

CS120 The Information Era

Chapter 5 – Advanced HTML

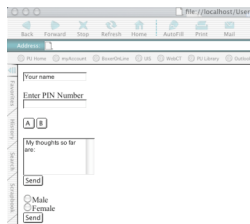
TOPICS: Introduction to Web Page Forms and Introductory Javascript

Forms

- Web pages are usually there only to be read
- But sometimes, you might want to obtain and process information provided by the user
- We do this using forms:
 - Now, we'll concentrate on obtaining information using forms
 - Later, we'll learn how to process the information obtained from the forms using PERL and CGI Scripts

Form Examples

- This is what a few different types of forms look like on a web page:



- Today we'll learn how to set up all of the different types of forms

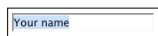
Types of Forms

- Simple forms
- Multiple lines of input
- Password forms
- Multiple elements
- Check boxes
- Radio button
- Pop up list
- Reset values
- Experiment with these at :
 - <http://www.math.pacificu.edu/cs120/forms.html>
 - (NOTE: Processing of these forms is not set up)

Simple Forms

```
<FORM METHOD=GET ACTION="URL">  
<INPUT TYPE="text" NAME="name"  
      SIZE="20" VALUE="Your name">  
</FORM>
```

- NOTES:
 - TYPE="text" and SIZE="20" gives a textbox of width 20 characters
 - VALUE="Your name" is what is placed in the textbox by default
 - NAME="name" sets the variable "name" that our CGI script will use to store and process the information typed in the textbox
 - With ACTION="URL" we will specify the URL of our CGI script on euler; we'll talk more about this later
 - With METHOD=GET we are specifying how the data gets sent to the CGI script. The other option is METHOD=POST, but we'll also talk more about this later



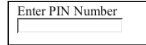
Multiple lines of input

```
<FORM METHOD=GET ACTION="URL">  
  <TEXTAREA NAME="feedback" ROWS=5 COLS=20>  
  My thoughts so far are:  
</TEXTAREA>  
  <BR>  
  <INPUT TYPE="submit" NAME="button"  
        VALUE="Send">  
</FORM>
```



Password Forms

```
<FORM METHOD=GET ACTION="URL">
  Enter PIN Number<BR>
  <INPUT TYPE="password" NAME="Password"
  SIZE="20" VALUE="">
</FORM>
```



- NOTES:
 - TYPE="password" will hide the characters as they are typed
 - NAME="Password" is the variable our CGI script will use to process the information

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Multiple elements

```
<FORM METHOD=GET ACTION="URL">
<INPUT TYPE="submit" NAME="button"
  VALUE=" A ">
<INPUT TYPE="submit" NAME="button"
  VALUE=" B ">
</FORM>
```



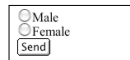
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Radio Buttons

```
<FORM METHOD=GET ACTION="URL">
  <INPUT TYPE="radio" NAME="sex" VALUE="M">Male<BR>
  <INPUT TYPE="radio" NAME="sex" VALUE="F">Female<BR>
  <INPUT TYPE="submit" NAME="button" VALUE="Send">
</FORM>
```



- NOTES:
 - Use Radio Buttons if exactly one of several options is to be selected.

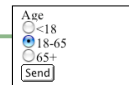
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Radio buttons

```
<FORM METHOD=GET ACTION="URL">
  Age<BR>
  <INPUT TYPE="radio" NAME="age" VALUE="a">&lt;18<BR>
  <INPUT TYPE="radio" NAME="age" VALUE="b"
  CHECKED>18-65<BR>
  <INPUT TYPE="radio" NAME="age" VALUE="c">65+<BR>
  <INPUT TYPE="submit" NAME="button" VALUE="Send">
</FORM>
```



- NOTES:
 - Including CHECKED in the attributes places a default selection next to the choice


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Check Boxes

```
<FORM METHOD=GET ACTION="URL">
  Use<BR>
  <INPUT TYPE="checkbox" NAME="use"
  VALUE="Ada 95" CHECKED>Ada 95<BR>
  <INPUT TYPE="checkbox" NAME="use"
  VALUE="C++" CHECKED>C++<BR>
  <INPUT TYPE="checkbox" NAME="use"
  VALUE="COBOL">COBOL<BR>
  <INPUT TYPE="submit" NAME="button"
  VALUE="Send">
</FORM>
```



- NOTES:
 - Use TYPE="Checkbox" if any number of options can be selected
 - Including CHECKED in the attributes places a default check next to the choice

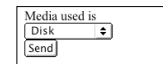
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Pop up list

```
<FORM METHOD=GET ACTION="URL">
  Media used is<BR>
  <SELECT NAME="Media">
    <OPTION SELECTED> Disk
    <OPTION> Floppy disk
    <OPTION> DAT tape
  </SELECT>
  <BR>
  <INPUT TYPE="submit" NAME="button"
  VALUE="Send">
</FORM>
```



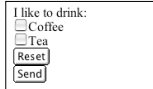
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Reset values

```
<FORM METHOD=GET ACTION="URL">
  I like to drink:<BR>
  <INPUT TYPE="checkbox" NAME="Like"
    VALUE="Coffee">Coffee<BR>
  <INPUT TYPE="checkbox" NAME="Like"
    VALUE="Tea">Tea<BR>
  <INPUT TYPE="reset" VALUE="Reset"><BR>
  <INPUT TYPE="submit" NAME="button"
    VALUE="Send">
</FORM>
```



- NOTES:

- TYPE="reset" VALUE="Reset" will reset all selections in the form to their defaults

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Problem

- Create the form found at:

- <http://zeus.cs.pacificu.edu/shereen/cs120/Lectures/15forms.gif>

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Javascript

- Javascript is an easy-to-use programming language that can be embedded in the header of your web pages
- Javascript can enhance the dynamics and interactive features of your page by allowing you to perform calculations, check forms, write interactive games, add special effects, customize graphics selections, create security passwords and more

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Javascript

- The first thing you need is to write the javascript
- This is placed in the head tag

```
<SCRIPT language="javascript">
  <!-- Beginning of JavaScript -
    function HelloWorld() {
      alert ("Hello World!"); }
  // - End of JavaScript - -->
</SCRIPT>
```

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Javascript

- The next thing that you need to do is call the javascript that you created
- You do this by placing a call in the body of your html
 - ` Hello `

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Javascript

- One thing you must know and remember:
 - Javascript is **CASE SENSITIVE**

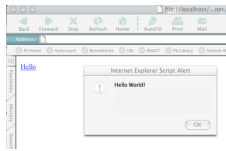
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Try It Out

```
<HTML>
<HEAD>
<SCRIPT language="javascript">
<!-- Beginning of JavaScript -
function HelloWorld() {
    alert ("Hello World!"); }
// - End of JavaScript - -->
</SCRIPT>
</HEAD>
<BODY>
<A HREF="javascript:HelloWorld()">Hello</A>
</BODY>
</HTML>
```



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Variables

- Let's suppose $x=5$
- x is a variable
- At the time of the statement, x happens to be 5
- Can x be something else?
 - Sure, $x=6$
 - Now x equals 6
- (Hence the name "variable"... its value can vary.)

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Variable Example

```
<HTML>
<HEAD>
<SCRIPT language="javascript">
<!-- Beginning of JavaScript -
function HelloWorld() {
    myname = "Joe";
    alert (myname); }
// - End of JavaScript - -->
</SCRIPT>
</HEAD>
<BODY>
<A HREF="javascript:HelloWorld()">Hello</A>
</BODY>
</HTML>
```

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Question

- Can you make the message box display Hello, and the name?

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Getting Information

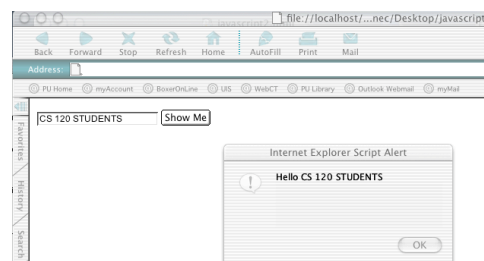
- We can get the information from the user and have the message box display the word "hello" and the user name
- We do this by creating a text box where the user can enter their name
- Then we create a button that the user can click
- By clicking on that button, the Javascript function is called, and the message box is displayed

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Another Example



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JavaScript

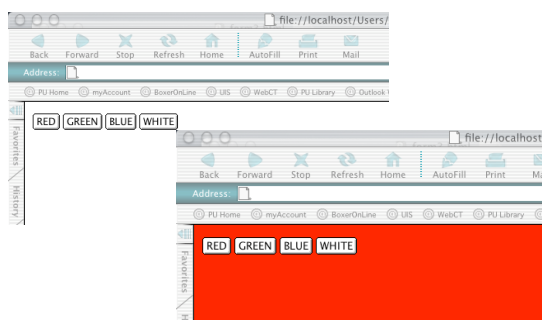
```
<html>
<head>
  <SCRIPT LANGUAGE="JavaScript">
    <!-- Beginning of JavaScript -
    function MsgBox (myname) {
      alert ("Hello " + myname) }
    // - End of JavaScript - -->
  </SCRIPT>
</head>
<body>
  <FORM>
    <INPUT NAME="text1" TYPE=Text>
    <INPUT NAME="submit" TYPE=Button VALUE="Show Me"
      onClick="MsgBox(form.text1.value)">
  </FORM>
</body>
</html>
```

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Another Example



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HTML

```
<html>
<body>
  <form>
    <input type="button" name="Button1" value="RED"
      onclick=document.bgColor="red">
    <input type="button" name="Button2" value="GREEN"
      onclick=document.bgColor="green">
    <input type="button" name="Button3" value="BLUE"
      onclick=document.bgColor="blue">
    <input type="button" name="Button4" value="WHITE"
      onclick=document.bgColor="white">
  </form>
</body>
</html>
```

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Javascript

- We can improve the HTML by adding some Javascript

```
<SCRIPT LANGUAGE="JavaScript">
  <!-- Beginning of JavaScript -
  function changecolor(code) {
    document.bgColor=code}
  // - End of JavaScript - -->
</SCRIPT>
```

- Then the HTML code will change to:

```
<input type="button" name="Button1"
  value="RED" onclick="changecolor('red') ">
```

etc.

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