

## XML: A brief tutorial

Look at CH 14 and my examples for additional help.

XML (Extensible Markup Language) is a tag based language for organizing data. While it looks similar to html, in XML, you create your own tags. XML is not a programming language. In other words, it does not "do" anything, It simply organizes data and points (at times) to the location of data, such as jpgs.

*A simple xml doc might look like this:*

```
<cats>
  <cat>
    ///these elements are at index[0]
    <catname>Eddie</catname>
    <catnickname>Mr Boy</catnickname>
    <hobbies>chasing planes,cuddling</hobbies>
    <gender>male</gender>
    <age>5</age>
    <pic>cats/eddie.jpg</pic>
  </cat>
  <cat>
    //these elements are at index[1]
    <catname>Yma</catname>
    <catnickname>Thing</catnickname>
    <gender>female</gender>
    <hobbies>yelling, knocking things off other things</hobbies>
    <age>3</age>
    <pic>cats/yma.jpg</pic>
  </cat>
</cats>
```

Each element in the xml list is called a node. (catname node, catnickname node...) You can access any node by it's location (similar to an array) . SO:

```
cat.catname[0]= Eddie
cat.catname[1]=Yma
```

```
cat.age[0]=5
cat.age[1]=3
```

**In class exercise:**

The class, as a whole, will come up with elements for an class list. The list will start like this:

```
<art348>
    <student>
        <name></name>
        <pic>images/thompson.jpg</pic>
    </student>
</art348>
```

The class as a whole will come up with elements to be included (in addition to name and pic). Each student will write their own xml entry. Make list of which index each student is at before beginning.

All students must give Cara a 300 x 300 jpg name lastname(yours!).jpg. This will be placed in a folder called "images."

////////////////////////////////////

**BRIEF xml parser (see also p 314 for a briefer intro to loading data)**

//THIS IS NOT COMPLETE CODE. Look at my files (external.as and ThompsonCats.xml for full code. i

**import flash.net.\*;**//this imports the package needed for URL loaders and requests.

**public class extXML extends Sprite{**

private var xmlLoader:URLLoader = new URLLoader();  
*//the loader class loads xml data below*

private var imgLoad:Loader = new Loader;  
*//this will call url below to load an image*

private var xmlData:XML = new XML();//this will store our xml data

```
public function extXML():void{
```

```
    //listens for xml loading to complete. this will assure that data is completely  
    //loaded before we try to access it.
```

```
    xmlLoader.addEventListener(Event.COMPLETE, loadXML, false, 0, true);
```

```
    /*.load points to the location of the xml file. I have it in the same directory, so can just say  
    "thompsonCats.xml". If I had it in a directory called "data", I would have to put  
    "data/thompsonCats.xml" You can use absolute addresses  
    ("http://www.brewerthompson.com/data/thompsonCats.xml")*/
```

```
    xmlLoader.load(new URLRequest("thompsonCats.xml"));
```

```
}
```

```
private function loadXML (evt:Event):void{
```

```
    //this function tells when the xml load has been completed.  
    //the xmlData object stores the xml data that has been loaded.  
    //evt.target.data = url loader data: which is a request for thompsonCats.xml.
```

```
    xmlData = new XML(evt.target.data);
```

```
}
```

```
private function setNum(num:int):void{
```

```
    //see external.as for full code  
    imgLoad.load(new URLRequest(xmlData.cat.pic[1]));
```

```
    imgLoad.contentLoaderInfo.addEventListener(Event.INIT, imgLoaded)
```

```
    //checks to make sure load is complete. Otherwise, will try to access it before  
    //the info is there which will throw an error.
```

```
}
```

```
private function imgLoaded(event:Event):void{
```

```
    var imgObj= event.target.content;  
    //see full code
```

```
}
```

For this assignment, you will be compiling the xml and loading /parsing the info in Flash. You will be given additional FLA files to serve as a reference.

**Due by the end of class on April 23.**