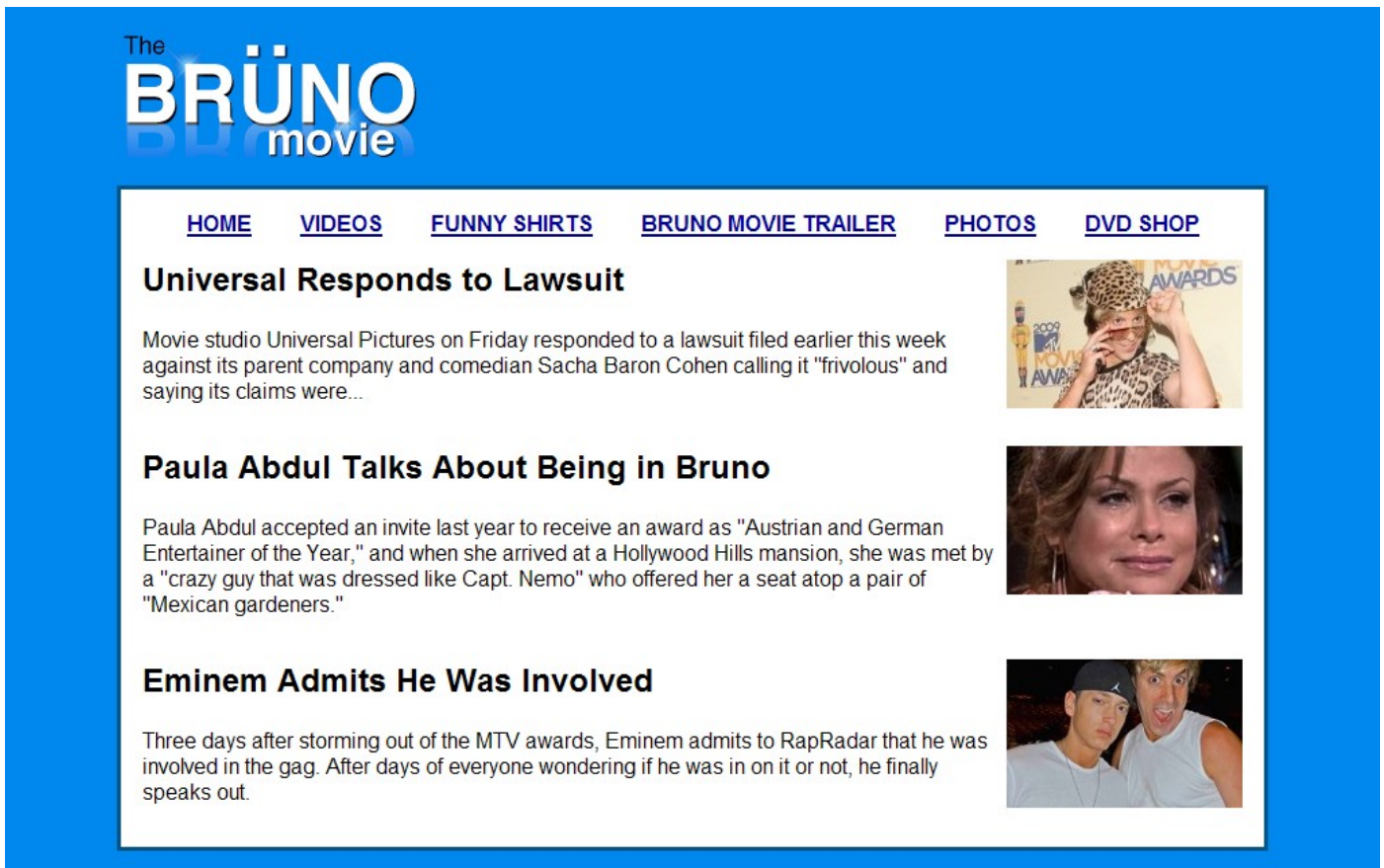
CSS:

```
div { padding: 2em; }                    .b { float: left; }
#a { border: 3px dashed black; }         .c, .b { border: 5px dotted red;
#b { background-color: yellow; }                 margin: 1em; width: 5em; }
.c { float: right; }                     p em { text-decoration: underline; }
.d { font-weight: bold; }
```

2. HTML/CSS Coding

Write the HTML and CSS code necessary to recreate the following appearance on-screen.
No manual line breaks have been inserted into the text.

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 code** that would pass the W3C validators. Assume that the given HTML text would appear inside the body of the page.

- Text on the page uses a **sans-serif** font. The area around the outside of the page has a bluish color of **#0088EE**.

- The central content area has a **white background** and a **3px-thick solid** border using the color **#005588**. The content area is **centered** within the page and occupies **85%** of the page width.

- The list of links appears **without bullets** displayed all in **one line**, **centered** on the page. Each link's text is **bold**, and the link has **1em** of horizontal space between it and the other neighboring links.

- Each news story on the page has an image that **hovers** to the right of other content, which wraps around it as necessary. There is **1em** blank space around stories on all sides. No two stories should "collide" together; each story should be **large enough** on the page to fit its content.

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 it should be inserted. Though 3 articles are shown above, your solution should work for any number of stories. (Don't rely on article-specific IDs or on there being exactly 3 of them.)

Write your answer on the next page.

2. HTML/CSS Coding (writing space)

Mark up the **HTML code** below.

```html
<img src="brunologo.png" alt="logo" />


<ul id="links">
  <li><a href="home.html">HOME</a></li>
  <li><a href="vids/">VIDEOS</a></li>
  <li><a href="shirt.html">FUNNY SHIRTS</a></li>
  <li><a href="trailer.html">BRUNO MOVIE TRAILER</a></li>
  <li><a href="photos/">PHOTOS</a></li>
  <li><a href="http://dvdshop.com/">DVD SHOP</a></li>
</ul>


<img src="brunouniversal.jpg" alt="Bruno at Universal" />


<h2>Universal Responds to Lawsuit</h2>


<p>Movie studio Universal Pictures on Friday responded to a lawsuit filed...</p>


<img src="paulaabdul.jpg" alt="Paula Abdul" />


<h2>Paula Abdul Talks About Being in Bruno</h2>


<p>Paula Abdul accepted an invite last year to receive an award as ...</p>


<img src="eminem.jpg" alt="Eminem" />


<h2>Eminem Admits He Was Involved</h2>


<p>Three days after storming out of the MTV awards, Eminem admits to RapRadar...</p>
```

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

3. JavaScript/DOM

Write the **JavaScript code** to add behavior to the following page that has a user interface for entering grades on homework assignments. You will compute the percentage of points earned, with an optional **curve**. When "Compute!" is clicked, your JS code should use the values in the text boxes to compute the percentage (**rounded** to the nearest percent). If the "Curve +5" checkbox is checked, add **+5 percent** up to a **maximum of 100%** total.

You should insert the percentage into the page as a new `div` added to the end (bottom) of the existing page section with the `id` of `resultsarea`. If the overall percentage is **60% or more**, give your newly created `div` a CSS class of `pass`; otherwise give it a class of `fail`. Each time the user clicks "Compute!", you will insert such a new `div`; this means that several `div`s would be there after several clicks of "Compute!".

In the code shown there are 3 assignments, but your code should work for **any number of assignments** ≥ 1.

When **"Clear"** is clicked, all text in all of the input text boxes should be erased.

Assume valid input; that is, assume that when "Compute!" is clicked, the user will have already typed valid text into every box that can be interpreted as an integer. You may assume that **Prototype** is also included in the page.

HTML:

```html
<h1>Grade Calculator</h1>

<div id="assignments">
  <div class="hw">
    HW1 <input class="earned" type="text" size="2" />
     /  <input class="max" type="text" size="2" />
  </div>
  <div class="hw">
    HW2 <input class="earned" type="text" size="2" />
     /  <input class="max" type="text" size="2" />
  </div>
  <div class="hw">
    HW3 <input class="earned" type="text" size="2" />
     /  <input class="max" type="text" size="2" />
  </div>
  ...
</div>

<div>
  <label><input id="curve" type="checkbox" /> Curve +5 ?</label>
</div>

<div id="resultsarea">
  <button id="compute">Compute!</button>
  <button id="clear">Clear</button>

  <!-- your percentages should be inserted here -->
</div>
```

CSS:

```css
.pass {
  background-color: #cfc;
  font-weight: bold;
}


.fail {
  background-color: #fcc;
  font-style: italic;
}
```

These screenshots show the initial state, and state after scores have been typed and "Compute!" has been clicked.

3. **JavaScript/DOM (additional writing space)**