

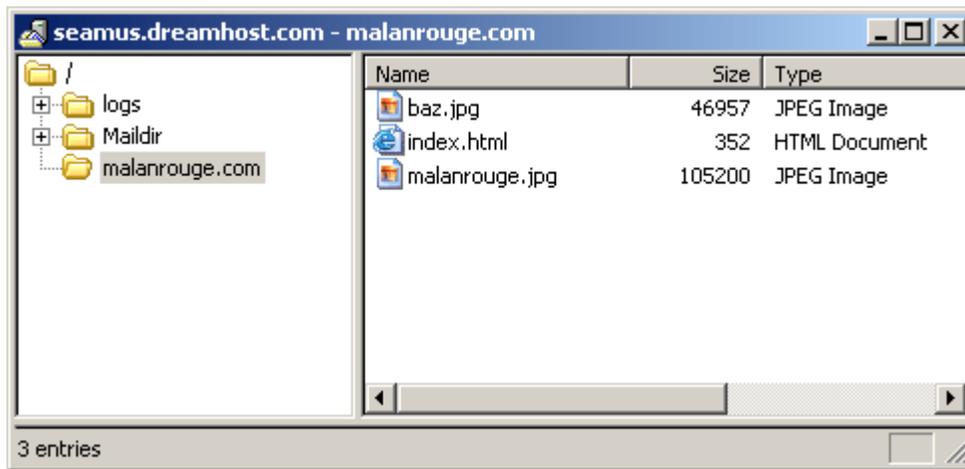
Problem Set 7: Website Development

due Wednesday, 20 December 2006, by 5:30 P.M. ET

You must submit this problem set via upload to the dropbox on the course's website.

Come What May. (10 points each.)

Consider the screenshot, below, of an FTP session with `seamus.dreamhost.com`.



1. Per Lecture 10 as well as the above, `malanrouge.com` is hosted on `seamus.dreamhost.com`. But so are many other websites (including, soon, your own)! Technically speaking, how is it that `seamus.dreamhost.com` (a server with just one IP address) can host so many different domains? In other words, how, in your own words, does “virtual hosting” work?
2. Given the directory structure above, via what URL could you access `malanrouge.jpg` (not `index.html`) with a web browser?
3. Consider the element below.

```

```

What are the attributes of this element? XHTML does not require that you specify an image's dimensions, but why, in a sentence or two, is doing so useful?

Short Answers. (10 points each.)

4. 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

What exactly does this error message mean? Suggest two possible reasons for this error's occurrence.

5. What does it mean for a web page to be well-formed? How is the well-formedness of a page different from its validity?
6. 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 one eye open!</p>`
 - b. Purple dragons are, no surprise, `purple.`
 - c. I like Puff, the Magic Dragon.
`
`
I don't like Smaug, J.R.R. Tolkien's nasty dragon.
 - d. It's the `"Dragon Tales"` show!

Twenty Unique Start Tags?! (40 points.)

7. 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 `twenty.html`.
 - ii. Your page must contain at least one image.¹
 - iii. Your page must contain at least one `mailto:` link and one link to another website.
 - iv. Your page must use CSS for at least two elements (*i.e.*, tags).
 - v. Your page must be XHTML 1.0-compliant (*i.e.*, well-formed and valid).
 - vi. Your page must contain at least twenty unique start tags.

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.

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.²

Extra Credit. (5 points.)

8. 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.

¹ Be sure, if necessary, to submit the image along with `twenty.html` to the dropbox.

² Trust us. Finding and fixing errors in 10 lines of XHTML is a lot easier than in 20 lines.