Special Guests

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- Marshall Bjerke, Senior, Informatics

Programming

- Why is programming fun?
  - Second is the pleasure of making things that are useful to other people. Deep within, we want others to use our work and to find it helpful. In this respect the programming system is not essentially different from the child’s first clay pencil holder “for Daddy’s office.”


Announcements

- Change in deadline:
  - Labs 7 and 8 will be due a week from Tuesday
  - You may want to do lab 8 before lab 7

Screen Input and Output

The form of <form>

JavaScript and HTML

- HTML is markup for Web content
- Web browser interprets HTML and displays the page
- JavaScript responds to user actions
  - Click button: onclick event
  - Hover over link: onmouseover
  - Enter data in forms: onsubmit
  - Change value in a form field: onchange

A short form

```html
<body style="background-color: #cccccc; margin-left: 20px;">
<h1>For example</h1>
<form>
  <p><input type="button" value="Press" for good results">
  <p>Enter data here: <input type="text" name="x" size="20"> <br />
  Radio buttons:
  <input type="radio" name="y" value="right">
  right or
  <input type="radio" name="y" value="left">
  left</p>
</form>
</body>
```
A short form

For example
<form>
  <button value="Press"> for good results</button>
  <p>Enter data here: <input type="text" name="x" size="20">
  <br />
  Radio buttons:
  <input type="radio" name="y" value="right">
  right or
  <input type="radio" name="y" value="left">
</p>
</form>

Demonstration

• The short form:

Forms

Input & Output in JS are given in forms

form
  input type="button" value="Press" for good results
form
  * Inside form tags
  * Notice
    • type
    • value
    • relationship to text

More Forms

<form>
  Enter data here: <input type="text" name="x" size="20">
</form>

* Notice
  • type
  • name
  • size
  • relationship to text

Radio Control

<form>
  Radio buttons: <input type="radio" name="y"> Left or
  <input type="radio" name="y"> right
</form>

* Notice
  • type
  • name (common)
  • relationship to text

Input/Output

Text boxes are input or output based on your point of view ...

Human

Computer

* Programming uses computer's view
  • It's obvious that buttons are inputs
  • Text boxes are inputs, but if the computer puts information in them, they're outputs

Forms define the type of I/O and the processing
Events Cause Processing

After drawing a page, browsers sit idle waiting for something to happen … when we give input, it cause events

• Processing the input is the task of an event handler
  * Event types
    - onClick
    - onChange
    - onMouseOver

Demonsration

• Smileys...

Asian Emoticons

<table>
<thead>
<tr>
<th>Emoticon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(^_^)</td>
<td>Laughing</td>
</tr>
<tr>
<td>(&gt;_&lt;)&gt;</td>
<td>Troubled</td>
</tr>
<tr>
<td>(^^;)</td>
<td>Shy</td>
</tr>
<tr>
<td>(ToT)</td>
<td>Crying</td>
</tr>
<tr>
<td>m(_ _)m</td>
<td>Apologising</td>
</tr>
<tr>
<td>(???;)</td>
<td>Shy</td>
</tr>
<tr>
<td>(????)</td>
<td>Grinning</td>
</tr>
</tbody>
</table>

Emoticons = Emotional Icons

<table>
<thead>
<tr>
<th>Emoticon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>:-)</td>
<td>Smile or Happy</td>
</tr>
<tr>
<td>:-(</td>
<td>Frown or Sad</td>
</tr>
<tr>
<td>:-D</td>
<td>Laughter</td>
</tr>
<tr>
<td>:-C</td>
<td>Very, very sad</td>
</tr>
<tr>
<td>:-</td>
<td></td>
</tr>
<tr>
<td>O:O_O</td>
<td>Surprised or shocked</td>
</tr>
</tbody>
</table>

Observe Actions

‘onClick’ Event for Buttons

* Event handlers say what to do if event happens … “put ‘Smiley’ in the output textbox”

Event handlers = mini programs
‘onClick’ for Buttons

Notice ...
• ‘onClick’ event does the task: places 'Smiley' in the output textbox

x.value

Notice ...
• the value of a textbox is the contents of the textbox

x.value

Study
• For Monday, read QuickStart to JavaScript, pages 108-113.
• Monday I’ll introduce the next project.
Study

- Next week's quiz
  - Review the questions at the end of these chapters:
    - Fluency chapters 20, 21, and 22
    - QuickStart chapters 1 and 2
- Expect lots of questions on JavaScript!

- JavaScript topics will include:
  - Variables
  - Values
  - Assignment statements
  - Conditionals
  - Functions
  - Curly brackets
  - Relationship to HTML

Schedule Changes

- Monday and Tuesday:
  - Keep working on Lab 7
  - Due at your Wednesday or Thursday lab this week
- Deadline for next project is postponed