



Computer Science S-75

Building Dynamic Websites

Harvard Summer School
<https://www.cs75.net/>

Lecture 0: HTTP

David J. Malan
dmalan@harvard.edu
<http://www.cs.harvard.edu/malan/>

DNS



Prerequisites

- One or more years of programming experience in any language and knowledge of HTML are assumed

Expectations

- Attend all lectures
- Implement three projects

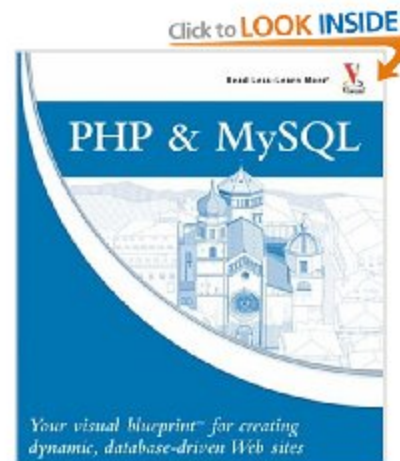
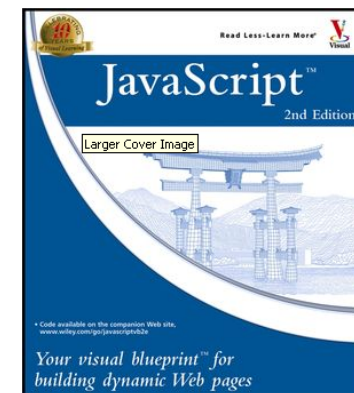
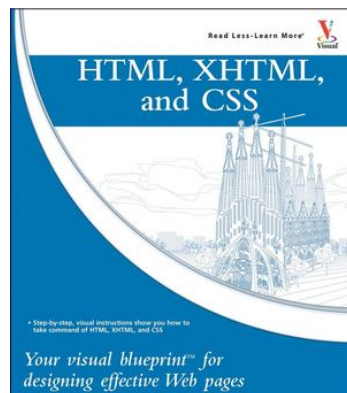
Lectures

- Lecture 0: HTTP
- Lecture 1: PHP
- Lecture 2: PHP, Continued
- Lecture 3: XML
- Lecture 4: SQL
- Lecture 5: SQL, Continued
- Lecture 6: JavaScript
- Lecture 7: Ajax
- Lecture 8: Security
- Lecture 9: Scalability

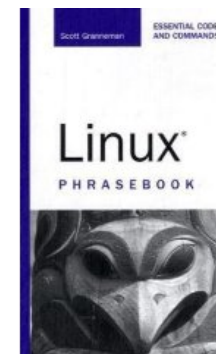
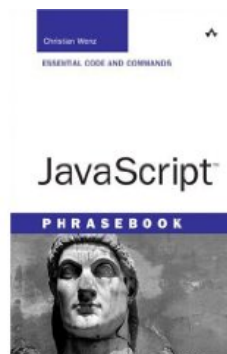
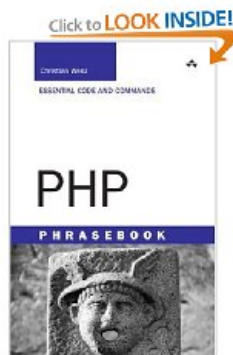
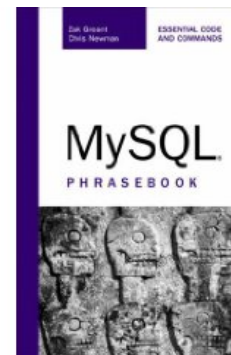
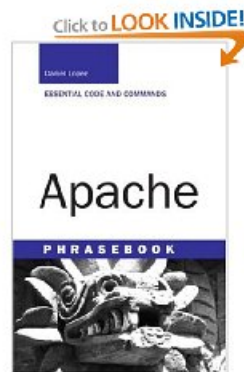
Sections, Office Hours

- Mondays, before lecture
- Wednesdays, before lecture

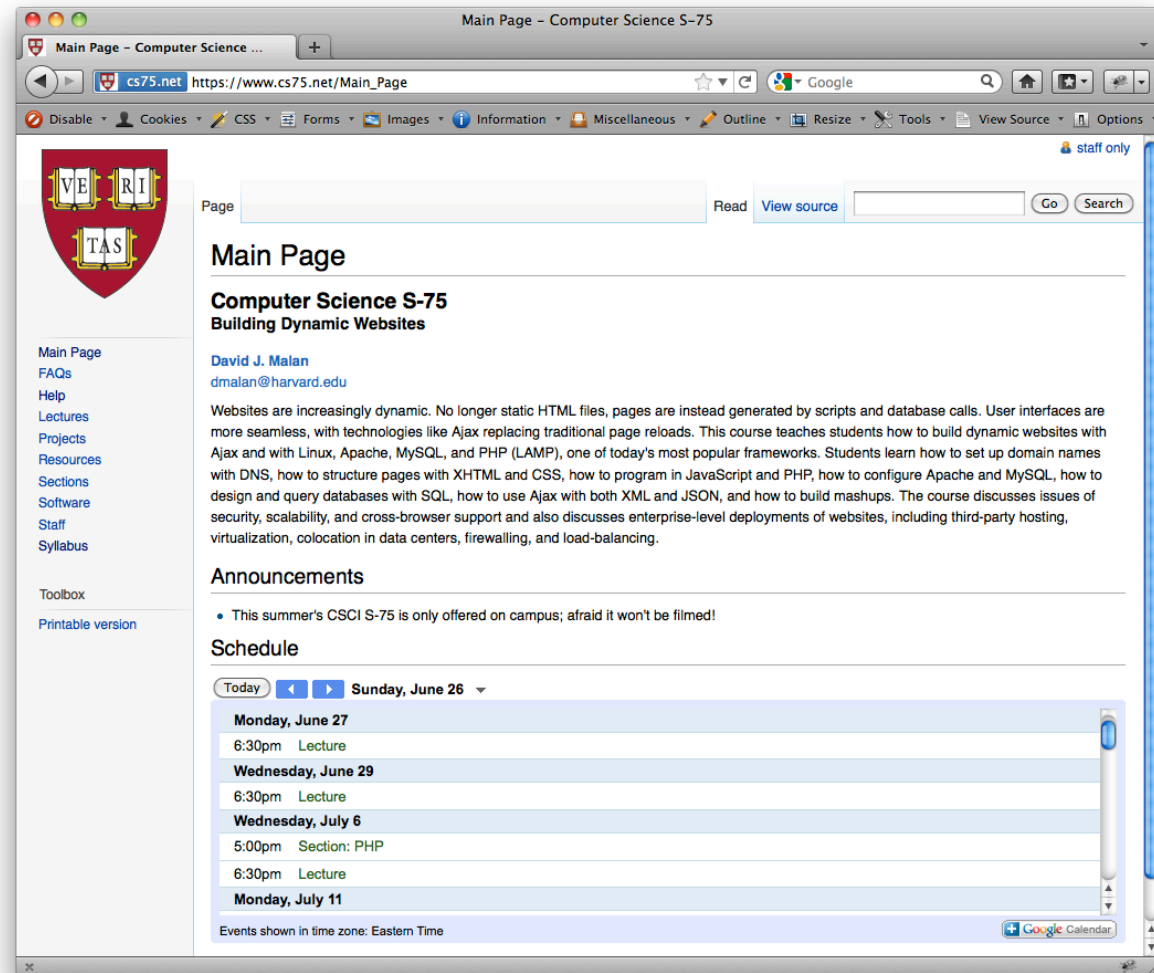
Books for Those Less Comfortable



Books for Those More Comfortable



www.cs75.net



help.cs75.net

The screenshot shows a web browser window titled "Discussion Area - CSCI S-75 Support". The address bar shows "http://help.cs75.net/discussions". The page has a blue header with navigation links: "Support Home", "Public Discussion", "Knowledge Base", "Admin", and "Go to CSCI S-75 -->". It also shows the user is logged in as "David J. Malan from CSCI S-75" with a "Log out" link. A yellow box indicates "Pending: 0 Discussions". Below this is a search bar with a "SEARCH" button. The main content area is titled "Public Discussion" and contains a welcome message. A table lists discussion categories:

CATEGORY	LATEST POST
Project 0: PizzaML For discussions about Project 0.	
Project 1: CS75 Finance For discussions about Project 1.	
Project 2 For discussions about Project 2.	
... Other For discussions that don't seem to belong elsewhere.	
help@cs75.net	

At the bottom right, there is a link "All discussions (authenticated)". The footer includes "Powered by Tender™. Have a question? Start a discussion on our Tender -->" and a "CHANGELOG" link.

DNS

- A
- CNAME
- MX
- NS
- ...







Web Hosts

All this for just **\$8.95 per month!**

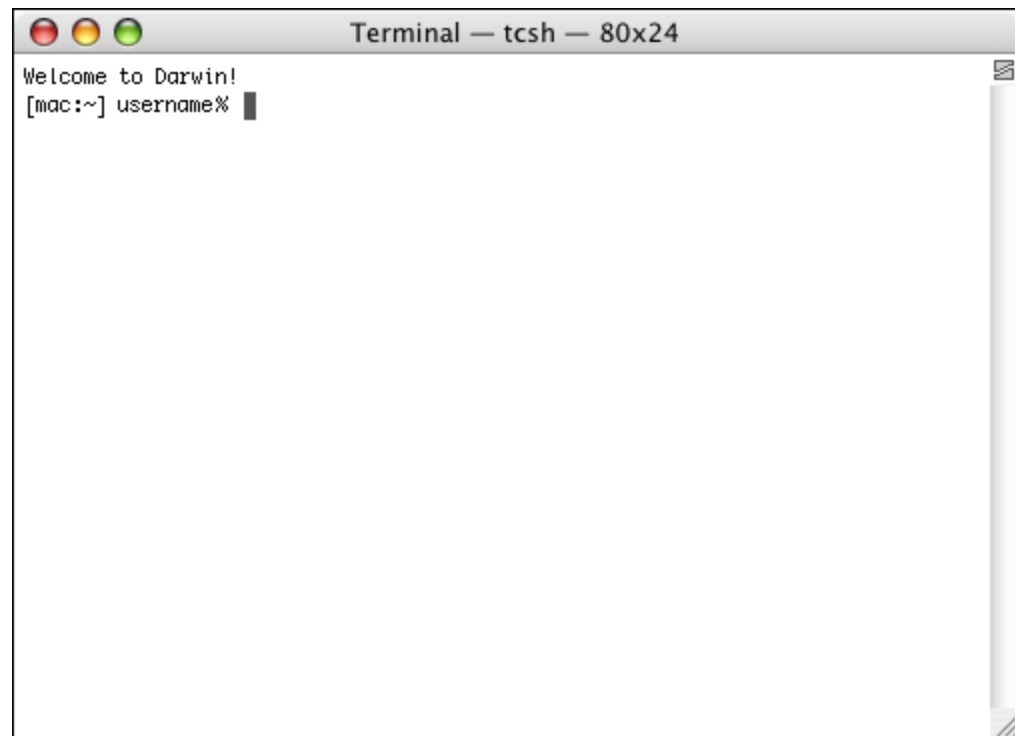
Core Resources	SIGN UP NOW!
Disk Storage	Unlimited TB + 50GB Backups
Monthly Bandwidth	Unlimited TB
Domains Hosted	Unlimited
Full Shell / SSH / FTP / SFTP Users	Unlimited
E-Mail Accounts (POP/IMAP/Webmail)	Unlimited
MySQL 5 Databases	Unlimited
Operating System	Debian Linux
EMail	SIGN UP NOW!
IMAP / POP / SMTP Access	<input checked="" type="checkbox"/>
Web-Based Email Access	<input checked="" type="checkbox"/>
Mail Filtering	<input checked="" type="checkbox"/>
Spam Filtering - SpamAssassin	<input checked="" type="checkbox"/>
Use Google Gmail @yourdomain.com	<input checked="" type="checkbox"/>
Email Addresses (Aliases)	Unlimited
Announcement Lists	Unlimited
Discussion Lists	Unlimited
Vacation Auto-Responders	Unlimited
Domains	SIGN UP NOW!
Free Domain Registration (A \$9.95 Value!)	<input checked="" type="checkbox"/>
Free Domain WHOIS Privacy	<input checked="" type="checkbox"/>
Domains Hosted	Unlimited
Subdomains Hosted	Unlimited
Domains Forwarded/Mirrored	Unlimited
Custom DNS	<input checked="" type="checkbox"/>
Programming	SIGN UP NOW!
PHP5 Support	<input checked="" type="checkbox"/>
Perl Support	<input checked="" type="checkbox"/>
Python Support	<input checked="" type="checkbox"/>
Full Unix Shell	<input checked="" type="checkbox"/>
Crontab Access	<input checked="" type="checkbox"/>
Full CGI Access	<input checked="" type="checkbox"/>
Ruby On Rails	<input checked="" type="checkbox"/>
Canned CGI Scripts	<input checked="" type="checkbox"/>
Server Side Includes (SSI)	<input checked="" type="checkbox"/>
CVS Repository	<input checked="" type="checkbox"/>
Subversion Repository (SVN)	<input checked="" type="checkbox"/>

Image from dreamhost.com.

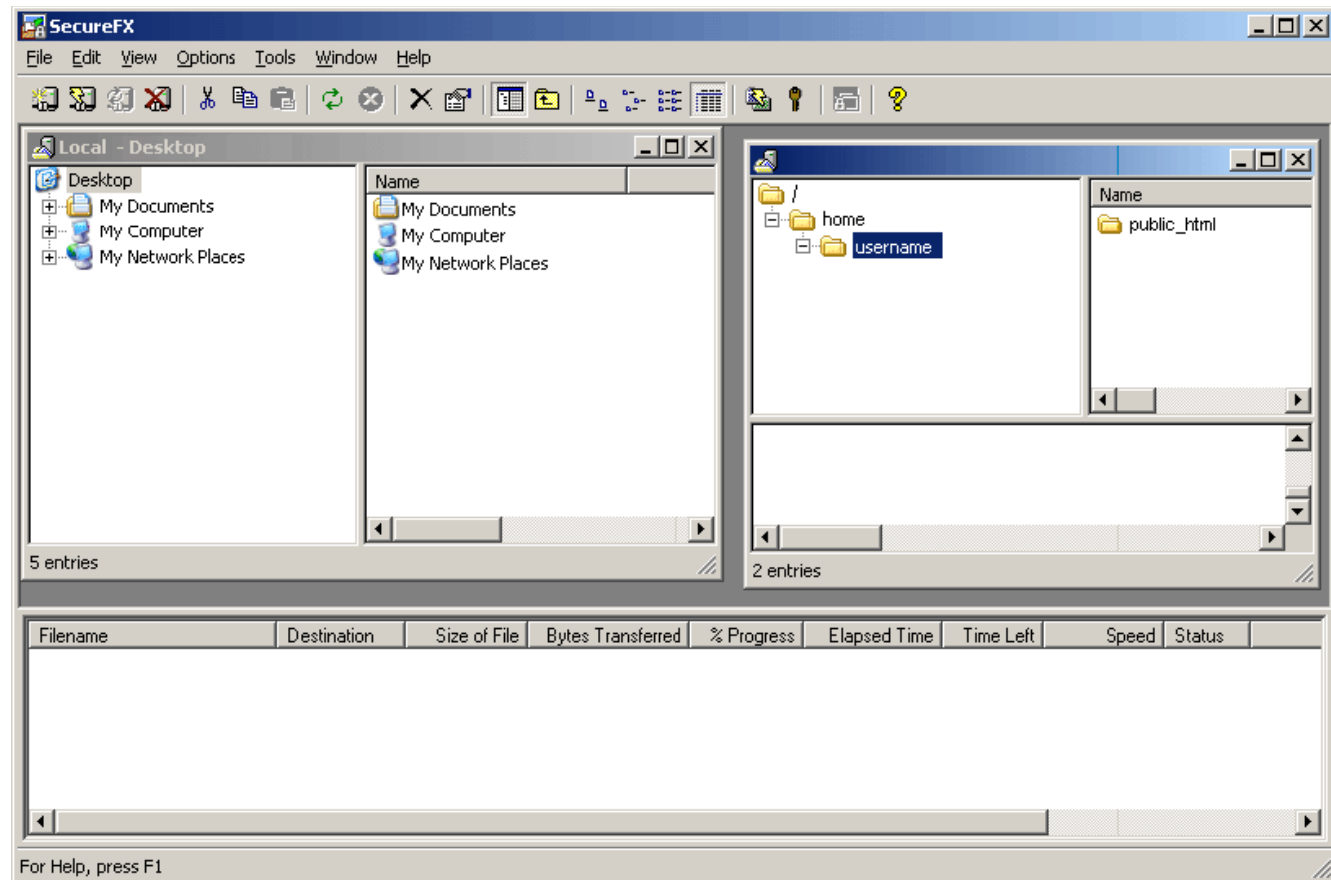
Virtual Private Servers

	Linode 512	Linode 768	Linode 1024	Linode 1536	Linode 2048	Linode 4096
						
RAM	512MB	768MB	1024MB	1536MB	2048MB	4096MB
Storage	20GB	30GB	40GB	60GB	80GB	160GB
Transfer	200GB	300GB	400GB	600GB	800GB	1600GB
Price	\$19.95	\$29.95	\$39.95	\$59.95	\$79.95	\$159.95
	713 Available	233 Available	251 Available	223 Available	167 Available	27 Available
	Sign Up Now!	Sign Up Now!	Sign Up Now!	Sign Up Now!	Sign Up Now!	Sign Up Now!

SSH



SFTP



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>
    <style type="text/css">
      <!--
        body { background: #fff; }
      -->
    </style>
    <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>
```



Validity

<http://validator.w3.org/>

Cross-Browser Issues

- Chrome
- Firefox
- Internet Explorer
- Safari
- ...

Yahoo! UI Library (YUI)

- YUI Reset CSS

<http://developer.yahoo.com/yui/reset/>

- YUI Fonts CSS

<http://developer.yahoo.com/yui/fonts/>

YUI Reset 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 rel="stylesheet" type="text/css" href="http://yui.yahooapis.com/2.9.0/build/
    reset/reset-min.css" />
    <title>hello, world</title>
  </head>
  <body>
    hello, world
  </body>
</html>
```

YUI Fonts 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 rel="stylesheet" type="text/css" href="http://yui.yahooapis.com/2.9.0/build/
    fonts/fonts-min.css" />
    <title>hello, world</title>
  </head>
  <body>
    hello, world
  </body>
</html>
```

Forms

- Text Fields
`<input name="email" type="text" />`
- Password Fields
`<input name="password" type="password" />`
- Hidden Fields
`<input name="id" value="123" />`
- Checkboxes
`<input checked="checked" name="remember" type="checkbox" />`
- Radio Buttons
`<input name="gender" type="radio" value="F" />`
`<input name="gender" type="radio" value="M" />`
- Drop-Down Menus
`<select name="state">`
 `<option value=""></option>`
 `<option value="MA"></option>`
 `<option value="NY"></option>`
`</select>`



Computer Science S-75

Building Dynamic Websites

Harvard Summer School
<https://www.cs75.net/>

Lecture 0: HTTP

David J. Malan
dmalan@harvard.edu
<http://www.cs.harvard.edu/malan/>