HTML Forms

Lecture 5
CGS 3066 Fall 2016

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The `<head>` tag has several attributes for different purposes.

- `<title>`: specify the title of the document.
- `<base>`: specify base for all URLs.
- `<link>`: link to an external resource.
- `<style>`: specify inline style.
- `<meta>`: specify metadata for machine parsing.
- `<script>`: usually for client-side Javascript.
XHTML

- eXtended HTML.
- Follows strict coding standards.
- DOCTYPE, `<html>`, `<head>`, `<title>` and `<body>` are mandatory.
- xmlns attribute in `<html>` is mandatory.
- Attributes must be in lowercase, quoted and not minimized.
- Elements must be in lowercase, properly nested and closed (even when empty).
HTML Forms

- HTML Forms are used to select different kinds of user input and pass data to the server.
- An HTML form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons and more.
- A form can also contain select lists, textarea, fieldset, legend, and label elements.
- The `<form>` tag is used to create an HTML form.
The `<input>` element

- The `<input>` element is used to select user information.
- An `<input>` element can vary in many ways, depending on the type attribute.
- Some common `<input>` types are:
  - `text`: defines a one-line input field that a user can enter text into.
  - `password`: defines a password field.
  - `radio`: let a user select ONLY ONE of a limited number of choices.
  - `checkbox`: let a user select ZERO or MORE options of a limited number of choices.
  - `submit`: defines a Submit button. Used to send form data to a server. Also includes the action and method attributes.
HTML5 input types

HTML5 introduces several new input types:

- color
- date
- datetime
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week
Some other form related tags

- `<textarea>`: Defines a multiline input control (text area)
- `<label>`: Defines a label for an `<input>` element.
- `<button>`: Defines a clickable button
- `<select>`: Defines a drop-down list.
- `<option>`: Defines an option in a drop-down list
- `<datalist>`: Specifies a list of pre-defined options for input controls.
- `<output>`: Defines the result of a calculation.
HTML5 Form attributes

- `formnovalidate`
- `formtarget`
- `height and width`
- `list`
- `min and max`
- `multiple`
- `pattern (regexp)`
- `placeholder`
- `required`
- `step`
Browser Engine

- Software application for retrieving, presenting and traversing information resources on the World Wide Web.
- An information resource is identified by a Uniform Resource Identifier.
- May be a web page, image, video or other piece of content.
- Fetching a page:
  - User inputs URL. The interpretation of the URL depends on the prefix.
  - The server is contacted to retrieve the page.
  - The page is rendered by the browsers layout engine.
- All web (non-mobile) and most mobile browsers have 2 components
  - Host Application: The basic user interface.
  - Layout Engine: Program that “draws” the content.
Parts of a browser

- Host Application
  - Provides the menu bar, address bar, status bar, bookmark manager, history and preferences functionality ...
  - Serves as an interface between the user, the engine, and the underlying operating system.

- Layout Engine
  - Takes a URL and a set of window content-area rectangle coordinates as arguments.
  - It then retrieves the document corresponding to the URL and paints a graphical representation of it in the given rectangle.
  - It also handles links, forms, cookies, client-side scripting, plug-in loading, and other matters.
Browser Components
Rendering Engine Flow