

Intro to Techniques Used to Manipulate HTML at Run Time

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Intro to Techniques Used to Manipulate HTML at Run Time

Appetizer: High Level Categorization of HTML Elements

Main Course – 4 techniques commonly used

Narrowing the topic (hit the 20 minutes):

- Try to do topic within the context of a traditional IBM i business application
 - needs user interaction and long term data storage (separate from the web server)
- Avoid a face-off based on capability to do a fancy list or inquiry fast
 - Most techniques have this
- Let's not try to imply or extract pros and cons right now

There are slides I have had to hide because we don't have time to cover them...

Please feel free to contact me for a copy of this presentation that includes the hidden slides.

Main things to accomplish in this session

- See Parallel Techniques for Setting HTML “Display Attributes”
 - Called “Properties” and styles
 - Individually
 - As a group
 - Almost all of the techniques do this in one way or another!
 - Server-side or client-side
 - 1) Server-side = web server
 - 2) Client-side = browser runs interpretive code (script) triggered by events (although less events in browser or mobile than desktop)
- Populate HTML entry fields with data from database
- Intro to Manipulating layout from client side
 - like we saw with server-side properties
 - to accommodate mobile formats
 - ~~Fancy UI stuff~~ (sorry, not enough time, please contact me for hidden slides)

Boiled Down List of the 4 techniques

for manipulating HTML and the UI at run time

- server-side HTML manipulation examples – business app focus
 - c# server-side compiled code, just a cross section (Technique 1)
 - has a nice parallel to DSPF and *PGM separation
 - has some parallels to the old Visual Basic forms interaction (client-server)
 - PHP server-side code (but not compiled), a more complete example (Technique 2)
 - Embedded code (or script) writing additional HTML or populating pre-existing elements
 - Separate, stand-alone code module usually triggered on form submit
- client-side HTML manipulation examples
 - jQuery (Technique 3)
 - ~~Add a custom HTML element into to the header of WordPress website (not enough time)~~
 - Use jQuery to set display attributes based on processing mode
 - ~~Animating, just a start (not enough time)~~ (sections skipped are available via your email request)
 - CSS3 Media Queries – one strategy for dynamic resizing for mobile (Technique 4)
 - Super brief – just touching upon it
 - Used to reformat container sizes and orientation in order to reformat for mobile
 - Based on the width of the device, manipulate the CSS on the client-side at run time to resize
- More than one way to get flexibility
 - Shoot these topics keep leap-frogging each other... Which sequence provides the easiest way to build understanding? ☺

Appetizer – High Level Categorization of HTML Elements

Question: how many folks attending today are already pretty familiar with HTML?

Let's start by setting an eye towards equivalencies to an IBM i application that involves interaction with data. I want to let us think for a few moments that the base HTML is kind of like the DSPF specification.

- Containers
 - `<div>xxxx</div>` is probably the most common container - a rectangle
 - Best practice → don't hard-code sizes – specify proportionate sizing or none at all
 - a) If no heights or widths... Contents, line breaks & border sizes determine runtime size
 - b) A percentage width, like 33%, is used to format into 3 columns to fit browser window
 - IBM i textual UI container-like elements, fixed sized and component positions
 - a) A format at 24x80 or 27x132 is a fixed-size container
 - b) A pop-up window is a fixed-size container
 - `<p>paragraphs</p>`
 - Table (rows and columns (yea!)), but the syntax is a little funky
 - *Please note - containers within containers is common*
- UI Components within Containers
 - Note - Try not to use fixed positioning coordinates, this will hinder our flexibility down the road
 - Text or Literals
 - Pictures – `` tag displayed via a link to a picture file within site directory
 - Notice size of picture file is the amount of data transferred
 - Input fields
 - `` tag could be similar to an output only field
 - Navigation Triggers – Buttons and Links