CSCI E-75
Lecture 1
Notes

I. LAMP: A software bundle used for developing dynamic websites. Consists of:

i. **Linux:** Operating system
ii. **Apache:** Web server system
iii. **MySQL:** Database software and query language
iv. **PHP:** The programming language used primarily (sometimes Perl or Python)

II. Behind the Scenes

.htaccess is an optional server file stored in a website's following that lets you do things like 'rewrite:'

```
RewriteEngine On
RewriteCond %{HTTP_HOST} !^www.malanrouge.com$ [NC]
RewriteRule (.*) http://www.malanrouge.com/$1 [R=301,L]
```

An IP address is the unique number assigned to each machine on the internet:

```
64.131.79.130
```

A port is a number that denotes unique processes over a network:

"Think of IP addresses as the street address of an apartment building, and the port number as the number of a particular apartment within that building. If a letter (a data packet) is sent to the apartment (IP) without an apartment number (port number) on it, then nobody knows who (which service) it is for. In order for the delivery to work, the sender needs to include an apartment number along with the address to ensure the letter gets to the right domicile." (Wikipedia)

```
64.131.79.130:80 (←80 is the port!)
```

BIND, the Berkely Internet Name Domain, is the most common DNS server on the web.

III. Sections!

Monday 5:30PM--53 Church Street, 202
Tuesday 7:35PM—Boylston Hall 104
Thursdays 5:30PM—1 Story Street, 302, with Video Feed
Thursdays 9:00PM—Virtual Terminal Room
Saturdays 1:00PM—Science Center 101b

Section Assignments forthcoming, and all of this info is subject to change!

IV. XAMPP

The easiest way to turn your own computer (local host) into a web software development environment. Our very own Keito has provided an in depth and exciting tutorial on how to install, configure, and use XAMPP on your own computer. Send him a thank you note here.

V. PHP:

PHP is a recursive acronym standing for PHP: Hypertext Preprocessor.

It's a 'server side' scripting language, meaning that a user can benefit from the program without having to install it on their own system—all processing is done on the server.

We've touched briefly on file permissions before, but just a note about PHP files:
Though html needs to be world readable, PHP scripts that contain programs do not: they can be chmodded to 600, as no one else needs to execute them.

```
chmod 600 program.php
```

Forms:

Forms are simply any html page that collects information from the user.
In our case, we'll start by passing the information from a form to some PHP script.
Here's a reference for all your form-related needs:
http://www.w3schools.com/html/html_forms.asp

While we'll give you a more nitty gritty introduction to PHP in Section (and in the Section Notes!), here are some basics to keep in mind:

Loops:

Look familiar?

```
<?
for($i = 0; $i < 10; $i++)
print('img alt="" src="malanrouge.jpg" /><br />' . "\n");
?>
```

Loops in PHP work very, very much like loops in your favorite programming language.

Superglobals:

We'll get into this a little deeper a little later, but these are the variables that set PHP apart as a web oriented programming language. For example, $_GET sends information from an html page to a PHP script, as do $_POST and $_REQUEST. Stored in $_SESSION and $_COOKIE is information about the specific user on a given site.

```
$_COOKIE
$_ENV
$_FILES
$_GET
$_POST
$_REQUEST
$_SERVER
$_SESSION
```

And finally, as you discover PHP for yourself, www.w3schools.com/php is an invaluable resource.