

HTML 5 Tables and Forms

Tables for Tabular Data Display

Tables can be used to represent information in a two-dimensional format. Typical table applications include calendars, displaying product catalog, inventory data, price table, financial data, calendars, etc. A two-dimensional table includes caption, heading cell, row data, and borders if needed.

As shown in HTML5 4.9 Tabular Data, <http://www.w3.org/TR/html5/tabular-data.html>. The elements that are defined in HTML 5 for creating tables can be found:

<u>Element</u>		<u>Meaning</u>
<code><table></code>	<code></table></code>	The table element represents data with more than one dimension in the form of table. Attributes: BORDER, ALIGN, WIDTH, CELSPACING, CELLPADDING, BGCOLOR, BACKGROUND
<code><caption></code>	<code></caption></code>	The caption element represents the title of the Table.
<code><colgroup></code>	<code></colgroup></code>	The colgroup element represents a group of one or more columns in the table.
<code><tbody></code>	<code></tbody></code>	The tbody element represents a block of rows that consists of a body of data.
<code><col></code>	<code></col></code>	The col (column) element represents one or more columns in the column group.
<code><thead></code>	<code></thead></code>	The thead element represents the block of rows that consists of the column labels (headers).
<code><tfoot></code>	<code></tfoot></code>	The tfoot element represents the block of rows that consists of the column summaries (footers)
<code><tr></code>	<code></tr></code>	The tr element defines a row of cells in a table. Attributes: ALIGN (left, right, center), VALIGN (top, middle, bottom)
<code><td></code>	<code></td></code>	The td element represents a data cell in a table.
<code><th></code>	<code></th></code>	The th element represents a header cell in a table. Attributes: COLSPAN, ROWSPAN, ALIGN, VALIGN, WIDTH, HEIGHT

Table Border Styles Examples: (Figure 4.8, pp. 157)

```

<style>
  table { border: solid 1 pt black; }
</style>

<style>
  table {border: solid 1 pt black;}
  td    {border: solid 1 pt black;}
</style>

<style>
  table { border: solid 1 pt black; border-collapse: collapse;}
  td    { border: solid 1 pt black; padding: 10 pt;}
</style>

<style>
  table { border: solid 1 pt black; border-spacing: 10pt;}
  td    { border: solid 1pt black;}

```

Examples of Boxed Tables – Styles (Figure 4.9, pp. 158)

```

<style>
table{
  font-size: 0.8 em;
  font-family: Aerial, Helvetica, sans-serif;
  border-collapse: collapse;
  border-top: 4 px solid #DCA806;
  border-bottom: 1 px solid white;
  text-align: left;}
caption{
  font-weight: bold;
  padding: 0.25em 0 0.25 em 0;
  text-align: left;
  text-transform: uppercase;
  border-top: 1px solid #DCA806;}
</style>

<style>
tbody tr {
  background-color: #F1F1F1;
  border-bottom: 1px solid white;
  color: #6E6E6E;}

tbody td {padding: 0.75em;}
</style>

```

```

<style>
table {
    font-family: "Lucida Sans", Verdana, Arial, sans-serif;
    font-size: 1em;
}
tbody {
    background-color: #F1F1F1;
}
td, th {
    padding: 0.5em;
}
thead, tfoot {
    background-color: #CACACA;
}
caption {
    font-size: 1.2em;
    font-weight: bold;
    background-color: #DCA806;
    padding: 0.5em;
}
tbody tr:nth-child(odd) {
    background-color: white;
}
</style>

```

Hover Effect and Zebra Strips – Table Examples (Figure 4.10, pp. 159)

```

<style>
    tbody tr:hover{
        background-color: #9e9e9e;
        color: black;
    }
</style>

<style>
    tbody tr:nth-child (odd){
        background-color: white;}
</style>

```

HTML Forms

A `<form>` element in a HTML page contains such `<input>` elements control as Text box, Text Area, Check Box, Radio button, Multiple Selection, Submit Command Button, Reset button, etc., that allows a Web page to gather information from users and send them back to a Web server for further processing.

HTML 5 section 4.1, describes :

“A form is a component of a Web page that has form controls, such as text fields, buttons, checkboxes, range controls, or color pickers. A user can interact with such a form, providing data that can then be sent to the server for further processing (e.g. returning the results of a search or calculation). No client-side scripting is needed in many cases, though an API is available so that scripts can augment the user experience or use forms for purposes other than submitting data to a server.

Writing a form consists of several steps, which can be performed in any order: writing the user interface, implementing the server-side processing, and configuring the user interface to communicate with the server.”

The HTML5 specifications for Forms can be found at <http://www.w3.org/TR/html5/forms.html>.

Form Element and Attributes

You will need to use the following syntax for creating a form. All controls must appear between two `<form>` and `</form>` tags. A general `<form>` syntax using name, action, and method attributes is as shown below:

```
<form name= thisName action = thisAction method =thisMethod>  
</form>
```

Where:

- The **name** attribute is the name or ID of form to use in the document.
- The **action** attribute is the name of application program, a CGI program, on the server with valid URL that will be called to process the information.

- The **method** attribute specifies how the controls' value will be transmitted to the server via HTTP protocol. There are two methods: POST (environment variable) and GET (no special characters; for example, $1 < \frac{1}{4}$; $a > b$; or b).

<u>Begin Tag</u>	<u>End Tag</u>	<u>Meaning</u>
<code><form></code>	<code></form></code>	Indicates a form Attributes; ACTION, METHOD, ENCTYPE, TARGET, NAME, ONSUBMIT, ONRESET

Global attributes defined in the HTML 5, 4.10 Forms

(<http://www.w3.org/TR/html5/forms.html>), include

- accept-charset – Character encoding to use for form submission
- action – URL to use for form submission
- autocomplete – Default settings for autofill feature for controls in the form
- enctype – Form data set encoding type
- method – HTTP method to use for submission of form submission
- name – Name of form to use in the document.forms API
- novalidate – Bypass form control validation for form submission
- target – Browsing context for form submission

Example (Figure 4.11, Sample HTML form)

```
<form method="get" action="process.php">
  <fieldset>
    <legend> Details </legend>
    <p>
      <label> Title: </label>
      <input type="text" name="title"/>
    </p>
    <p>
      <label> Country: </label>
      <select name="where">
        <option> Choose a Country </option>
        <option> Canada </option>
        <option> Finland </option>
        <option> United States </option>
      </select>
    </p>
    <input type="submit"/>
  </fieldset>
</form>
```

Input Element and Attributes

Ref: HTML 5, The Input Element, <http://www.w3.org/TR/html5/forms.html#the-input-element>

<u>Begin Tag</u>	<u>End Tag</u>	<u>Meaning</u>
<INPUT>		Define an input element such as TEXT field, radio button, check box, and pass word field for a form.
		Attributes: TYPE, NAME, VALUE, ALIGN, CHECKED, MAXLENGTH, SIZE, SRC, ONCLICK, ONDBCLICK, ONSELECT, ONCHANGE, ONFOCUS, OBBLUR

Input Types and Variables

Text Box for Input

```
<INPUT TYPE="text" NAME="lastname">
```

Submit and Reset Buttons

```
<INPUT TYPE="SUBMIT">
```

```
<INPUT TYPE="RESET">
```

Text Control

The text control is a box that the users can enter a single line of text such as name, address, and so on.

```
<input type= text name= "TextName" value = "DisplayInBox"> < /FONT>
```

CheckBox Control

ChexBox control is similar to check box in Visual Basic, a little square with an option checkmark. It is used to present a list of options, which the users can select more than one. The control's value can be 0 or 1; for example, checked (1) or cleared (0).

```
<input type = checkbox name = "check1">FirstBox < /FONT>
```

RadioButton

Control RadioButton controls are used to present lists of options, similar to the CheckBox control, but it allows one of them can be selected.

```
<input type = radio name ="level">Beginner<br>
```

```
<input type = radio name ="level" checked>Intermediate<br>
```

```
<input type = radio name ="level">Advanced<br>
```

Command Button

Control Command button can perform only two actions in the browser (Submit and Reset) without Script (VBScript, JavaScript, or PerlScript). The Submit command is to submit the entered data on the controls to the server. The Reset command is to reset all control values on the Form to their original values.

```
<input type = submit value = "Send Data"> </FONT >
```

```
<input type = reset value = "Reset Value"> </FONT >
```

Text Area Tags and Attributes

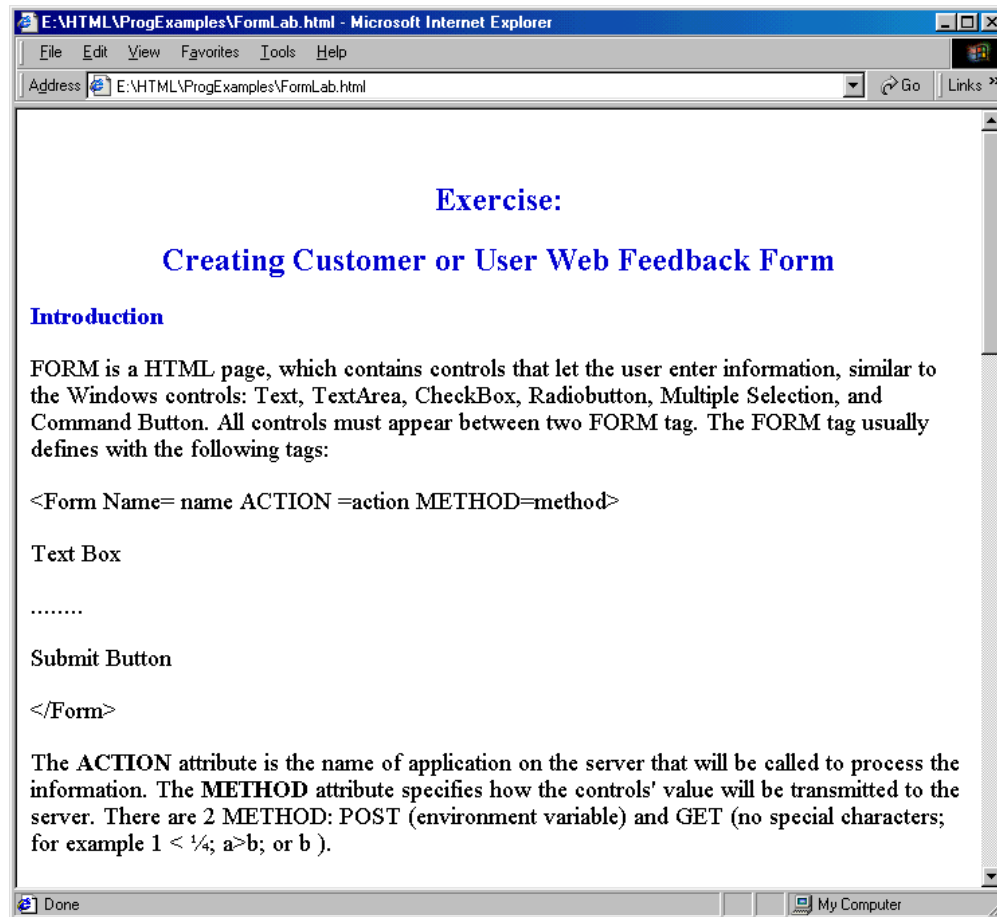
The TextArea control is similar to the Text control, but it allows the entry of multiple lines of text. The TextArea control can also defined with row and column.

<u>Begin Tag</u>	<u>End Tag</u>	<u>Meaning</u>
<TEXTAREA>	</TEXTAREA>	Create a multi-line text entry area. Attributes: NAME, ROWS, COLS, WRAP, ONSELECT, ONCHANGE, ONFOCUS, ONBLUR, ONKEYDOWN, ONKEYPRESS, ONKEYUP
		<TEXTAREA NAME=".." ROWS=xxx, COLS=yyy> </TEXTAREA>

Select and Option Tags and Attributes

<u>Begin Tag</u>	<u>End Tag</u>	<u>Meaning</u>
<SELECT>	</SELECT>	Create a combo box or a list box to let user select among many multiple predefined options. Attributes: NAME, SIZE, MULTIPLE, ONCLICK, ONFOCUS, ONBLUR, ONCHANGE
<OPTION>	</OPTION>	Attributes: VALUE, SELECTED

Example: The following example "FormLab.htm" will help you to understand the form basics. It



Example: A user feedback form example.

```

<HTML>
<!-- httpd\HtDocs\buttons\form1.html -->
<HEAD>
<TITLE>ECET/ EET 499 - Forms</TITLE>
</HEAD>

<BODY>
<H2>Form</H2>

<P>Please fill out this form to help us improve our site.</P>

<!--The code below is a method that calls cgi program or server program (ASP,
perl...) in Server side when the users -->
<!-- click the Send button below-->
<!--Cgi program or server program then generates the output from the server
and send the result back the client-->
<!-- This example will not work in this lab -->
<!-- Initial Form tag is needed -->
<FORM METHOD = "POST" ACTION = "/cgi-bin/formmail">

<!--A text box named "name"; it is like a text box name in Visual Basic
Programming language -->
<!--Whenever the users type in the text box, the string (value) will equal to
"name" -->
<!--like a variable in Programming; for example, name = " string" if the
users type string in the text box. -->
<!-- When the users click the Send button, the client will send name's value
to the server. -->
<!--The server will be able to retrieve string from "name" and generate the
result (as the program set up)-->
<!--Case Sensitive -->
<!--all tags in the form work the same way such as text box, TextArea, radio,
Check, and selection-->
<!--All tags with the send button need to be in the same form tag to work
together.-->

<!--Creating text box named "name", and size 25 character -->
<P><STRONG>Name: </STRONG>
<INPUT NAME = "name" TYPE = "text" SIZE = "25"></P>

<!-- Another text box name "comments" (textarea), also have row and column
option-->
<P><STRONG>Comments:</STRONG>
<TEXTAREA NAME = "comments" ROWS = "4" COLS = "36"></TEXTAREA>
</P>

<!--Another text box name "email"; Type password means when the user type, *
will display on screen -->
<P><STRONG>Email Address:</STRONG>
<INPUT NAME = "email" TYPE = "password" SIZE = "25"></P>

<!--Checked box selection like VB; different name will present different
value -->

```

```

<P><STRONG>Things you liked:</STRONG><BR>
Site design
<INPUT NAME = "thing" TYPE = "checkbox" VALUE = "Design">
Links
<INPUT NAME = "thing1" TYPE = "checkbox" VALUE = "Links">
Ease of use
<INPUT NAME = "thing2" TYPE = "checkbox" VALUE = "Ease">
Images
<INPUT NAME = "thing3" TYPE = "checkbox" VALUE = "Images">
Source code
<INPUT NAME = "thing4" TYPE = "checkbox" VALUE = "Code">
</P>

<!-- <INPUT TYPE="radio"> creates a radio button. The -->
<!-- difference between radio buttons and checkboxes is -->
<!-- that only one radio button in a group can be selected -->
<!--Only 1 name to present radio's value -->

<P><STRONG>How did you get to our site?:</STRONG><BR>

Search engine
<INPUT NAME = "how get to site" TYPE = "radio"
  VALUE = "search engine" CHECKED>
Links from another site
<INPUT NAME = "how get to site" TYPE = "radio"
  VALUE = "link">
Deitel.com Web site
<INPUT NAME = "how get to site" TYPE = "radio"
  VALUE = "deitel.com">
Reference in a book
<INPUT NAME = "how get to site" TYPE = "radio"
  VALUE = "book">
Other
<INPUT NAME = "how get to site" TYPE = "radio"
  VALUE = "other">
</P>

<!--Like a combobox in VB -->
<!-- The <select> tag presents a drop down menu with -->
<!-- choices indicated by the <option> tags -->
<P><STRONG>Rate our site (1-10):</STRONG>
<SELECT NAME = "rating">
<OPTION SELECTED>Amazing:-)
<OPTION>10
<OPTION>9
<OPTION>8
<OPTION>7
<OPTION>6
<OPTION>5
<OPTION>4
<OPTION>3
<OPTION>2
<OPTION>1
<OPTION>The Pits:-)
</SELECT></P>

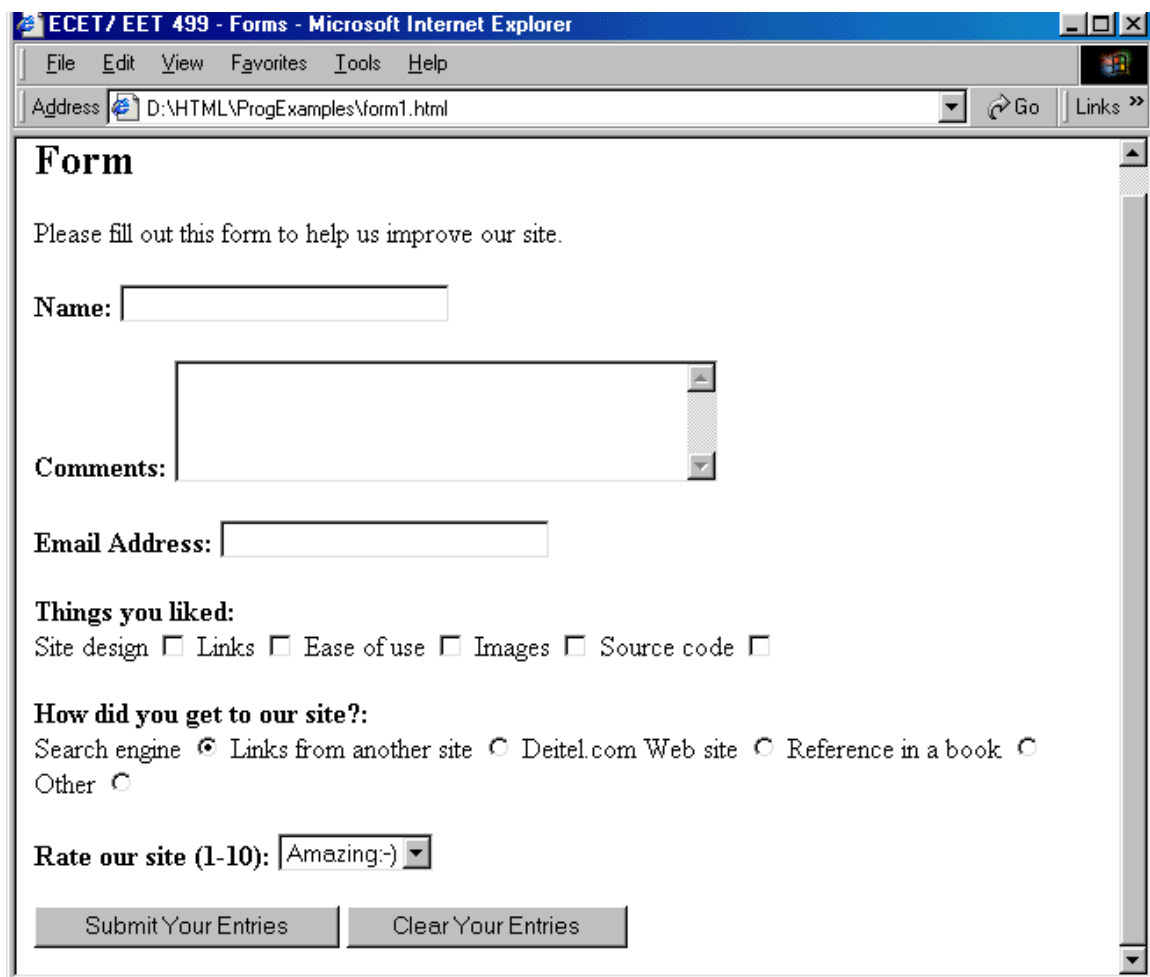
```

```
<!--Send button; when the users click the Send button, the all values in the
form will be sent to the server -->
<INPUT TYPE = "submit" VALUE = "Submit Your Entries">

<!--Reset button, when it is clicked, it will reset all onformation to the
default values-->
<INPUT TYPE = "reset" VALUE = "Clear Your Entries">




</FORM>      <!-- End of Form tag -->

</BODY>
</HTML>
```



ECET/ EET 499 - Forms - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address  D:\HTML\ProgExamples\form1.html  Go  Links »

Form

Please fill out this form to help us improve our site.

Name:

Comments:

Email Address:

Things you liked:
 Site design ☐ Links ☐ Ease of use ☐ Images ☐ Source code ☐

How did you get to our site?:
 Search engine ☒ Links from another site ☐ Deitel.com Web site ☐ Reference in a book ☐
 Other ☐

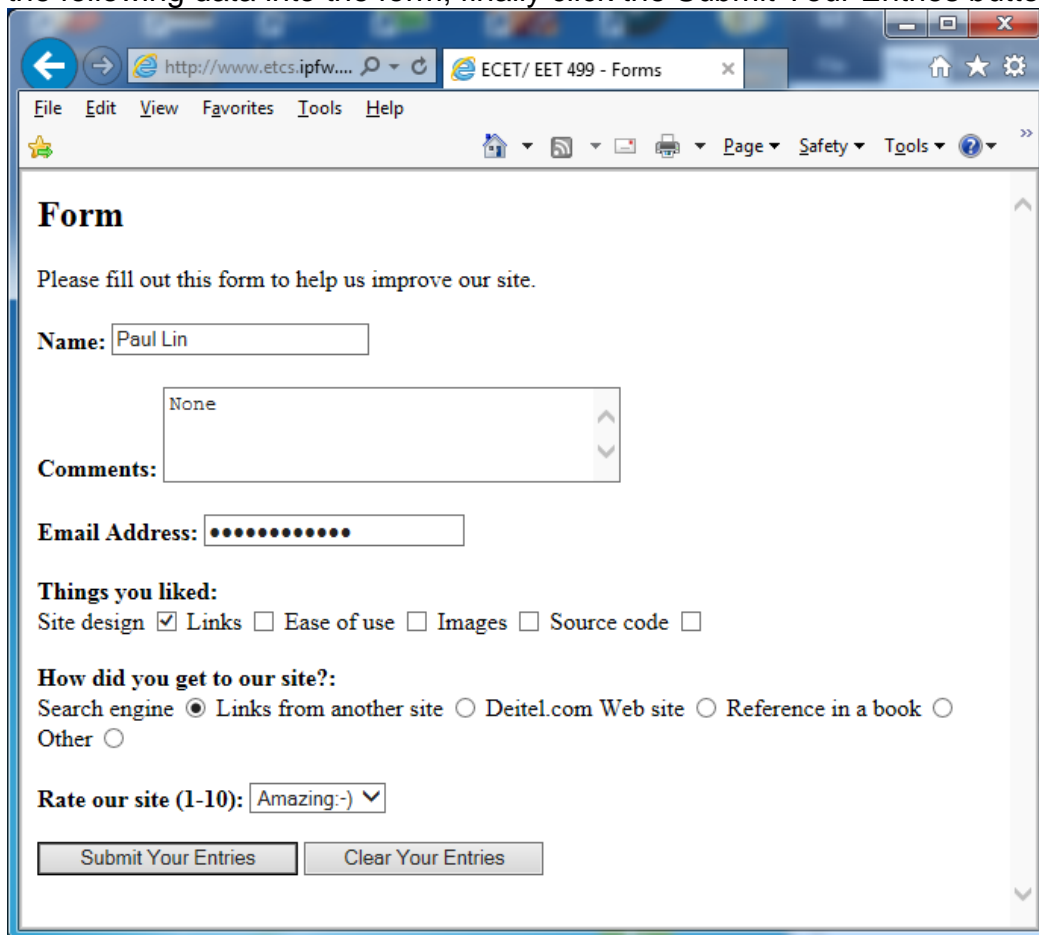
Rate our site (1-10):

Query String, Get and Post Methods.

A browser will package the user's data input from Form/Input elements into something called Query String which is a series of ***name=value*** pairs separated by ampersands (& symbol) and send it back to the requested web server with either Get or Post method.

- Get method:
 - The browser locates the data in the URL of the request
 - It uses URL to send the query string, form data will be saved when the user bookmarks a page; including user name and password.
 - It may post a potential security risk for shared use computers
 - You will use it for testing or developing a web system
- Post method:
 - The form data is located in the HTTP header after HTTP variables
 - ?? Passwords

Run the user input form example as shown above, located as http://www.etcs.ipfw.edu/~lin/CECourses/2_HTML/05FormsEx/form1.html; then enter the following data into the form; finally click the Submit Your Entries button.



The screenshot shows a web browser window with the address bar displaying http://www.etcs.ipfw.edu/~lin/CECourses/2_HTML/05FormsEx/form1.html. The browser window has a menu bar (File, Edit, View, Favorites, Tools, Help) and a toolbar with icons for home, back, forward, print, and other functions. The form itself is titled "Form" and contains the following elements:

- A heading "Form" followed by the text "Please fill out this form to help us improve our site."
- A "Name:" label followed by a text input field containing "Paul Lin".
- A "Comments:" label followed by a text area with a dropdown menu showing "None".
- An "Email Address:" label followed by a text input field containing a series of dots.
- A section titled "Things you liked:" with four checkboxes: "Site design" (checked), "Links", "Ease of use", "Images", and "Source code".
- A section titled "How did you get to our site?:" with four radio buttons: "Search engine" (selected), "Links from another site", "Deitel.com Web site", and "Reference in a book".
- A "Rate our site (1-10):" label followed by a dropdown menu showing "Amazing:-)".
- Two buttons at the bottom: "Submit Your Entries" and "Clear Your Entries".

The browser will pack all the inputs and send it to a server CGI script called **formmail**.
<FORM METHOD = " POST " ACTION = "/cgi-bin/formmail"> in the following format:

```
POST /cgi-bin/formmail http/1.1
Date: Mon, 19 September 2017 14:27 GMT
Host: ...
User-Agent: ...
Content-Length: xx

name=Paul Lin&comments=None&email=lin@ipfw.edu&thing=Design&how%20get%20to%20
site=search%20engine&rating=10
```

where %20 is character.