

XML Introduction

- Extensible Markup Language
- SGML (Standard General Markup Language)
1980
- HTML (Hyper-Text Markup Language)
- XML

sources

- XML and Web services Unleashed by Schmelzer et al. SAMS 2002
- XML Tutorial: Getting Started with XML
<http://www.oneworld.org/thinktank/iktools/xmlt>
- XML Tutorials – W3 Schools.com
<http://www.w3schools.com>
- Many other books and tutorial sites on web.

XML

`<city>`

`<city>Melbourne</city>`

`<!-- XML example of a comment -->`

case sensitive

XML Example

```
<?xml version="1.0"?>
```

```
<pay_record>
```

```
  <employeeNum>123654</employeeNum>
```

```
  <name>
```

```
    <firstName>John</firstName>
```

```
    <lastName>Maverickson</lastName>
```

```
  </name>
```

```
  <address>
```

```
    <street>12 City Road</street>
```

```
    <city>Melbourne</city>
```

```
    <state>Victoria</state>
```

```
    <zip>8001</zip>
```

```
  </address>
```

```
  <status>Full Time</status>
```

```
  <position>
```

```
    <title>Widget Designer</title>
```

```
    <description>This involves the demanding dete  
      of a master widget designer </description>
```

```
    <workdays>
```

```
      <day>Monday</day>
```

```
      <day>Wednesday</day>
```

XML Example

```
    <day>Friday</day>
  </workdays>
</position>
<salary currency="AUD">5600</salary>
<married/>
</pay_record>
```

Attributes

```
<salary currency="AUD">5600</salary>
```

```
<salary currency='AUD'>5600</salary>
```

```
<name>
```

```
  <firstName>John</firstName>
```

```
  <lastName>Maverickson</lastName>
```

```
  <sex>Male</sex>
```

```
</name>
```

```
<name sex="Male">
```

```
  <firstName>John</firstName>
```

```
  <lastName>Maverickson</lastName>
```

```
</name>
```

Well Formed XML

- ALL XML elements must have a closing tag
- XML tags are case sensitive
- All XML elements must be properly nested
- ALL XML documents must have a root element
- Attribute values must always be quoted
- Comments properly formed.

Well Formed vs Valid XML

XML parser – IE ver 6.0

- Is it in the form needed by an application
- DTD – Document Type Definition

Namespaces

Document 1

```
<table>
  <tr>
    <td>Apples</td>
    <td>Bananas</td>
  </tr>
</table>
```

Document 2

```
<table>
  <name>African Coffee Table</name>
  <width>80</width>
  <length>120</length>
</table>
```

Namespaces

Document 1

```
<h:table>
  <h:tr>
    <h:td>Apples</h:td>
    <h:td>Bananas</h:td>
  </h:tr>
</h:table>
```

Document 2

```
<f:table>
  <f:name>African Coffee Table</f:name>
  <f:width>80</f:width>
  <f:length>120</f:length>
</f:table>
```

Namespaces

Document 1

```
<h:table xmlns:h="http://www.w3.org/TR/html14/">
  <h:tr>
    <h:td>Apples</h:td>
    <h:td>Bananas</h:td>
  </h:tr>
</h:table>
```

Document 2

```
<f:table xmlns:h="http://www.monmouth.edu/furnitu
  <f:name>African Coffee Table</f:name>
  <f:width>80</f:width>
  <f:length>120</f:length>
</f:table>
```

Namespace

`xmlns:namespace-prefix="namespace">`

URI/URL

Namespaces

```
<table xmlns="http://www.w3.org/TR/html14/">
  <tr>
    <td>Apples</td>
    <td>Bananas</td>
  </tr>
</table>
```

```
<table xmlns="http://www.monmouth.edu/furniture">
  <name>African Coffee Table</name>
  <width>80</width>
  <length>120</length>
</table>
```