Computer Science 50

Introduction to Computer Science I

Harvard College

Week 10

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Your Classmates by Year

2. What year are you?		Response Percent	Response Count
freshman		21.7%	62
sophomore		**30.8%**	88
junior		25.9%	74
senior		17.5%	50
grad student		4.2%	12
	answered question		**286**

Your Classmates by Gender

Female	29%	79
Male	71%	194

Your Classmates' Comfort Levels

1. Which category do you feel you fall into?		
	Response Percent	Response Count
I'm among "those less comfortable"	30.8%	88
I'm among "those more comfortable"	19.6%	56
I'm somewhere in between	**49.7%**	142
	answered question	**286**

Your Classmates' Prior Experience

4. How much programming experience did you have before CS 50?

	Response Percent	Response Count
none	43.4%	124
a little	**46.5%**	133
a lot	10.1%	29
	answered question	**286**

Time Spent on Problem Sets

23. Roughly how much time would you say you've spent on recent problem sets (say, ps2: Crypto onward)?		Response Percent	Response Count
0 - 5 hours		4.0%	11
5 - 10 hours		38.5%	106
10 - 15 hours		33.1%	91
15 - 20 hours		17.5%	48
20+ hours		6.9%	19
	answered question		**275**

Oh, the Places You'll Go!

- **CS 51:** Introduction to Computer Science II
  sneak preview on Friday, 7 December 2007
  - Abstraction and design in computation. Topics include: Functional and object-oriented styles of programming; software engineering in the small; implementation of a language interpreter. Goal: understanding how to design large programs to make them readable, maintainable, efficient, and elegant. Exercises in LISP (Scheme) and C++.
- **CS 61:** Systems Programming and Machine Organization
  sneak preview on Monday, 10 December 2007
  - Fundamentals of computer systems programming, machine organization, and performance tuning. This course provides a solid background in systems programming and a deep understanding of low-level machine organization and design. Topics include C and assembly language programming, program optimization, memory hierarchy and caching, virtual memory and dynamic memory management, concurrency, threads, and synchronization.

Image from http://members.memlane.com/gromboug/P16MvSig.htm.

The year was 1995...

Recommended Reading

- **TCP/IP Tutorial**
  http://www.w3schools.com/tcpip/
- **How Web Servers Work**
  http://computer.howstuffworks.com/web-server.htm
- **XHTML Tutorial**
  http://www.w3schools.com/xhtml/
- **CSS Tutorial**
  http://www.w3schools.com/css/
- **PHP Tutorial**
  http://www.w3schools.com/php/
- **SQL Tutorial**
  http://www.w3schools.com/sql/

“RTFM”

- **PHP Manual**
  http://us.php.net/manual/en/
- **MySQL 5.0 Reference Manual**
  http://dev.mysql.com/doc/refman/5.0/en/

Use the Bulletin Board!

Fall 2007

Forum	Topics	Posts
Announcements Official announcements by the staff. You'll find that you can reply to our announcements but not initiate them yourself. RSS	19	80
Final Project Ideas Have an idea for your final project that you'd like to bounce off of others? Have an idea for a final project that you'd like to see someone else implement? Post it here! Try to give your post a descriptive title (e.g., "An AIM Bot that Tells You What's For Lunch"). RSS	44	90
Other For posts that don't seem to belong in the other forums! RSS	78	268
Problem Sets For Q&A about problem sets. **Do NOT post your work in this public forum**; speak privately with the staff instead. RSS	225	872
Problem Sets (Hacker Editions) For Q&A about Hacker Editions of problem sets. **Do NOT post your work in this public forum**; speak privately with the staff instead. RSS	58	223
Technical Support For questions about your FAS account, lab computers, your own computer, this bulletin board, the VTR, etc. RSS	36	113

TCP/IP

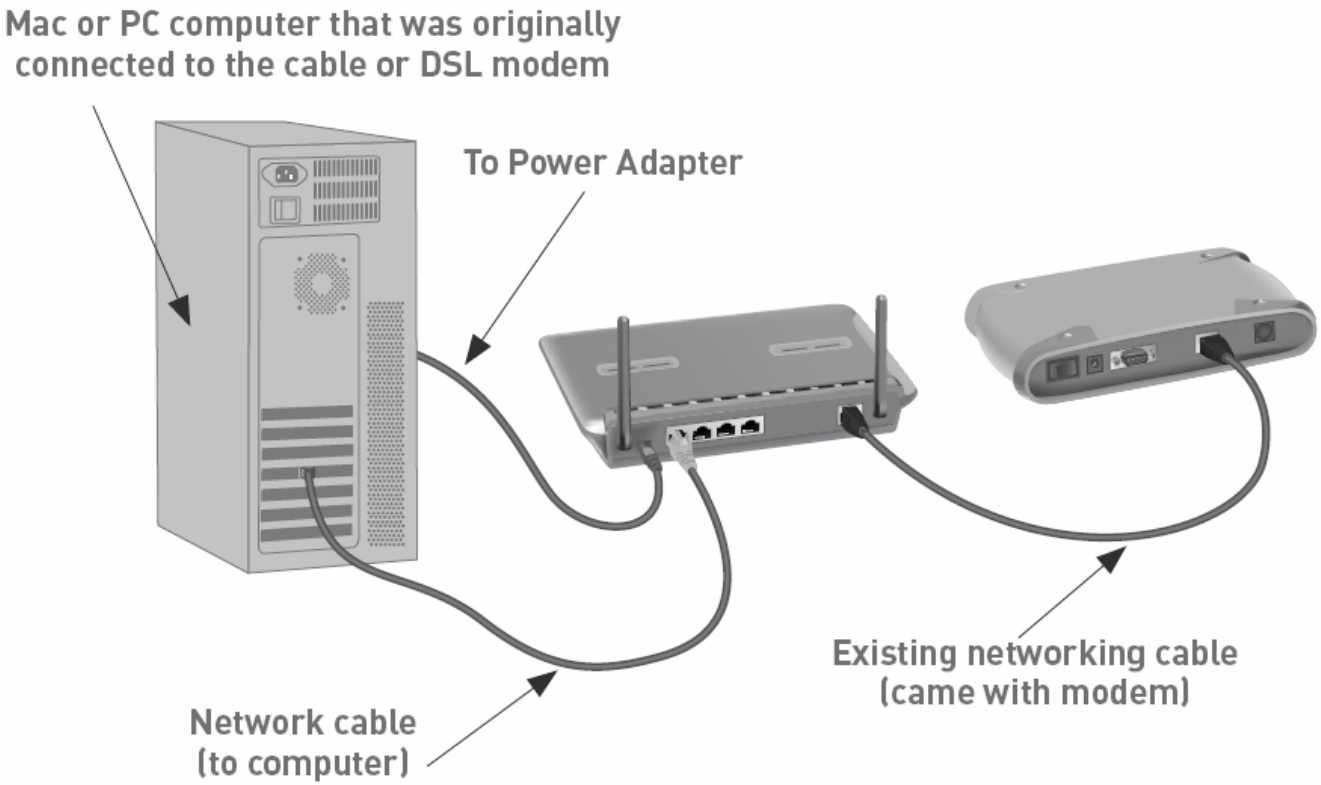

Image from http://www.belkin.com/support/download/files/F5D7231-4.pdf.

HTTP

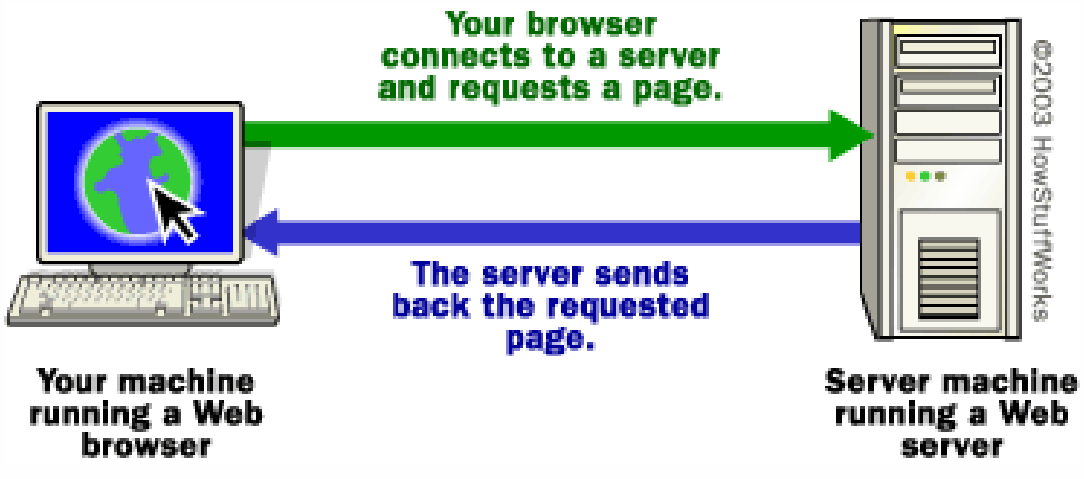

Image from http://computer.howstuffworks.com/web-server1.htm.

XHTML

```
<!DOCTYPE html
     PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
     "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>hello, world</title>
  </head>
  <body>
    hello, world
  </body>
</html>
```

CSS

```
<!DOCTYPE html
     PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
     "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <link href="styles.css" rel="stylesheet" type="text/css" />
    <title>hello, world</title>
  </head>
  <body>
    hello, world
  </body>
</html>
```

Validation

http://validator.w3.org/

Forms

- **Text Fields**
```
<input name="email" type="text" />
```
- **Password Fields**
```
<input name="password" type="password" />
```
- **Checkboxes**
```
<input name="save" type="checkbox" />
```
- **Radio Buttons**
```
<input name="gender" type="radio" value="F" />
<input name="gender" type="radio" value="M" />
```
- **Drop-Down Menus**
```
<select name="dorm">
  <option value=""></option>
  <option value="Matthews"></option>
  <option value="Weld"></option>
</select>
```

Mispellings

```
$dictionary[$word] = TRUE;
```

Some Predefined Variables

- **`$_GET`**
- **`$_POST`**

SQL

- **SELECT**
- **INSERT**
- **UPDATE**
- **DELETE**

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