

Writing XML

SimpleXML

Adding elements and attributes to an existing XML file using SimpleXML.

Strategy:

- You must get the handle to ask the element that will act as the parent element and ask to addChild()

```
1  <?php
2
3  # SimpleXML : add children to existing XML
4  ini_set("display_errors", true);
5  # Set up existing XML
6  $root = <<<EOD
7  <root>
8    <one>xyz</one>
9    <two>abc</two>
10 </root>
11 EOD;
12
13 echo "<h1>Adding Children via SimpleXML </h1>";
14
15 #set up existing XML as SimpleXML object
16 $root = simplexml_load_string($root);
17
18 # use existing SimpleXML to create new SimpleXML child element
19 $newevt = $root->addChild(event);
20
21 # create child (who) via addChild
22 $who      = $newevt->addChild("who");
23
24 # create child (lastname)
25 $lastname = $who->addChild('lastname', 'foster');
26
27 #add attribute
28 $newevt->addAttribute('lang', 'eng');
29
30 #show the augmented XML
31 echo $root->asXML();
32 ?>
```

33 Working with DOM

```
34
35 <?php
36 /*
37 server program that adds content to a log file.
38
39     in:      user, specialMsg
40     out:     data written to log file
41     files:   log.xml
42
43 */
44
45 // FILES USED
46 $logfile = "data/log.xml";
47
48 // PARAMETER Decode
49 if( (!isset($_REQUEST['userid']) ||
50     (!isset($_REQUEST['specialMsg']) || )) ) {
51
52     echo "<html><head/><body><h3>Special Msg to Log -- Params Problem</h3>" .
53         "    Expecting params= " .
54         " pin userid specialMsg -- needed to PostLogEntry" .
55         "</body></html>";
56     return;
57 }
58
59 # we have all expected data - we can proceed
60 $user      = $_REQUEST['userid'];
61 $specialMsg = $_REQUEST['specialMsg'];
62
63
64
65 // WRITE to LOG
66 writeToLog($user, $specialMsg);
67
68 echo "<h3>The deed is done</h3>";
69
70 return;
71
72
73
74 // ----- write to LOG -----
75 function writeToLog($user, $specialMsg) {
76
77     global $logfile;
```

```

78
79 // LOG: write content to a file and keep ref for log
80 $today = date('ymd.hms');
81
82
83 // ACQUIRE LOCK - protect against concurrent access to file
84 $lock = "data/lockfile.txt";
85 $fp = fopen($lock, "r");
86 flock($fp, LOCK_EX); // waits until available
87
88 // WRITE LOG FILE - using DOM
89
90 $doc = new DomDocument();
91 $doc->load($logfile); // top elt is logs
92 $xp = new domxpath($doc);
93
94 // create new log node entry
95 $logNode = $doc->createElement("log");
96 $logNode->setAttribute("id", $today);
97 $logNode->setAttribute("user", $user);
98 $logNode->setAttribute("specialMsg", $specialMsg);
99
100 // get root element
101 $logsNode = $doc->getElementsByTagName('logs')->item(0);
102
103 // get first to insert before
104 $logOneNode = $doc->getElementsByTagName('log')->item(0);
105
106 // append new log node
107 $logsNode->insertBefore($logNode, $logOneNode);
108
109 // write back to file
110 $doc->save($logfile);
111
112 // unlock files.
113 flock($fp, LOCK_UN);
114
115
116 return;
117 }
118
119
120
121 // ----- create DOM Tree for XML file -----
122 -

```

```
123 function getDomFromFile($theFile) {
124     $doc = new DomDocument();
125     $doc->load($theFile);
126     return $doc;
127 }
```

```
128
129
```

```
130 ?>
```

```
131
132
133
```

134 **DOM and XPath -----**

135 Evaluating XPath queries in DOM requires creating a DOMXPath object. The evaluate()
136 function returns an array of DOMELEMENTS.

```
137 $XPath = new DOMXPath($xml);
138 $XPath->evaluate("/library/books/book[title='Apache 2']");
```

```
139
140 -----
141
```

A Generic SimpleXML PHP Program that writes all parameters to a log file

```
<?php

# SimpleXML : add children to existing XML

ini_set("display_errors", true);

# Set up existing XML
$root = <<<EOD
<root>
  <one>xyz</one>
  <two>abc</two>
</root>
EOD;

echo "<h1>Adding Children via SimpleXML </h1>";

#set up existing XML as SimpleXML object
$root = simplexml_load_string($root);

# use existing SimpleXML to create new SimpleXML child element
$newevt = $root->addChild(event);

# create child (who) via addChild
$who      = $newevt->addChild("who");

# create child (lastname)
$lastname = $who->addChild('lastname', 'foster');

#add attribute
$newevt->addAttribute('lang', 'eng');

#show the augmented XML
echo $root->asXML();

?>
```

Log file

```
<?xml version="1.0"?>
<logs
  <log datetime="05/15/10: 07:05:28" parml="foo"/>
  <log datetime="05/15/10: 07:07:33" pl="foo" foo="bar"/>
</logs>
```