

Computer Science E-1



Understanding Computers and the Internet

Lecture 10: Website Development

Wednesday, 29 November 2006

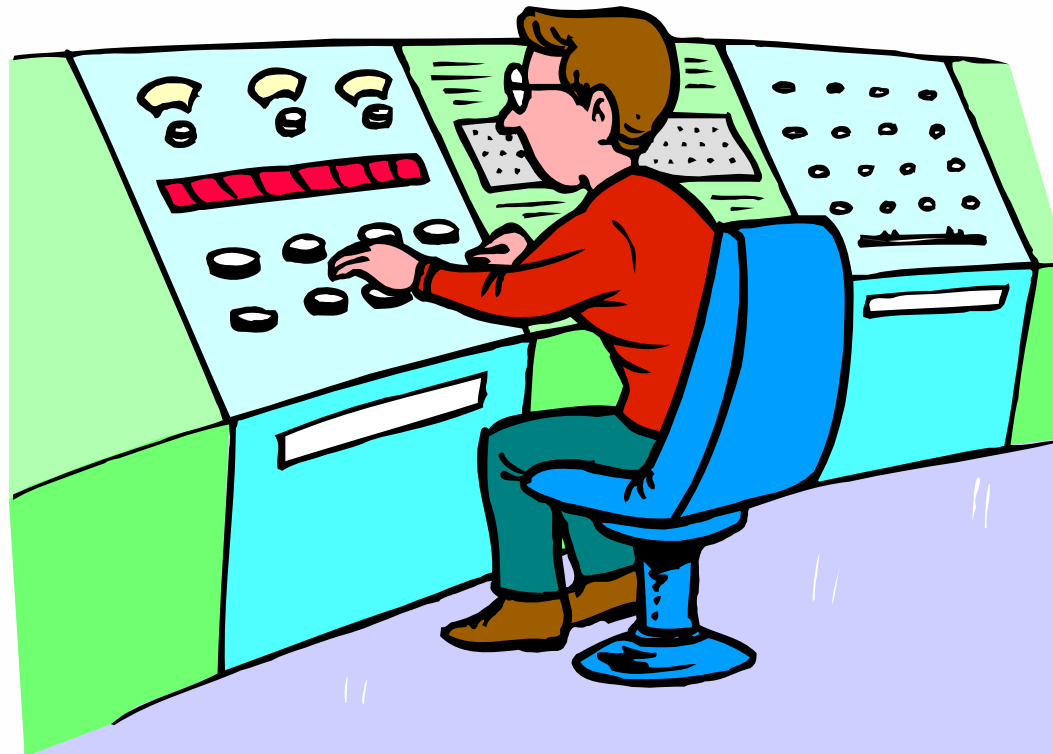
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Agenda

- Webservers
 - Structure
 - Permissions
 - Implementations
 - Virtual Hosting
- Static Webpages
 - XHTML
 - Tags
 - Attributes
 - Elements
 - CSS
 - Well-Formedness
 - Validity
- Dynamic Webpages
 - SSIs
 - DHTML
 - AJAX
 - CGI
 - ASPs
 - JSPs

Webservers





Static Webpages

XHTML

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

<html>
  <head>
    <title>Hello, World!</title>
  </head>
  <body>
    Hello, World!
  </body>
</html>
```



Static Webpages

XHTML

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

<html>
  <head>
    <title>Hello, World!</title>
  </head>
  <body bgcolor="#00ff00">
    Hello, World!
  </body>
</html>
```



Static Webpages

XHTML

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

<html>
  <head>
    <title>Hello, World!</title>
  </head>
  <body>
    <div align="center">
      <font color="blue" face="sans-serif" size="7">
        Hello, World!
      </font>
      <br/>
      <font color="#0000ff" face="sans-serif" size="2">
        from little ol' <a href="mailto:username@fas.harvard.edu">me</a>
      </font>
    </div>
  </body>
</html>
```

Source from <http://www.fas.harvard.edu/~csciel/distribution/lectures/10/markup/mailto.html>.



Static Webpages

XHTML

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

<html>
  <head>
    <title>Hello, World!</title>
  </head>
  <body>
    <div style="text-align: center; color: blue;
    font-family: sans-serif; font-size: 36pt;">
      Hello, World!
    </div>
    <br/>
    <div style="text-align: center; color: blue;
    font-family: sans-serif; font-size: 10pt;">
      from little ol' <a
      href="mailto:username@fas.harvard.edu">me</a>
    </div>
  </body>
</html>
```

Source from <http://www.fas.harvard.edu/~cscie1/distribution/lectures/10/markup/style.html>.



Static Webpages

XHTML

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

<html>
  <head>
    <title>Hello, World!</title>
    <style type="text/css">
      <!--
      .mystyle { text-align: center; color: blue; font-family: sans-serif; }

      a      { text-decoration: none; font-weight: bold; color: blue }
      a:hover { text-decoration: underline; font-weight: bold; color: red }
      -->
    </style>
  </head>
  <body>
    <div class="mystyle" style="font-size: 36pt;">
      Hello, World!
    </div>
    <br/>
    <div class="mystyle" style="font-size: 10pt;">
      from little ol' <a href="mailto:username@fas.harvard.edu">me</a>
    </div>
  </body>
</html>
```

Source from <http://www.fas.harvard.edu/~cscie1/distribution/lectures/10/markup/css.html>.

Static Webpages



Well-Formedness

```
<foo bar="baz" />
```

Static Webpages



Validity





Dynamic Webpages

SSIs

```
<!--#config timefmt="%A, %B %d, %Y %r"-->
```

```
<!--#echo var="LAST_MODIFIED"-->
```

```
<!--#echo var="REMOTE_ADDR"-->
```

```
<!--#echo var="DATE_LOCAL"-->
```

```
<!--#echo var="HTTP_USER_AGENT"-->
```

```
<!--#include file="footer.html"-->
```

Excerpted from <http://www.fas.harvard.edu/~cscie1/distribution/lectures/10/markup/ssi.html>.

For a tutorial on the SSIs supported by Apache's webserver, see <http://httpd.apache.org/docs/howto/ssi.html>.

Dynamic Webpages



DHTML

XHTML
+
CSS
+
JavaScript

Dynamic Webpages



AJAX

JavaScript
+
XML



Dynamic Webpages

CGI

```
##
## dispatcher.cgi
##
## Main entry point to E-1 site.
##
##
## Copyright (c) 2002 David Malan
## All rights reserved
##

##
## libraries
##

# standard libraries
use CGI ':standard';

# E-1 libraries
use lib '/home/l/i/libel/public_html/cgi-bin/lib';
use E1::Constants;
use E1::Helpers;

##
## MAIN
##
## Main entry point for site
##

MAIN:
{
    # instantiate a CGI object, accessible by all subroutines
    local $cgi = new CGI;

    # process the request
    &E1::Helpers::processRequest($cgi, $E1::Constants::MENU);

    exit(0);
}

# EOF
```

Source from <http://www.fas.harvard.edu/~csciel/cgi-bin/dispatcher.cgi>.



Dynamic Webpages

ASPs

```
<%@ LANGUAGE = "VBScript" %>
<html>
  <head>
    <title>My First ASP!</title>
  </head>
  <body>
    <% If Time >= #12:00 AM# And Time < #12:00 PM# Then %>
      Good morning!
    <% ElseIf Time >= #12:00 PM# And Time < #6:00 PM# Then %>
      Good afternoon!
    <% Else %>
      Good evening!
    <% End If %>
  </body>
</html>
```



Dynamic Webpages

JSPs

```
<html>
  <head>
    <title>My First JSP!</title>
  </head>
  <body>
    <%@ page language="java" %>
    <% out.println("Hello World"); %>
  </body>
</html>
```


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