



Introduction to webpage building

(HTML, CSS, JavaScript)

**Sponsored by
The Fordham Council on
Applied Psychometrics**

**Professional Workshop Series
November 21, 2008**

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Introduction

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Who would have thought the pursuits of the 1980's striving to create an interactive academic network would result in the modern day phenomenon that is the Internet? Millions of users around the world access this global system utilizing it for virtually every aspect of their lives. Be it banking, database management, library resources, information exchange, trade, shopping, communication, entertainment or simply to kill some time the Internet is unmatched in its breadth and scope.

With the ever expanding network, including virtually every country on this planet, the Internet is an unparalleled resource not only for business and governmental agencies, academia and economics, but also for each individual with access to it.

It is beyond doubt that the Internet (with its now fundamentally societal inseparable aspects such as e-mail, online shopping and chat capabilities) has revolutionized the way people in developed countries think about their communication opportunities. It is because of this fast and vast development that the average Internet consumer ought to have insight into its structure, utility and management. Being able to build and maintain a webpage gives the average Internet user an advantage over the rest by taking an active role in creating this world-wide-web of information. Further, considering the developments of the past decade, it would be unsurprising that the novel and specialized knowledge involving web based programming will become the standard practice of tomorrow. Why be left behind; why wait?

This workshop is designed so as to introduce participants into the broad world of webpage building by presenting step-by-step essential instructions on how to construct a web based portal. No prior knowledge is required, no expensive software is needed. Though fascinating in its own right the history, economic impact and cultural developments are largely omitted from this workshop, seeing as each of these topics would require a separate full day session.

The focus thus for this event is the acquisition of webpage building skills that can be directly translated into immediate use. The goal of this workshop is to have each participant leave not only with insight into the structure of a webpage, but also his/her first online accessible webpage. The workbook is divided into logical sections building upon each other to create a complete introductory comprehension of all webpage aspects.

Each page-spread is organized in such a way as to present topics, explain them, give examples and leave enough space to make personalized comments. Enjoy!

Structure of the Internet

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Items	Comments
Personal Computer / Central Processing Unit (CPU)	A machine that can execute computer programs. This broad definition can easily be applied to many early computers that existed long before the term "CPU" ever came into widespread usage.
Router	A computer whose software and hardware are usually tailored to the tasks of routing and forwarding information. Routers generally contain a specialized operating system, RAM, NVRAM, flash memory, and one or more processors, as well as two or more network interfaces.
An Internet Service Provider (ISP, also called Internet access provider or IAP)	A company which offers their customers access to the Internet. The ISP connects to its customers using a data transmission technology appropriate for delivering Internet Protocol datagrams, such as dial-up, DSL, cable modem or dedicated high-speed interconnects.
Internet Host	A hosting service is a service that runs Internet servers, allowing organizations and individuals to serve content to the Internet. There are various levels of service and various kinds of services offered. A common kind of hosting is web hosting. Most hosting providers offer a combined variety of services. Web hosting services also offer e-mail hosting service, for example. DNS hosting service is usually bundled with domain name registration.
Web Server	A computer program that is responsible for accepting HTTP requests from web clients, which are known as web browsers, and serving them HTTP responses along with optional data contents, which usually are web pages such as HTML documents and linked objects (images, etc.) or a computer that runs a computer program as described above.
Standalone servers (Independent Server)	Compilations of programs that run on a single PC, but emulates what the same set of programs will do when run on a server over the Internet. They usually contain a web server (such as the Apache HTTP Server), one or more languages, and one or more databases.

Terminology

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Items	Comments
The Internet Protocol Suite (TCP/IP)	A set of communications protocols used for the Internet and other similar networks. It is named from two of the most important protocols in it: the Transmission Control Protocol (TCP) and the Internet Protocol (IP), which were the first two networking protocols defined in this standard.
Internet Protocol Address (IP Address)	A numerical identification (logical address) that is assigned to devices participating in a computer network utilizing the Internet Protocol for communication between its nodes.
Hypertext Transfer Protocol (HTTP)	Is a communications protocol. Its use for retrieving inter-linked text documents (hypertext) led to the establishment of the World Wide Web. HTTP development was coordinated by the World Wide Web Consortium and the Internet Engineering Task Force (IETF).
HyperText Markup Language (HTML)	The predominant markup language for Web pages. It provides a means to describe the structure of text-based information in a document — by denoting certain text as links, headings, paragraphs, lists, and so on — and to supplement that text with interactive forms, embedded images, and other objects.
Web Browser	A software application which enables a user to display and interact with text, images, videos, music, games and other information typically located on a Web page at a website on the World Wide Web or a local area network. Web browsers format HTML information for display, so the appearance of a Web page may differ between browsers.
File Transfer Protocol (FTP)	A network protocol used to transfer data from one computer to another through a network such as the Internet. FTP is a file transfer protocol for exchanging and manipulating files over a TCP computer network. A FTP client may connect to a FTP server to manipulate files on that server.
The World Wide Web (Web)	A system of interlinked hypertext documents accessed via the Internet. With a Web browser, one can view Web pages that may contain text, images, and other multimedia and navigate between them using hyperlinks. The World Wide Web was created in 1989 by English scientist Tim Berners-Lee.

Terminology

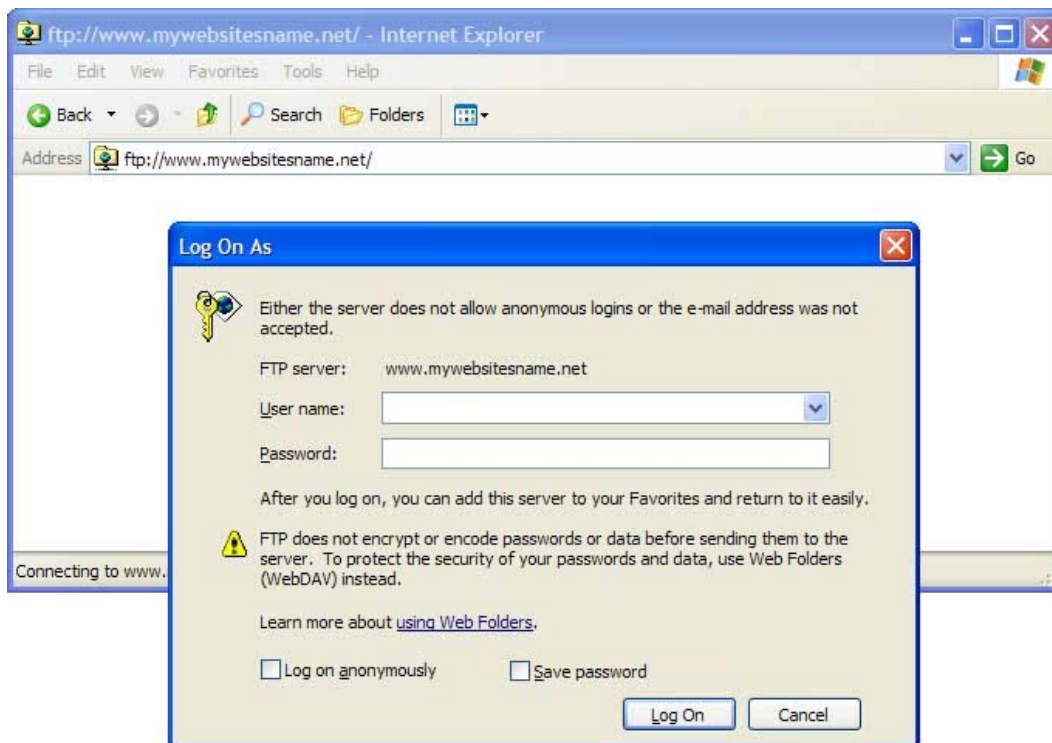
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Examples

IP Address 192.168.1.35

0 - 255

11000000.10101000.00000001.00100011



Web Hosting

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Items	Comments
The Internet	Is a global system of interconnected computer networks that interchange data by packet switching using the standardized Internet Protocol Suite (TCP/IP). It is a "network of networks" that consists of millions of private and public, academic, business, and government networks of local to global scope that are linked by copper wires, fiber-optic cables, wireless connections, and other technologies.
Hostname (or Sitename)	Is the unique name by which a network-attached device (which could consist of a computer, file server, network storage device, fax machine, copier, cable modem, etc.) is known on a network. The hostname is used to identify a particular host in various forms of electronic communication such as the World Wide Web, e-mail or Usenet.
Domain Name <i>.com –indicates a commercial site</i> <i>.net –stands for Network</i> <i>.biz –implies a business</i> <i>.org –organization</i> <i>.info –information</i> <i>.gov –denotes a governmental portal</i> <i>.edu –educational webpage</i> <i>.de, .pl. uk etc. –sites hosted in other countries (Germany, Poland, the UK)</i>	The most basic functionality of a domain name is to provide symbolic representations, i.e., recognizable names, to mostly numerically addressed Internet resources. This abstraction allows any resource (e.g., website) to be moved to a different physical location in the address topology of the network, globally or locally in an intranet, in effect changing the IP address. This translation from domain names to IP addresses (and vice versa) is accomplished with the global facilities of Domain Name System (DNS).
Subdomain	In the Domain Name System (DNS) hierarchy, a subdomain is a domain that is part of a larger domain.[1] For example, "mail.example.com" and "calendar.example.com" are subdomains of the "example.com" domain, which in turn is a subdomain of the "com" top-level domain (TLD).
Bandwidth	In computer networking and computer science, digital bandwidth or just bandwidth is the capacity for a given system to transfer data over a connection. It is measured as a bit rate expressed in bits/s or multiples of it (kbit/s Mbit/s etc.). Digital bandwidth should not be confused with the network throughput, which is the average rate of successful data transfer through a connection. It should also be distinguished from "data transfer", which is the quantity of data transferred over a given period of time.

Web Hosting

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Items

<http://www.100-best-free-webspace.com/>
<http://webhostinggeeks.com/>
<http://hosting-review.com/>
<http://www.hostcritique.net/>
<http://www.geocities.com>
<http://www.netfirms.com>

Go to → <http://www.awardspace.com/>

Username: _____
Password: _____
E-mail: _____

[Register and check your e-mail. Post a subdomain. It will take about 5 minutes for it to activate.]

Webpage Host:

Account Manager

This will contain account information, password management, account renewal and closure etc.

Website Statistics

This application will keep track of how many people visit your site, link to it, where people are from etc.

E-mail Manager

Accounts can provide e-mails which can then be managed and used through the providers webmail interface.

Website Manager

Under this manager you will find the domain, subdomain, FTP and file managers which will allow expansion of your webpage.

Database Manager / phpMyAdmin

Once you have forms that collect information you can create databases with tables to write those data into them.

Comments

You should shop around for a host that suits you best. Most web space providers will have free minimum hosting options. You can start out by having a basic account and upgrade when you feel ready.

You will need to register with a host in order to have a place to which you can post your constructed HTML code.

Every web space provider/host will offer a different package to its clients. However, each provider will have a similar structural organization.

Examples

TRUSTED BY OVER 900,000 CUSTOMERS
AWARDSPACE
YOUR WINNING WEB HOSTING PROVIDER

Sign Up

1 Domain Name 2 Contact Details

ENTER DISCOUNT COUPON TO GET 20% ADDITIONAL

Ordered Products

Item	Description
Domain Name:	Not selected FREE Free subdomain

Domain Name

New Domain

Existing Domain

Free Subdomain

Use a subdomain
We provide free subdomains when you sign up, you can use an example yourname.com

SUBMIT

TRUSTED BY OVER 900,000 CUSTOMERS
AWARDSPACE
YOUR WINNING WEB HOSTING PROVIDER

Sign Up

Signup Step 2

1 Domain Name 2 Contact Details

Ordered Products

Item	Description
Domain Name:	Not selected FREE Free subdomain

Account Information

* Username:
Note: Username can contain only alpha-numeric characters

Contact Information

* First Name:

* Last Name:

* E-mail:

* Verify E-mail:

Note: Provide valid e-mail address to receive our newsletter

* Address 1:

* Address 2:

* City:

* State:

* ZIP:

Notes

Assistant Software

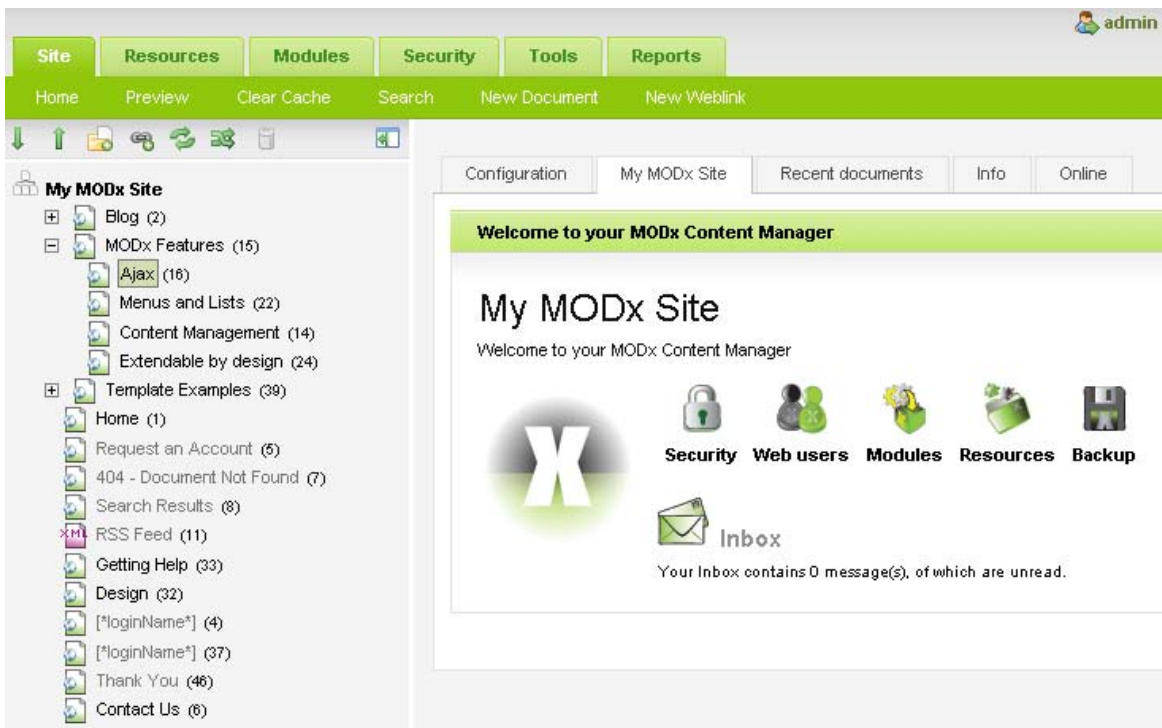
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Items	Comments
Browsers:	
<i>Internet Explorer</i>	A good browser will allow you to check and evaluate your code. Keep in mind that different browsers will interpret your code differently. Therefore it is important to keep your code as standard as possible.
<i>Safari</i>	
<i>Netscape/ Navigator (closed as of March 2008)</i>	
<i>Mozilla Firefox</i>	
FTP Clients:	
<i>Microsoft Explorer FTP</i>	File transfer protocols of individual browsers or as freestanding software applications (often bundled together with other software packages such as HTML editors or Webpage Builders) will allow you to upload your files efficiently.
<i>Safari FTP</i>	
<i>Firefox FreFTP</i>	
Code Editors / Builders:	
<i>Notepad++</i>	Editor and building softwares make a programmer's life much easier by unifying coding standards and being able to interactively review one's progress.
<i>PSPad</i>	
<i>Trellian</i>	
<i>SeaMonkey</i>	
<i>Dreamweaver</i>	
CMS:	
<i>DokuWiki</i>	Content management systems are used to build and manage dynamic webpages. Dynamic webpages are best when numerous sites are needed with similar formats.
<i>Wordpress</i>	
<i>Jaws</i>	
<i>Joomla</i>	
<i>ModX</i>	
Miscellaneous / Other:	
<i>Firefox Web Developer</i>	There is a multitude of assistant softwares, which allow for the construction of additional components (such as Flash objects, transitional screens etc.).
<i>Adobe CS3 (Web and Design)</i>	
<i>Macromedia Flash</i>	

Assistant Software


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Examples



HTML: Part I - Structure

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Items	Comments
<code><html> </html></code>	Everything that is specified in a HTML script is included between the HTML tag.
<code><title> </title></code>	The main title of your webpage.
<code><! Comment text ... ></code>	Used to insert annotations into your script.
<code><head> </head></code>	This is the page information tag. All items regarding the page's functionality, formatting and external scripts go into it.
<code><body> </body></code>	All of the content of a webpage is contained
Document structure: <code><h1> </h1></code> <code><p> </p></code> <code>
</code> <code> </code> <code> </code> <code> </code> <code><sub> </sub></code> <code><sup> </sup></code> <code><q> </q></code> <code><blockquote> </blockquote></code> <code> or </code> <code> </code>	 <p>Structure tags allow you to format your webpage content into what you would like it to appear on the webpage. These traditional tags are used to specifically format text in your webpage body.</p>

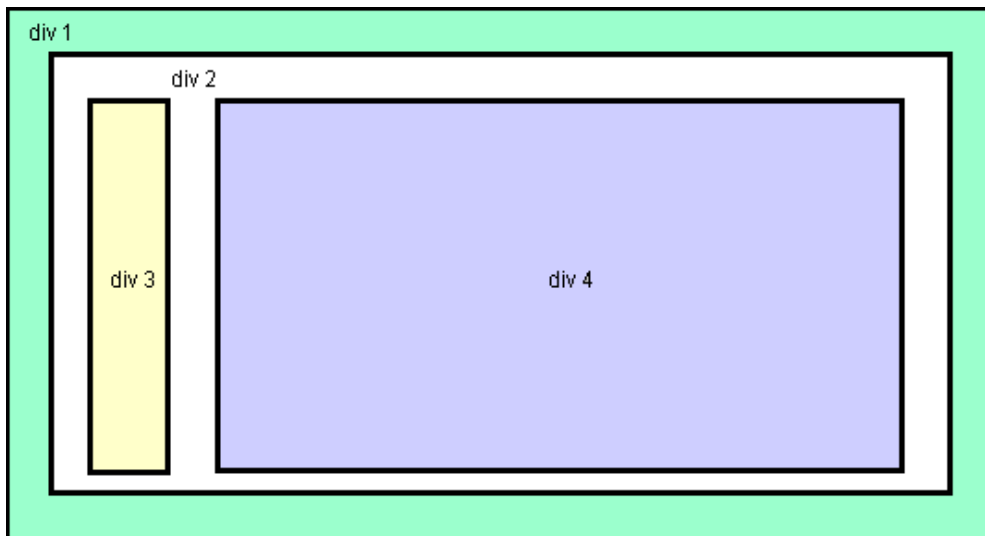
HTML SCRIPT NO. 1

```
<html>
<title>This is my new webpage</title>
<head></head>
<body bgcolor=#CCFF99>
<font face="Arial" size=3>
<center> <h1>Welcome to my page</h1>
<strong><em>Find out more about me here</em></strong><br/>
<br/>
<p>This paragraph should tell you a little something about me. How about a quote:<p>
<q>Common sense is not so common.</q><br/>
<em>- Voltaire</em><br/>
<br/>
You can also create formulas such as H<sub>2</sub>O or mathematical expressions such
as 2<sup>3</sup> = 8. <br/>
Also, I'd like to share some personal information:<br/>
<br/></center>
My top favorite desserts:<br/>
<ol><li>Cheesecake</li>
<li>Brownies</li>
<li>Nutella</li></ol></font>
</body>
</html>
```

Webpage Code Organization

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Items	Comments
<pre>http://www.w3c.org/</pre>	The World Wide Web Consortium has attempted to standardize the usage of HTML.
<pre><!DOCTYPE></pre>	Embedding meta tags in an HTML script allows for browsers and search engines to locate, identify and catalog your website, which makes finding it much easier.
<pre><html> </html></pre>	
<pre><head></pre>	
<pre> <title> </title></pre>	
<pre> <meta> </meta></pre>	DO NOT USE! These were functional in old HTML scripts and webpage formats.
<pre> <link> </link></pre>	
<pre></frameset></pre>	
<pre> <frameset></pre>	
<pre> <frame></pre>	Div elements divide the web page into the desired sections (see below).
<pre> </frameset></pre>	
<pre></frameset></pre>	
<pre><div id=" "></pre>	
<pre> <div id=" "></pre>	
<pre> <p class=" "></p></pre>	
<pre> </div></pre>	
<pre></div></pre>	



Items

Comments

```
<link rel="stylesheet" type="text/css"
href="css/mainscript.css" media="screen"/>
```

The link tag included in the HTML script will point to a specific CSS script that is a collection of all of the styles used in the specific webpage.

```
/** Annotate all of your CSS specifications **/
```

```
body, html {
margin: ;
padding: ;
background: ##### url(..images/...) repeat;
font-family: ; }
```

```
img{
border: ; }
```

```
a{
font-size: ;
font-family: ;
... }
```

```
h1{
font-size: ;
font-family: ;
... }
```

CSS allows you to specify a style for every possible element you'd like to use in your webpage. By specifying different parameters you will not have to type style specifications in your HTML script. This way you can use the same format with other pages.

```
p.general{
text-indent: ;
font-size: ;
font-family: ;
font-style: ; }
```

By following an attribute with a period you can specify several classes for the same type of parameter. This way you can use different styles for the same type of object (such as different hyperlink styles etc.).

```
p.blog{
font-size: ;
... }
```

```
/** Every specified div can have it's own CSS
parameters **/
```

```
#general{
margin: ;
width: ; }
```

```
#second{
height: ; }
```

```
#...{
margin: ;
margin-top: ;
padding: ;
width: ;
border: ;
background: ;
text-align: ; }
```

CSS also allows you to specify different body styles for different div sections of your webpage. For instance you could specify a look for the menu section and another for the main body part.

HTML: Part II - Content

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CSS SCRIPT NO. 1

```
/** general body formats */
body, html {
  margin:0;
  padding:0;
  background:#ffffff url(../images/dark_flowers_tile.jpg) repeat;
  font-family:Arial Narrow, Verdana, sans serif;
  color: black; }

h1{
  font-family:Comic Sans MS, Verdana, sans serif;
  font-size:25px;
  font-style:strong;
  color: black; }

ul{
  text-align:left; }

/** div formats */
#main{
  position:absolute;
  margin-top:5%;
  margin-left:10%;
  margin-right:10%;
  width:80%;
  height:80%;
  border:5px solid #000000;
  background:#ffffff;
  clear:both; }

#left{
  float:left;
  margin:3px;
  width:20%;
  height:98%;
  text-align:center;
  border-right:2px solid #000000;
  background:#ffffff; }

#right{
  float:right;
  margin:3px;
  padding:0px;
  width:75%;
  height:90%;
  text-align:left;
  background:#ffffff; }
```

HTML: Part II - Content

FCAP Workshop

HTML SCRIPT NO. 2

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://psychometrics.awardspace.com" xml:lang="en-US" lang="en-US">
<head>
<title>Psychometric Applications</title>
<!-- meta information of single pages -->
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<meta name="generator" content="PSPad editor, www.pspad.com" />
<meta name="keywords" content="psychometrics, statistics, mathematics" />
<meta name="description" content="New psychometric application" />
<!-- including external documents like css, javascript etc -->
<link rel="stylesheet" type="text/css" href="css/allstyles.css" media="screen"/>
<link rel="stylesheet" type="text/css" href="css/allstyles.css" media="print"/>
</head>

<body>
<!-- define div boxes -->
<div id="main">
  <div id="left">
    <h1>Content</h1>
    <ul><li>Pictures</li>
    <li>Documents</li>
    <li>Music</li></ul>
  </div>
  <div id="right">
    <h1>Welcome to my page:</h1>
    I am very glad that you have decided to visit my page. Here you will find
    many interesting things about me such as my resume, family tree, ...<br />
    <br />
    And now we should turn to creating and adding more content.
  </div>
</div>
</body>

</html>
```

Examples



HTML: Part II - Content

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Items

[Let's upload our new webpage to the internet using a FTP (such as fireFTP)]

[Using the PSPad FTP we can now interactively change the scripts online]

CSS

```
body, html{  
background:url(..images/paper_tile.jpg) }
```

```
img{  
border:2px solid #000000;  
width:50%;  
height:65%; }
```

```
#main{  
margin-left:0%;  
margin-right:0%;  
width:100%  
border-top:3px solid #000000;  
border-bottom:3px solid #000000; }
```

The link tag included in the HTML script will point to a specific CSS script that is a collection of all of the styles used in the specific webpage.

Make these style additions/changes to the allstyles.css script in order to alter/modify the look of your webpage.

HTML

```
<div id="left">  
<li>  
<a href="http://www.google.com">Google</a>  
</li>
```

```
<div id="right">  

```

Add these two elements to your HTML script (one is a link to google the other an image you uploaded to the server earlier).

CSS SCRIPT NO. 2

```
body, html {  
margin:0;  
padding:0;  
background:#ffffff url(..images/double_ornate_border.gif) repeat-y;  
background-position:center center;  
font-family:Arial Narrow, Verdana, sans serif;  
color: black; }
```

```
h1{  
font-family:Comic Sans MS, Verdana, sans serif;  
font-size:25px;  
font-style:strong;  
color: black; }
```

```
img{  
border:2px solid #000000;  
width:30%;  
height:55%; }
```

HTML: Part II - Content

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Items

```
<a> </a>
  <a href="URL"> </a>
  <a href="HTML"> </a>

<img />

<table> </table>
  <tr> </tr>
  <td> </td>
```

Comments

The majority of webpage content is managed by fairly straightforward HTML tags. Most designs can be achieved using tables instead of div elements (while remembering that div elements are the current programming preference table usage is much easier).

HTML SCRIPT NO. 3

```
<html>
<title>My Pictures</title>
<head>
<!-- including external documents like css, javascript etc -->
<link rel="stylesheet" type="text/css" href="css/picturestyles.css" media="screen"/>
</head>

<body>

<center><h1> My Favorite Pictures</h1>

<table align="center" border="1">
<tr><td colspan="3" align="center">
<font size="+2"><b>My collection of pictures</b></font></td></tr>
<tr><td><b>Collection</b></td>
<td><b>Picture</b></td>
<td><b>Note</b></td></tr>
<tr><td rowspan="2">Posted</td>
<td>Whoopi Goldberg</td>
<td>"Ghost", "Sister Act"</td>
<tr><td>Albert Einstein</td>
<td>"E=MC<sup>2</sup>"</td></tr></tr>
<tr><td>Missing</td>
<td>William Shakespeare</td>
<td bgcolor=#FFCC33>"Macbeth"</td></tr>
</table><br />
<br />

<a href="http://en.wikipedia.org/wiki/Whoopi_Goldberg">
</a><br />
Whoopi Golberg<br />
<br />

<a href="http://en.wikipedia.org/wiki/Einstein">
</a><br />
Albert Einstein<br />
<br /></center>>

</body>
</html>
```

Intro to JavaScript

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Items

Comments

[Create another webpage using Trellian]

HTML SCRIPT NO. 4

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0  
Transitional//EN">  
<HTML>  
<HEAD>  
<TITLE>My Java Page</TITLE>
```

```
<SCRIPT src="time_jsonly.js"  
type=text/javascript></SCRIPT>  
<SCRIPT src="mailto_validation_jsonly.js"  
type=text/javascript></SCRIPT>
```

```
<META http-equiv=Content-Type content="text/html;  
charset=utf-8">  
<STYLE type=text/css>BODY {  
FONT-SIZE: 12px; BACKGROUND-IMAGE:  
url(images/floral_tile.gif); COLOR: #ffffff;  
BACKGROUND-REPEAT: repeat; FONT-FAMILY:  
verdana, arial, sans-serif; BACKGROUND-COLOR:  
#ffffff}
```

```
A {FONT-SIZE: 12px; FONT-FAMILY: Arial}
```

```
[...]
```

```
<BODY onload=startclock()>
```

```
[...]
```

```
<CENTER>Time:</CENTER>  
<FORM name=clock>  
<INPUT size=11 name=face>  
</FORM></CENTER><BR>
```

```
<CENTER>  
<FORM name=form onsubmit="return validate_form()"  
action="mailto:YOUR EMAIL ADDRESS  
?SUBJECT=YOUR SUBJECT" method=post  
encType=text/plain>  
Name:<BR><INPUT size=50 name=NAME><BR>  
Email:<BR><INPUT size=50 name=EMAIL><BR>  
URL:<BR><INPUT size=50 name=URL><BR>  
Description:<BR><TEXTAREA name=DESCRIPTION  
rows=8 wrap=virtual cols=50></TEXTAREA><BR>  
<INPUT type=submit value=Submit name=submit>  
<INPUT type=reset value=Reset></FORM>  
</CENTER>
```

```
</BODY>  
</HTML>
```

Trellian, much like any webpage developer (webpage builder), allows you to use an interactive step-by-step construction. This way you can produce all the needed tags without having to type them.

Just like with external css scripts you can embed JavaScripts (.js) into the document without having to write out the code.

Construct your page using the easy Trellian builder tools to your liking.

Some JavaScripts require onload commands

JavaScripts consist of two components: The script and the actual body component. The script processes the function and the body component produces the interactive part.

Multimedia: More with Images, Sound and Video

FCAP Workshop

Items

```
<link rel="icon" href="images/favicon.ico"
type="image/x-icon">
<link rel="shortcut icon" href="images/favicon.ico"
type="image/x-icon">


  <map name="green">
    <area
      shape="polygon" coords="19,44,45 "
      href="http://www.trees.com/save.html">
    <area shape="rect" coords="128,132"
      href="http://www.trees.com/furniture.html">
    <area shape="circle" coords="68,211"
      href="http://www.trees.com/plantations.html">
  </map>

  [ href="#SectionTwo" ]
  [ mailto use href="mailto:george@trees.com" ]
```

```

```

```
<bgsound src="xfiles.mid" loop=5>
  id=
  src=
  volume=
  loop=
  title

<embed src="eureka.wav" controller="true"
autoplay="true" autostart="true" type="audio/wav" />
  src=
  controls=
  controller=
  width= and height=
  volume=
  href= and target=
```

```
<embed src="video.avi" />
```

```
<object>
  <param name="autostart" value="true">
  <param name="src" value="eureka.wav">
  <param name="autoplay" value="true">
  <param name="controller" value="true">
  <embed src="eureka.wav" controller="true"
  autoplay="true" autostart="true" type="audio/wav" />
</object>
```

```
<object data="video.avi" type="video/avi" />
```

Comments

Many webpages include a favicon, which is an icon used in the address bar of your browser as well as in bookmark menus.

Any image can have an image map constructed for it. An image map gives the pixel coordinates in that picture outlining an area which is to be used as a link. This allows you to click a picture in your designated area and link to anything you wish.

Microsoft Internet Explorer will recognize an imbedded video from an tag.

Embedding sound and video is not easy. There are as of current no standardized forms to include sound, music or videos into your webpage. The most common solution, so as to guarantee that your media will function is to install and run the respective multimedia player on the page.

CGI/Perl, PHP, MySQL

FCAP Workshop

Items	Comments
MySQL	<p>A popular for web applications and acts as the database component of the LAMP, BAMP, MAMP, and WAMP platforms and for open-source bug tracking tools like Bugzilla. Its popularity for use with web applications is closely tied to the popularity of PHP and Ruby on Rails, which are often combined with MySQL. PHP and MySQL are essential components for running popular content management systems. MySQL is a relational database management system (RDBMS) which has more than 11 million installations. The program runs as a server providing multi-user access to a number of databases. MySQL is owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now a subsidiary of Sun Microsystems, which holds the copyright to most of the codebase. The project's source code is available under terms of the GNU General Public License, as well as under a variety of proprietary agreements.</p>
PHP	<p>A scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical applications. PHP is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and on almost every operating system and platform free of charge.</p>
CGI	<p>The Common Gateway Interface (CGI) is a standard protocol for interfacing external application software with an information server, commonly a web server.</p>
Perl	<p>In computer programming, Perl is a high-level, general-purpose, interpreted, dynamic programming language. Perl borrows features from other programming languages including C, shell scripting (sh), AWK, sed and Lisp. The language provides powerful text processing facilities without the arbitrary data length limits of many contemporary Unix tools, facilitating easy manipulation of text files. It is also used for graphics programming, system administration, network programming, applications that require database access and CGI programming on the Web. Perl is nicknamed "the Swiss Army chainsaw of programming languages" due to its flexibility and adaptability.[5]</p>

Appendix A



Document Outline <table border="1"> <tr><td><!DOCTYPE></td><td>Version of (X)HTML</td></tr> <tr><td><html></td><td>HTML document</td></tr> <tr><td><head></td><td>Page information</td></tr> <tr><td><body></td><td>Page contents</td></tr> </table>	<!DOCTYPE>	Version of (X)HTML	<html>	HTML document	<head>	Page information	<body>	Page contents	Lists <table border="1"> <tr><td></td><td>Ordered list</td></tr> <tr><td></td><td>Unordered list</td></tr> <tr><td></td><td>List item</td></tr> <tr><td><dl></td><td>Definition list</td></tr> <tr><td><dt></td><td>Definition term</td></tr> <tr><td><dd></td><td>Term description</td></tr> </table>		Ordered list		Unordered list		List item	<dl>	Definition list	<dt>	Definition term	<dd>	Term description	Objects <table border="1"> <tr><td><object></td><td>Object</td></tr> <tr><td><param /></td><td>Parameter</td></tr> </table>	<object>	Object	<param />	Parameter																			
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</td><td><link /></td></tr> <tr><td><col /></td><td><meta /></td></tr> <tr><td><hr /></td><td><param /></td></tr> </table>	<area />		<base />	<input />	 	<link />	<col />	<meta />	<hr />	<param />												
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</td><td>Line break</td></tr> <tr><td><hr /></td><td>Horizontal rule</td></tr> </table>	<h[1-6]>	Heading	<div>	Page section		Inline section	<p>	Paragraph	 	Line break	<hr />	Horizontal rule	Images and Image Maps <table border="1"> <tr><td></td><td>Image</td></tr> <tr><td><map></td><td>Image Map</td></tr> <tr><td><area /></td><td>Area of Image Map</td></tr> </table>		Image	<map>	Image Map	<area />	Area of Image Map	Language Attributes <table border="1"> <tr><td>dir</td><td>lang</td></tr> </table> <p><i>Note: Language Attributes may not be used in base, br, frame, frameset, hr, iframe, param or script elements.</i></p>	dir	lang																							
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&	&	Ampersand																																											
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onClick	onMouseout																																												
onDbclick	onMouseover																																												
onMouseDown	onMouseup																																												
onMouseMove																																													

Appendix B

html character entities

CHARACTERS	CHARACTERS	CHARACTERS	CHARACTERS
 Space	Q Q Upper case Q	 Non-breaking space	Ï İ I with umlaut
! ! Exclamation mark	R R Upper case R	¡ i Inverted exclamation mark	Ð Ð ETH
" " Quotation mark	S S Upper case S	¢ ¢ Cent symbol	Ñ Ñ N with tilde
# # Pound symbol	T T Upper case T	£ £ Pound symbol	Ò Ò O with grave
$ \$ Dollar sign	U U Upper case U	¤ ¤ Currency symbol	Ó Ó O with acute
% % Percent sign	V V Upper case V	¥ ¥ Yen symbol	Ô Ô O with circumflex
& & Ampersand	W W Upper case W	¦ ¤ Broken vertical bar	Õ Õ O with tilde
' ' Apostrophe	X X Upper case X	§ § Section symbol	Ö Ö O with umlaut
((Opening bracket	Y Y Upper case Y	¨ ¨ Umlaut	× × Multiply symbol
)) Closing bracket	Z Z Upper case Z	© © Copyright	Ø Ø O with slash
* * Asterisk	[[Opening square bracket	ª ª Feminine ordinal	Ù Ù U with grave
+ + Plus	\ \ Backslash	« « Double-left arrow	Ú Ú U with acute
, , Comma]] Closing square bracket	¬ ¬ "Not" symbol	Û Û U with circumflex
- - Hyphen	^ ^ Caret	­ ¯ Soft hyphen	Ü Ü U with umlaut
. . Period	_ _ Underscore	® ® Registered	Ý Ý Y with acute
/ / Forward slash	` ` Single quote	¯ ¯ Overline	Þ Þ THORN
0 0 Zero	a a Lower case a	° ° Degree symbol	ß ß Sharp S
1 1 One	b b Lower case b	± ± Plus-or-minus	à à A with grave
2 2 Two	c c Lower case c	² ² Squared	á á A with acute
3 3 Three	d d Lower case d	³ ³ Cubed	â â A with circumflex
4 4 Four	e e Lower case e	´ ´ Acute accent	ã ã A with tilde
5 5 Five	f f Lower case f	µ µ Micro symbol	ä ä A with umlaut
6 6 Six	g g Lower case g	¶ ¶ Paragraph symbol	å å A with ring
7 7 Seven	h h Lower case h	· · Middle dot	æ æ AE
8 8 Eight	i i Lower case i	¸ ¸ Cedilla	ç ç C with cedilla
9 9 Nine	j j Lower case j	¹ ¹ Superscript "1"	è è E with grave
: : Colon	k k Lower case k	º º Masculine ordinal	é é E with acute
; ; Semicolon	l l Lower case l	» » Double-right arrow	ê ê E with circumflex
< < Less than	m m Lower case m	¼ ¼ One quarter	ë ë E with umlaut
= = Equals sign	n n Lower case n	½ ½ One half	ì ì I with grave
> > Greater than	o o Lower case o	¾ ¾ Three quarters	í í I with acute
? ? Question mark	p p Lower case p	¿ ¿ Inverted question mark	î î I with circumflex
@ @ "At" symbol	q q Lower case q	À À A with grave	ï ï I with umlaut
A A Upper case A	r r Lower case r	Á Á A with acute	ð ð ETH
B B Upper case B	s s Lower case s	Â Â A with circumflex	ñ ñ N with tilde
C C Upper case C	t t Lower case t	Ã Ã A with tilde	ò ò O with grave
D D Upper case D	u u Lower case u	Ä Ä A with umlaut	ó ó O with acute
E E Upper case E	v v Lower case v	Å Å A with ring	ô ô O with circumflex
F F Upper case F	w w Lower case w	Æ Æ AE	õ õ O with tilde
G G Upper case G	x x Lower case x	Ç Ç C with cedilla	ö ö O with umlaut
H H Upper case H	y y Lower case y	È È E with grave	÷ ÷ Divide symbol
I I Upper case I	z z Lower case z	É É E with acute	ø ø O with slash
J J Upper case J	{ { Opening curly brace	Ê Ê E with circumflex	ù ù U with grave
K K Upper case K	| Vertical line	Ë Ë E with umlaut	ú ú U with acute
L L Upper case L	} } Closing curly brace	Ì Ì I with grave	û û U with circumflex
M M Upper case M	~ ~ Tilde	Í Í I with acute	ü ü U with umlaut
N N Upper case N	 Delete	Î Î I with circumflex	ý ý Y with acute
O O Upper case O			þ þ THORN
P P Upper case P			ÿ ÿ Y with umlaut

Appendix C



Selectors

*	All elements
div	<div>
div *	All elements within <div>
div span	 within <div>
div, span	<div> and
div > span	 with parent <div>
div + span	 preceded by <div>
.class	Elements of class "class"
div.class	<div> of class "class"
#itemid	Element with id "itemid"
div#itemid	<div> with id "itemid"
a[attr]	<a> with attribute "attr"
a[attr='x']	<a> when "attr" is "x"
a[class~='x']	<a> when class is a list containing 'x'
a[lang = 'en']	<a> when lang begins "en"

Pseudo-Selectors and Pseudo-Classes

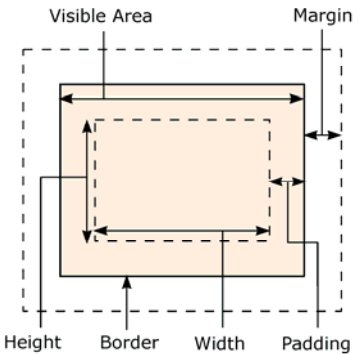
:first-child	First child element
:first-line	First line of element
:first-letter	First letter of element
:hover	Element with mouse over
:active	Active element
:focus	Element with focus
:link	Unvisited links
:visited	Visited links
:lang(var)	Element with language "var"
:before	Before element
:after	After element

Sizes and Colours

0	0 requires no unit
Relative Sizes	
em	1em equal to font size of parent (same as 100%)
ex	Height of lower case "x"
%	Percentage
Absolute Sizes	
px	Pixels
cm	Centimeters
mm	Millimeters
in	Inches
pt	1pt = 1/72in
pc	1pc = 12pt
Colours	
#789abc	RGB Hex Notation
#acf	Equates to "#aacfff"
rgb(0,25,50)	Value of each of red, green, and blue. 0 to 255, may be swapped for percentages.

Note Shorthand properties are marked x
Properties that inherit are marked +

Box Model



Positioning

display	clear
position	z-index
top	direction +
right	unicode-bidi
bottom	overflow
left	clip
float	visibility

Dimensions

width	min-height
min-width	max-height
max-width	vertical-align
height	

Color / Background

color +	background-repeat
background x	background-image
background-color	background-position
background-attachment	

Text

text-indent +	word-spacing +
text-align +	text-transform +
text-decoration	white-space +
text-shadow	line-height +
letter-spacing +	

Fonts

font + x	font-weight +
font-family +	font-stretch +
font-style +	font-size +
font-variant +	font-size-adjust +

Boxes

margin x	border-color x
margin-top	border-top-color
margin-right	border-right-color
margin-bottom	border-bottom-color
margin-left	border-left-color
padding x	border-style x
padding-top	border-top-style
padding-right	border-right-style
padding-bottom	border-bottom-style
padding-left	border-left-style
border x	border-width x
border-top x	border-top-width
border-bottom x	border-right-width
border-right x	border-bottom-width
border-left x	border-left-width

Tables

caption-side +	border-spacing +
table-layout	empty-cells +
border-collapse +	caption-header +

Paging

size	page-break-inside +
marks	page +
page-break-before	orphans +
page-break-after	widows +

Interface

cursor +	outline-style
outline x	outline-color
outline-width	

Aural

volume +	elevation
speak +	speech-rate
pause x	voice-family
pause-before	pitch
pause-after	pitch-range
cue x	stress
cue-before	richness
cue-after	speak-punctuation
play-during	speak-numeral
azimuth +	

Miscellaneous

content	list-style-type +
quotes +	list-style-image +
counter-reset	list-style-position +
counter-increment	marker-offset
list-style + x	

Available free from
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Appendix D

Methods

Object
 toString
 toLocaleString
 valueOf
 hasOwnProperty
 isPrototypeOf
 propertyIsEnumerable

String
 charAt
 charCodeAt
 fromCharCode
 concat
 indexOf
 lastIndexOf
 localeCompare
 match
 replace
 search
 slice
 split
 substring
 substr
 toLowerCase
 toUpperCase
 toLocaleLowerCase
 toLocaleUpperCase

RegExp
 test
 match
 exec

Array
 concat
 join
 push
 pop
 reverse
 shift
 slice
 sort
 splice
 unshift

Number
 toFixed
 toExponential
 toPrecision

Date
 parse
 toDateString
 toTimeString
 getDate
 getDay
 getFullYear
 getHours
 getMilliseconds
 getMinutes
 getMonth
 getSeconds
 getTime
 getTimezoneOffset
 getYear
 setDate
 setHours
 setMilliseconds
 setMinutes
 setMonth
 setSeconds
 setYear
 toLocaleTimeString

JavaScript

XMLHttpRequest

Safari, Mozilla, Opera:
 var req = new XMLHttpRequest();
Internet Explorer:
 var req = new
 ActiveXObject("Microsoft.XMLHTTP");

XMLHttpRequest Object Methods

abort()
 getAllResponseHeaders()
 getResponseHeader(header)
 open(method, URL)
 send(body)
 setRequestHeader(header, value)

XMLHttpRequest Object Properties

onreadystatechange
 readyState
 responseText
 responseXML
 status
 statusText

XMLHttpRequest readyState Values

0	Uninitiated
1	Loading
2	Loaded
3	Interactive
4	Complete

JAVASCRIPT IN HTML

External JavaScript File
 <script type="text/javascript"
 src="javascript.js"></script>
Inline JavaScript
 <script type="text/javascript">
 <!--
 // JavaScript Here
 //-->
 </script>

Functions

Window	Built In
alert	eval
blur	parseInt
clearTimeout	parseFloat
close	isNaN
focus	isFinite
open	decodeURI
print	decodeURIComponent
setTimeout	encodeURIComponent
	encodeURIComponent
	escape
	unescape

REGULAR EXPRESSIONS - FORMAT

Regular expressions in JavaScript take the form:
 var RegEx = **/pattern/modifiers;**

REGULAR EXPRESSIONS - MODIFIERS

/g	Global matching
/i	Case insensitive
/s	Single line mode
/m	Multi line mode

REGULAR EXPRESSIONS - PATTERNS

^	Start of string
\$	End of string
.	Any single character
(a b)	a or b
(...)	Group section
[abc]	Item in range (a or b or c)
[^abc]	Not in range (not a or b or c)
a?	Zero or one of a
a*	Zero or more of a
a+	One or more of a
a{3}	Exactly 3 of a
a{3,}	3 or more of a
a{3,6}	Between 3 and 6 of a
!(pattern)	"Not" prefix. Apply rule when URL does not match pattern.

EVENT HANDLERS

onAbort	onMouseDown
onBlur	onMouseMove
onChange	onMouseOut
onClick	onMouseOver
onDbClick	onMouseUp
onDragDrop	onMove
onError	onReset
onFocus	onResize
onKeyDown	onSelect
onKeyPress	onSubmit
onKeyUp	onUnload
onLoad	

FUNCTIONS AND METHODS

A method is a type of function, associated with an object. A normal function is not associated with an object.

Available free from
 AddedBytes.com

DOM Methods

Document
 clear
 createDocument
 createDocumentFragment
 createElement
 createEvent
 createEventObject
 createRange
 createTextNode
 getElementsByTagName
 getElementById
 write

Node
 addEventListener
 appendChild
 attachEvent
 cloneNode
 createTextRange
 detachEvent
 dispatchEvent
 fireEvent
 getAttributeNS
 getAttributeNode
 hasChildNodes
 hasAttribute
 hasAttributes
 insertBefore
 removeChild
 removeEventListener
 replaceChild
 scrollIntoView

Form
 submit

DOM Collections
 item

Range
 collapse
 createContextualFragment
 moveEnd
 moveStart
 parentElement
 select
 setStartBefore

Style
 getPropertyValue
 setProperty

Event
 initEvent
 preventDefault
 stopPropagation

XMLSerializer
 serializeToString

XMLHTTP
 open
 send

XMLDOM
 loadXML

DOMParser
 parseFromString

Appendix E



Mathematical
 ABS
 SIGN
 MOD
 FLOOR
 CEILING
 ROUND
 DIV
 EXP
 LN
 LOG, LOG2, LOG10
 POW
 POWER
 SQRT
 PI
 COS
 SIN
 TAN
 ACOS
 ASIN
 ATAN, ATAN2
 COT
 RAND
 LEAST
 GREATEST
 DEGREES
 RADIANS
 TRUNCATE

Date and Time
 DAYOFWEEK
 WEEKDAY
 DAYOFMONTH
 DAYOFYEAR
 MONTH
 DAYNAME
 MONTHNAME
 QUARTER
 WEEK
 YEAR
 YEARWEEK
 HOUR
 MINUTE
 SECOND
 PERIOD_ADD
 PERIOD_DIFF
 DATE_ADD
 DATE_SUB
 ADDDATE
 SUBDATE
 EXTRACT
 TO_DAYS
 FROM_DAYS
 DATE_FORMAT
 TIME_FORMAT
 CURRENT_DATE
 CURRENT_TIME
 NOW
 SYSDATE
 UNIX_TIMESTAMP
 FROM_UNIXTIME
 SEC_TO_TIME
 TIME_TO_SEC

Group
 COUNT
 AVG
 MIN
 MAX
 SUM
 GROUP_CONCAT
 VARIANCE
 STD
 STDDEV
 BIT_OR
 BIT_AND

DATA TYPES	MYSQL FUNCTIONS IN PHP
CHAR String, length 0 - 255	mysql_affected_rows
VARCHAR String, length 0 - 255	mysql_close
TINYTEXT String, length 0 - 255	mysql_connect
TEXT String, length 0 - 65535	mysql_data_seek
BLOB String, length 0 - 65535	mysql_db_name
MEDIUMTEXT String, length 0 - 16777215	mysql_errno
MEDIUMBLOB String, length 0 - 16777215	mysql_error
LONGTEXT String, length 0 - 4294967295	mysql_fetch_array
LOBLOB String, length 0 - 4294967295	mysql_fetch_assoc
* TINYINT Integer, -128 to 127	mysql_fetch_field
* SMALLINT Integer, -32768 to 32767	mysql_fetch_lengths
* MEDIUMINT Integer, -8388608 to 8388607	mysql_fetch_object
* INT Integer, -2147483648 to 2147483647	mysql_fetch_row
* BIGINT Int, -9223372036854775808 to 9223372036854775807	mysql_field_flags
FLOAT Decimal (precise to 23 digits)	mysql_field_len
DOUBLE Decimal (24 to 53 digits)	mysql_field_name
DECIMAL "DOUBLE" stored as string	mysql_field_seek
DATE YYYY-MM-DD	mysql_field_table
DATETIME YYYY-MM-DD HH:MM:SS	mysql_field_type
TIMESTAMP YYYYMMDDHHMMSS	mysql_free_result
TIME HH:MM:SS	mysql_insert_id
ENUM One of preset options	mysql_list_dbs
SET Selection of preset options	mysql_list_processes
	mysql_list_tables
	mysql_num_fields
	mysql_num_rows
	mysql_pconnect
	mysql_query
	mysql_real_escape_string
	mysql_select_db

SAMPLE SELECT QUERIES	
SELECT * FROM tablename	# Returns all columns
SELECT column FROM tablename	# Returns specific column
SELECT COUNT(*) FROM tablename	# Returns number of rows
SELECT SUM(column) FROM tablename	# Returns sum of column
SELECT DISTINCT column FROM tablename	# Returns unique values of column
SELECT * FROM tablename WHERE condition	# Returns rows that match condition
SELECT * FROM tablename WHERE BINARY condition	# Condition is case-sensitive
SELECT * FROM table1 INNER JOIN table2 on table1.id = table2.id	# Join two tables, return all columns
SELECT table1.* FROM table1 INNER JOIN table2 on table1.id = table2.id	# Only return columns from table1
SELECT LAST_INSERT_ID() as new_id	# Returns ID of last created row
SELECT max(column) AS alias	# Return maximum value in column as "alias"
SELECT * FROM table ORDER BY column	# Return all rows ordering by column
SELECT * FROM table LIMIT 10, 20	# Return first 20 rows after row 10

Control Flow
 IFNULL
 NULLIF
 IF

String
 ASCII
 ORD
 CONV
 BIN, OCT, HEX
 CHAR
 CONCAT
 CONCAT_WS
 LENGTH
 CHAR_LENGTH
 BIT_LENGTH
 LOCATE
 INSTR
 LPAD
 RPAD
 LEFT
 RIGHT
 SUBSTRING
 MID
 SUBSTRING_INDEX
 LTRIM
 RTRIM
 TRIM
 SOUNDEX
 SPACE
 REPLACE
 REPEAT
 REVERSE
 INSERT
 ELT
 FIELD
 LCASE
 UCASE
 LOAD_FILE
 QUOTE

Comparison
 STRCMP

Cast
 CAST
 CONVERT

Other
 BIT_COUNT
 DATABASE
 USER
 SYSTEM_USER
 SESSION_USER
 CURRENT_USER
 PASSWORD
 OLD_PASSWORD
 ENCRYPT
 DECODE
 MD5
 SHA1
 AES_ENCRYPT
 AES_DECRYPT
 DES_ENCRYPT
 DES_DECRYPT
 LAST_INSERT_ID
 FORMAT
 VERSION
 CONNECTION_ID
 GET_LOCK
 RELEASE_LOCK
 IS_FREE_LOCK
 BENCHMARK
 INET_NTOA
 INET_ATON
 FOUND_ROWS

Appendix G Online Resources

No.	Name:	Address:
1.	<i>“WWW consortium”</i>	http://www.w3.org/
	<i>“CSS Tutorial”</i>	http://www.w3schools.com/css/
2.	<i>“DHTML scripts for the real world”</i>	http://www.dynamicdriver.com/
3.	<i>“HTML tutorials for the rest of us”</i>	http://www.pagetutor.com/
	<i>“CSS button designer”</i>	http://www.pagetutor.com/button_designer/
4.	<i>“Web design, development and ...”</i>	http://www.addedbytes.com/
5.	<i>“The ultimate HTML resource”</i>	http://www.htmlgoodies.com/
6.	<i>“HTML code tutorials”</i>	http://www.htmlcodetutorial.com/
7.	<i>“Network for technology professionals”</i>	http://www.internet.com/
8.	<i>“Articles in web dev., software, ...”</i>	http://www.somacn.com/
9.	<i>“Open standards web design”</i>	http://www.codestyle.org/
	<i>“Font sampler and survey”</i>	http://www.codestyle.org/css/font-family/
10.	<i>“JavaScript Kit”</i>	http://www.javascriptkit.com/cutpastejava.shtml
11.	<i>“100s of free scripts”</i>	http://www.free-javascripts.com/
12.	<i>“Embedded media HTML generator”</i>	http://cit.ucsf.edu/embedmedia/step1.php
13.	<i>“Web design resources”</i>	http://www.wpdfd.com/resources/
14.	<i>“Tutorials, templates and resources”</i>	http://www.killersites.com/
15.	<i>“PHP code help”</i>	http://www.codewalkers.com/
16.	<i>“Resources for web design”</i>	http://www.kayodeok.btinternet.co.uk/favorites/webdesign.htm
17.	<i>“Web design references”</i>	http://www.d.umn.edu/itss/support/Training/Online/webdesign/



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November 2008