HctlDesign Demo

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 HTMLCONTROL Demo and Snippets

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Definitions:

Snippet
A small piece or brief extract

PL/B Snippet
A small text data file that contains HTML, JavaScript, and CSS which can be loaded into a PL/B HTMLCONTROL.

HTMLCONTROL Object:

The HTMLCONTROL object has been implemented to allow a Web application based on HTML, JavaScript, and CSS styling to be embedded into any PL/B program executed by PLBWIN, PLBNET, PLBCLIENT\PLBSERVE, and PLBWEBSRV runtimes. In addition, multiple HTMLCONTROL objects can exist in one PL/B program where each one is totally independent of the others.

'HctlDesignSun' Demo Program:

This program was first written by Bill to help develop, test, and evolve the concept of Html snippets for the PL/B HtmlControl. We have continued to use the program using Html, JavaScript, and CSS based code to evaluate snippets from many Web sites. In the end, we want to provide a demo program that can be used by many PL/B developers to create and build their own Html snippets. Also, we want to allow this program to be accessed and used on the Sunbelt Pl/B Web Server. In addition, we want to provide a set of PL/B snippets which can be accessed by any PL/B user and used in their own HTMLCONTROL objects.

Features:

1. Access PL/B Snippet files named using 'filename.snip' or 'filename.snip8'.

    The '.snip' snippet file contains single byte ANSI encoded data.

    The '.snip8' snippet file contains data that is UTF-8 encoded data.

2. Allow PL/B Snippets to be edited and tested real time using a PL/B Windows runtime or PWS runtimes.

3.   Allow PL/B Snippets to be 'saved'. To Be Determined for online usage.

4. Provide second PL/B Window that contains HTMLCONTROL being tested.

5. All snippets are loaded into the HTMLCONTROL object using the 'Innerhtml' property.

Getting Started:

Sunbelt PWS Server from Browser

http://www.sunbelt-plb.com:8081/hctldesignsun.plc

PL/B Runtime (Plbwin, Plbnet, Plbclient\Plbserve)

1. Download\install 10.0Ab 'Plbwin', 'Plbnet', or 'Plbwnt' Beta.

2. Download Demo program 'HctlDesignSun_Demo_180221.zip'.

   This zip contains a Sunide project, HctlDesignSun program, and a directory of Html snippets.

3. Unzip 'HctlDesignSun_Demo_180221.zip' into a directory. Sub-directories are included \required.
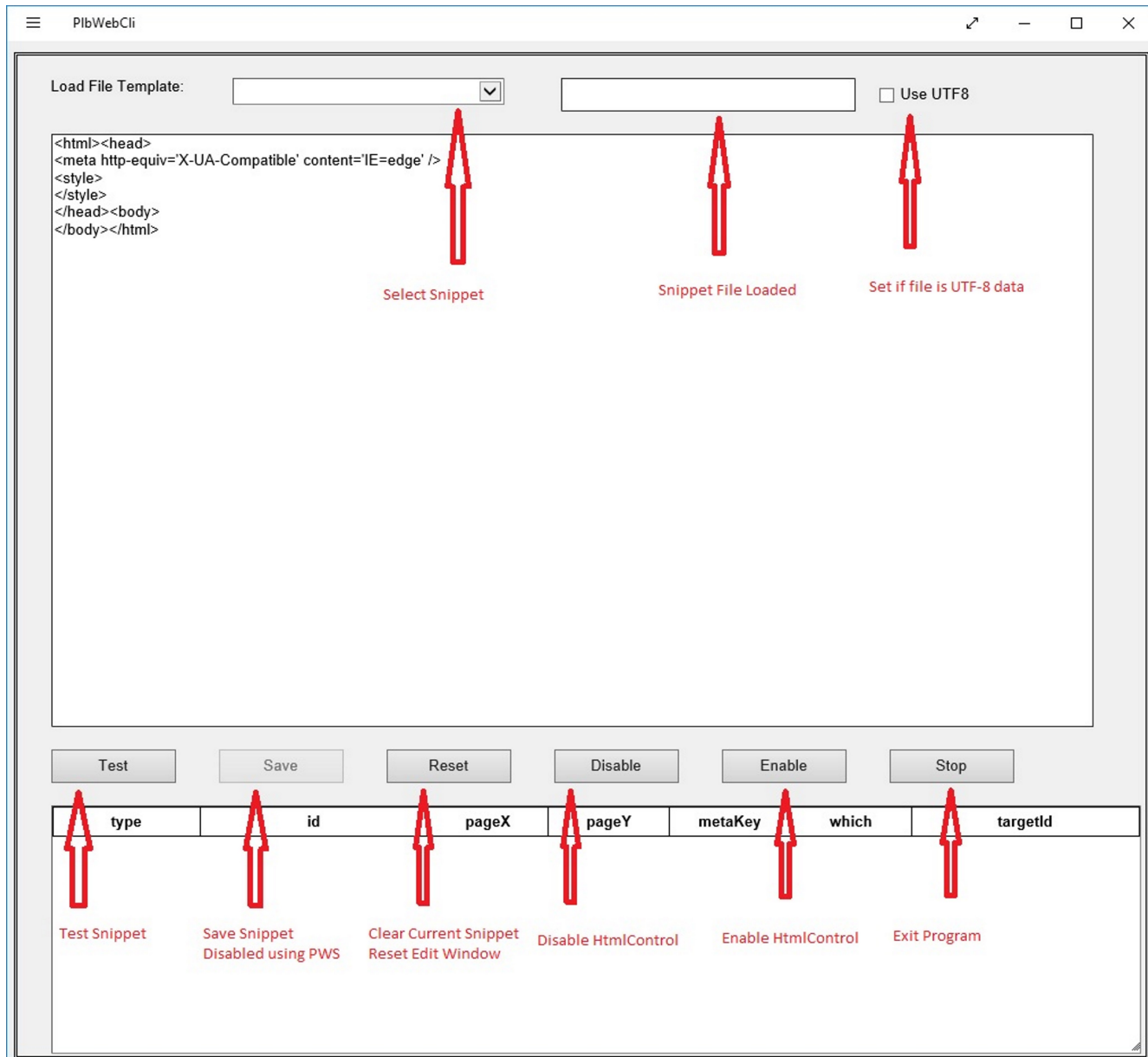
   Example:

   C:\temp\hctldesign
   C:\temp\hctldesign\htmlsnippets

4. Execute 'HctlDesignSun' program with 'c:\temp\hctldesign' directory as the current working directory.

Program Windows:

Hctldesignsun Edit Window Image

HtmlControl Test Window

PL/B Snippet Descriptions:

These snippets are samples that are very simple in some cases while other cases are more complicated. The intent is to allow the PL/B users to see these snippets working in an HTMLCONTROL. The users can make changes and retest to see how things work using HTML, JavaScript, and CSS. Once a user becomes more familiar with different operations, you can copy\paste and experiment with HTML from other Web Sites.

Note:

1. When an Html object is defined in the snippet code, there are 3 optional attributes named 'data-plbevent', 'data-plbenable', and 'data-plbtabid' that can be used. See the PL/B Language Reference for more details on the use of these attributes.

Blank.snip

This snippet has the basic template\format of PL/B snippet. The <meta> tag in this snippet is required to insure the Windows PL/B runtimes like Plbwin, Plbnet, and Plbclient\Plbserve use the newest\highest version of IE for the HTMLCONTROL. Also, the snippet data can have embedded JavaScript as required.

Note:
1. If the HTMLCONTROL snippet DOES NOT include the <html>, <head>, <style> and <body> sections as normal used in Web Page source.

Button1.snip

This snippet has a simple Html button. The Html button uses the PL/B attributes as follows:

data-plbevent='click'
This attribute allows a Html button to generate a click event when the End-user clicks on the button.

data-plbenable='on'
This attribute allows the HTMLCONTROL object to use the PL/B ENABLED={0/1} property to enable and disable the 'Hello' Html button object. Use the 'HctlDesignSun' edit window buttons 'ENABLE' and 'DISABLE' to change the ENABLED property for the Html button.

data-plbtabbid='1'
This attribute allows the Html button object to be included In the PL/B program tabbing list.

Button2.snip

This snippet has 3 Html buttons which are using CSS classes to enhance the visual presentation of the buttons. The third button is using a CSS class to invoke Hovering with button a shadow effect.

This snippet generates PL/B HTMLCONTROL events.

Button3.snip8 (UTF-8 encoded snippet file)

The '.snip8' extension on this snippet file means that the data in this file is encoded UTF-8 data. In this case, the 'HctlDesignSun' program sends the UTF-8 directly to the HTMLCONTROL exactly as found in the 'button3.snip8' data file.

This snippet has 3 Html buttons which are using CSS classes to enhance the visual presentation of the buttons. The text for the first button in this snippet is using uppercase and lowercase Cryillic characters.

This snippet generates PL/B HTMLCONTROL events.

Calckeys.snip

This snippet shows a set of Html button objects that form a calculator.

This snippet generates PL/B HTMLCONTROL events.

Calckeys1.snip

This snippet shows a set of Html button objects that form a calculator. Also, JavaScript is included in this snippet data to process Html button events and perform very basic calculations. The user actions, operations, and JavaScript Processing are being performed asynchronously to the PL/B program Execution.

This snippet DOES NOT generate any PL/B HTMLCONTROL events.

Canvans1.snip

This snippet uses a Html <canvas> object with JavaScript processing to continually generate different colored spheres within a black rectangle region. This snippet executes totally asynchronously to the PL/B program execution.

This snippet DOES NOT generate any PL/B HTMLCONTROL events.

Columns1.snip

This snippet shows how to generate columns of text using basic CSS styles.

This snippet DOES NOT generate any PL/B HTMLCONTROL events.

Edit1.snip

This snippet shows a single Html <input> object with a 'text' type.

This snippet generates PL/B HTMLCONTROL events. In this case, the " data-plbevent='change keypress click focus' " attribute is declaring that MULTIPLE Html object events are to be generated.

Edit2.snip

This snippet includes mutiple Html <input> objects. In this case, each Html <input> object has a unique 'data-plbtabid'. Therefore, all of the Html <input> objects are included in the PL/B program tabbing list.

The first Html <input> object can generate to kinds of Html object events.

Flexbox1.snip

This snippet shows how to use CSS 'flex' styles to present text in different visual forms. When the 'HctlDesignSun' test window is 'resized', the CSS 'flex' styles show how the visual forms adjust automatically.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Flexbox2.snip

This snippet shows how to used CSS 'flex' styles to present a Html <ul> and <li> to present a list of items.

This snippet generates PL/B HTMLCONTROL events.

The Html list is using the 'data-plbenable' attribute to allow the HTMLCONTROL ENABLE property to take affect.

Googlemap.snip

This snippet show how to use a Html <img> to present an map loaded from a third party Web site using .

This snippet DOES NOT generate any PL/B HTMLCONTROL events.

Note:
1. To use this code in your program, get a free API key from Google.

   Read more at:

   https://developers.google.com/maps/documentation/static-maps/

2. With the free API key, you can try this in your own snippet:

   ```
   <img src="https://maps.googleapis.com/maps/api/staticmap?
   center=Brooklyn+Bridge,New+York,NY&zoom=10&size=600x300
   &maptype=roadmap&markers=color:blue%7Clabel:S%7C40.702147,-74.015794
   &markers=color:green%7Clabel:G%7C40.711614,-74.012318
   &markers=color:red%7Clabel:C%7C40.718217,-73.998284&key={userAPIkey}">
   ```

List1.snip

This snippet shows how to present a Html list of items with visually enhanced CSS style effects being used.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

List2.snip

This snippet shows how to present a Html list of items with a different look and feel.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

List8.snip

This snippet shows how to present a Html list of items where CSS transform styling gives a unique visual effect.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Logon1.snip

This snippet brings together a multiple Html objects to present a very basic logon page in an HTMLCONTROL.

This snippet generates PL/B HTJMLCONTROL events.

Menu1.snip

This snippet uses CSS styles to present a Html list of items shown in a menu

kind of visual presentation.

This snippet generates PL/B HTMLCONTROL events.

Menu2.snip

This snippet uses CSS styles to present a Html list of items giving a menu
kind of visual presentation.

This snippet generates PL/B HTMLCONTROL events.

Resize the HctlDesignSun 'test' window to see the effect on the Html list
of items.

Qrcode.snip

This snippet shows how to use s simple Html <img> object to present a dynamically
Generated QR Code generate from a google Web site.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Test Actions:
1. Click 'Test' using this snippet.
2. Use your iPhone, iPad, or Android camera to focus on the presented QR Code
   generated from this snippet.
3. The QR Code text presented should be 'Hello World'.

Qrcode_jqmsamp.snip

This snippet uses a google Web site to dynamically generate a QR Code with the text specified as follows:

http://www.sunbelt-plb.com:8081/jqmsamp.plm

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Test Actions:
1. Click 'Test' using this snippet.
2. Use your iPhone, iPad, or Android camera to focus on the presented QR Code generated from this snippet.
3. The QR Code text presented is a link to the Dallas Sunbelt PWS server with a PL/B 'Mobile' program named 'jqmsamp.plm'.
4. Using your mobile device, use the QR Code link to load/execute the 'jqmsamp.plm' program.
5. After the 'jqmsamp.plm' program appears on your mobile device, click and select configuration icon is the upper right corner of the program window
6. Jqmsamp.plm Presentation on mobile device
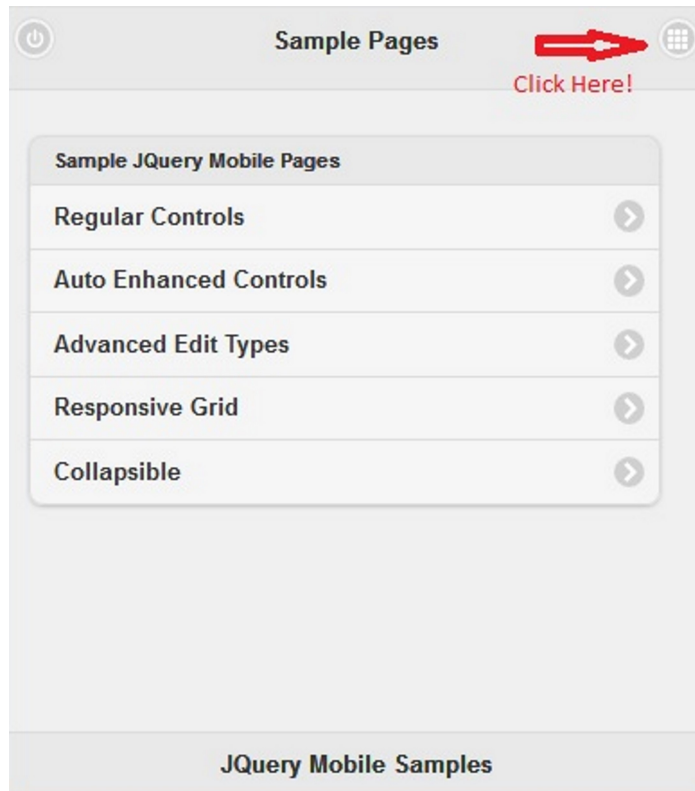
Restapi_dallaspws.snip

This snippet shows how a Web application can be used in a HTMLCONTROL object where REST APIs are being executed. It shows the capabilities of building a Web application based on Html, JavaScript, and CSS to interact using AJAX and REST services that are Web based.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Note:
1. The Dallas Sunbelt PWS server is running a Linux PWS version that

Is configured to support PWS REST services. When the Linux PWS server detects a REST API request, a Linux 'plb' runtime starts executing a PL/B program named 'phonemsg.plc'. This program processes the REST request and manages a 'phonemsg.db' SQLite database.

For more information on the PWS REST demo and operations can be found as follows:

C:\temp\hctldesign\restapi\RestApi_Demo_Quick_Start.pdf
C:\temp\hctldesign\restapi\dallaspws
C:\temp\hctldesign\restapi\localpws

1. While this snippet is setup to use PWS REST API services, the end-user HTMLCONTROL snippet code can be built to access other 3rd party Web API services.

Expected Behavior and Actions of this Snippet

1. When using a client browser, this PWS REST Html demo is designed to replace the current browser widow. Therefore, the 'hctldesignsun.plc' Program MUST be restarted after this snippet is executed.

2. When using 'plbwin' to load and execute this snippet, the PWS REST Html demo is visual within the HTMLCONTROL view port.

3. Test Actions Information:

See this link to view PWS REST Demo PDF:

http://www.sunbelt-plb.com:8081/samples/RestApi_Demo_Quick_Start.pdf

Restapi_dallaspws_iframe.znip

This snippet shows how to use a '!' prepended to a URL which causes the HTMLCONTROL object to invoke the URL within an 'iframe' as follows:

<iframe class='plbif' width='600px' height='300px' src='http://www.sunbelt-plb.com:8081/restmain.html '></iframe>

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Note:
1. This snippet executes the same as the 'Restapi_dallaspws.snip' snippets.
2. However, this snippet is started and limited to the scope of an <iframe> when it is loaded and executed by the client browser.

Expected Behavior and Actions of this Snippet

1. When using a client browser, this PWS REST Html demo is limited to the HTMLCONTROL view port.

2. When using 'plbwin' to load and execute this snippet, the PWS REST Html demo is visual within the HTMLCONTROL view port.

Run_jqmsamp.snip

This snippet shows how to run a PWS PL/B program within the HTMLCONTROL object. The PWS program that is rendered into the HTMLCONTROL client Browser executes asynchronously to the PL/B program executed by Plbwin, Plbnet, Plbcient\Plbserve, or another PWS program.

This snippet DOES NOT generate PL/B HTMLCONTROL events.

Expected Behavior and Actions of this Snippet

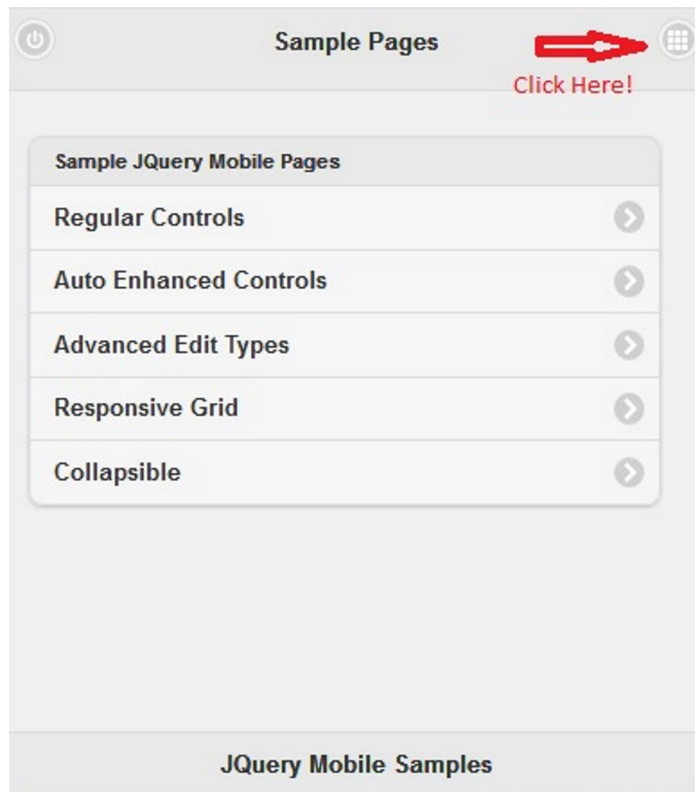1. Jqmsamp.plm Presentation on mobile device

Table1.snip

This snippet shows how an HTML table can be used to produced enhanced display of data. The table demonstrates the used of table styling, image use, and spanning of multiple columns.

This snippet DOES NOT generate PL/B HTMLCONTROL events.