

DATA ISLAND

When HTML is used to display data, the data is stored inside your HTML. With XML, data can be stored in separate XML files. This way you can concentrate on using HTML for data layout and display, and be sure that changes in the underlying data will not require any changes to your HTML.

XML data can also be stored inside HTML pages as "Data Islands". You can still concentrate on using HTML only for formatting and displaying the data.

- 1) Embed XML Data in HTML
- 2) Bind Data Island to HTML Elements

Embed XML Data in HTML

An XML data island is XML data embedded into an HTML page.

Here is how it works; assume we have the following XML document ("note.xml"):

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<note>
  <to>Tove</to>
  <from>Jani</from>
  <heading>Reminder</heading>
  <body>Don't forget me this weekend!</body>
</note>
```

Then, in an HTML file, you can embed the XML file above with the <xml> tag. The id attribute of the <xml> tag defines an ID for the data island, and the src attribute points to the XML file to embed:

```
<html>
<body>
<xml id="note" src="note.xml"></xml>
</body>
</html>
```

However, the embedded XML data is, up to this point, not visible for the user. The next step is to format and display the data in the data island by binding it to HTML elements. This data island itself is useless when embedded in an HTML document. In fact, unless you choose to view the page's source, you don't even know that the data island is there.

Bind Data Island to HTML Elements

Let content of fl.xml is

```
<root>
  <data>
    <cat>Whiskers</cat>
    <dog>Spot</dog>
    <fish>Bubbles</fish>
  </data>
</root>
```

An XML data island is XML surrounded by <XML> tags in a HTML document. Here's an example of an XML data island:

```
<XML ID="xmlTest" src="fl.xml">
```

In order to bind this data to HTML elements, you must specify the DATASRC and DATAFLD attributes on those elements. The following code demonstrates how to bind the "cat" field

to an <INPUT> element:

```
<INPUT TYPE="text" DATASRC="#xmlTest" DATAFLD="cat">
```

The "#" preceding the XML data island ID in the DATASRC attribute must be present in order to bind the data. When the page loads, the value of the <INPUT> will be "Whiskers".

cd_catalog.xml

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<CATALOG>
  <CD><TITLE>Empire Burlesque</TITLE> <ARTIST>Bob Dylan</ARTIST>      </CD>
  <CD><TITLE>Hide your heart</TITLE><ARTIST>Bonnie Tyler</ARTIST>      </CD>
  <CD> <TITLE>Greatest Hits</TITLE>          <ARTIST>Dolly Parton</ARTIST> </CD>
</CATALOG>
```

f1.html

```
<html>
<body>
<xml id="cdcat" src="cd_catalog.xml"></xml>
<table border="1" datasrc="#cdcat">
  <thead>
  <tr><th>Artist</th><th>Title</th></tr>
  </thead>
  <tfoot>
  <tr><th colspan="2">This is my CD collection</th></tr>
  </tfoot>
  <tbody>
  <tr>
    <td><span datafld="artist"></span></td>
    <td><span datafld="title"></span></td>
  </tr>
  </tbody>
</table>
</body>
</html>
```

Output of f1.html file

Artist	Title
Bob Dylan	Empire Burlesque
Bonnie Tyler	Hide your heart
Dolly Parton	Greatest Hits
This is my CD collection	

Example explained:

The datasrc attribute of the <table> tag binds the HTML table element to the XML data island. The datasrc attribute refers to the id attribute of the data island. <td> tags cannot be bound to

data, so we are using tags. The tag allows the datafld attribute to refer to the XML element to be displayed. In this case, it is datafld="ARTIST" for the <ARTIST> element and datafld="TITLE" for the <TITLE> element in the XML file. As the XML is read, additional rows are created for each <CD> element

If you are running IE 5.0 or higher, you can try it yourself.

A1.xml

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<root>
  <data>    <cat>Whiskers</cat><dog>Spot</dog> <fish>Bubbles</fish> </data>
  <data>    <cat>Whiskers1</cat><dog>Spot1</dog><fish>Bubbles1</fish></data>
  <data>    <cat>Whiskers2</cat><dog>Spot2</dog><fish>Bubbles2</fish></data>
</root>
```

<p>html1.html</p> <pre><html><body> <xml id="cdact1" src="a1.xml"></xml> <table border="1" datasrc="#cdact1"> <tr> <td></td> </tr> </table> </body></html></pre>	<pre><html> <body> <xml id="cdact" src="a1.xml"></xml> <input type="text" datasrc="#cdact" datafld="cat"> </body> </html></pre>				
<p>output</p> <table border="1"> <tr><td>Whiskers</td></tr> <tr><td>Whiskers1</td></tr> <tr><td>Whiskers2</td></tr> </table>	Whiskers	Whiskers1	Whiskers2	<p>Output</p> <table border="1"> <tr><td>Whiskers</td></tr> </table>	Whiskers
Whiskers					
Whiskers1					
Whiskers2					
Whiskers					

- 1) define DATAISLAND
- 2) How can you display content of an XML file in table format?
- 3) Write an XML document that stores some tabular data. Write on HTML page that displays the above XML data