

## Problem Set 7: Website Development

*due Monday, 8 December 2008, by 7:35 P.M.*

You must submit this problem set via email to [psets@computerscience1.org](mailto:psets@computerscience1.org).

### Short Answers. (10 points each.)

1. Consider the element below.

```

```

What are the attributes of this element?

2. Suppose that you've just entered

```
http://malanrouge.com/baz.jpg
```

into your browser. Unfortunately, upon hitting Enter, rather than being rewarded with a photograph of Baz Luhrmann, you are confronted with a page containing the error message below.

#### **HTTP Error 403 - Forbidden**

Explain in a sentence why you might be receiving this message.

3. What does it mean for a web page to be well-formed? How is the well-formedness of a page different from its validity?
4. Speaking of well-formedness, the XHTML in each of the following statements is not well-formed. Tweak each statement so that it is well-formed, making as few changes to the original text as possible.
  - a. `<p>Dragons prefer to sleep with <em>one eye open!</p></em>`
  - b. `Purple dragons are, no surprise, <span style="color:purple">purple.`
  - c. `I like Puff, the Magic Dragon.  
<br>  
I don't like Smaug, J.R.R. Tolkien's nasty dragon.`
  - d. `It's the <b>"Dragon Tales"</strong> show!`

**Twenty Unique Start Tags?! (60 points.)**

5. Okay, it's time to make a web page! We'll leave its design largely up to you, but let's put forth a few guidelines, below.
- i. Your page's filename must be `surname.html`, where `surname` is your last name in lowercase.
  - ii. Your page must contain at least one `mailto:` link and one link to another website.
  - iii. Your page must use some CSS for at least two elements (*i.e.*, tags).
  - iv. Your page must be XHTML 1.0-compliant (*i.e.*, well-formed and valid).
  - v. Your page must contain at least twenty unique start tags. (That is, you can't just use something like `<b>` 20 times!)

While the specific contents of your page are up to you, things of beauty are encouraged. However, your work be evaluated solely on the basis of its compliance with XHTML 1.0.

Rather than host this particular webpage on a server, you should instead develop it on your own computer, using any text editor (*e.g.*, Notepad or TextEdit) to create it and any browser (*e.g.*, Internet Explorer or Safari) to view it.

We suggest that you build your page incrementally, confirming its well-formedness and validity (with, say, the W3C's validator at <http://validator.w3.org/>) often.<sup>1</sup>

Simply submit `surname.html` as an attachment when you submit your answers to the rest of this problem set via email!

**Extra Credit. (5 points.)**

6. Although XHTML 1.0 is based on HTML 4.0, the former differs from the latter in a number of ways. Possibly by conducting a bit of research or doing a bit of reading, point out at least five fundamental differences between XHTML 1.0 and HTML 4.0.

---

<sup>1</sup> Trust us. Finding and fixing errors in 10 lines of XHTML is a lot easier than in 20 lines!