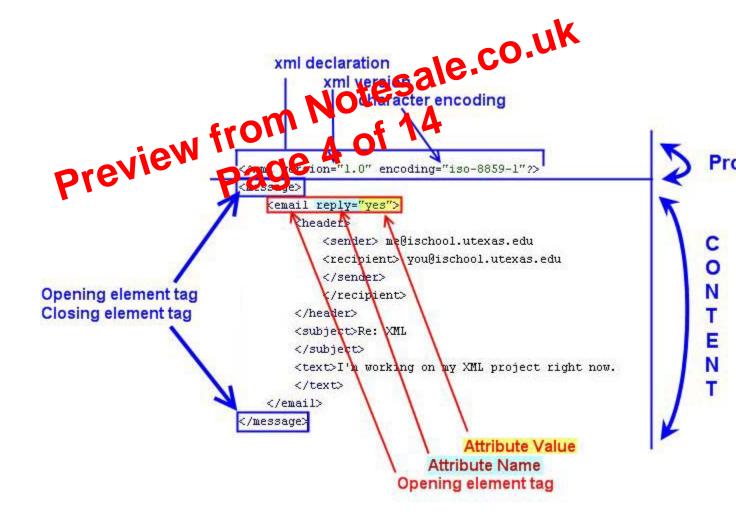- Since some attributes can only have predefined categories, you can't go back and easily add new categories.

We recommend using attributes for information that isn't absolutely necessary for interpreting the document or that has a predefined number of options that will not change in the future.

When using attributes in XML, the value of the attributes must always be contained in quotes. The quotes can be either single or double quotes. For example, the attribute version="1.0" in the opening XML declaration could be written version='1.0' and would be interpreted the same way by the XML parser. However, if the attribute value contains quotes, it is necessary to use the other style of quotation marks to indicate the value. For example, if there was an attribute name with a value of John "Q." Public then it would need to be marked up in XML as name='John "Q" Public', using the symbols for quotes to enclose the attribute value that is not being used in the value itself.

4

One standard used to validate XML is a DTD, or **D**ocument **T**ype **D**eclaration, although XML Schemas are also used.

These standards are useful when dealing with the creation of a number of XML documents for they provide a quality control measure to ensure that all the documents meet a minimum standard. Another benefit is that it allows for errors to be detected in the process of creating the XML document, rather than at the end. Later, we'll create a sample DTD for our email and letter XML documents.

Note: An important thing to remember is that when a document is valid it is also "well formed," but a "well formed" document is not necessarily valid. Additionally, you can create XML documents without a DTD, but the XML document can't be considered valid without a document type.

Is Your Markup Well-Formed?

So now that we've created some XML documents, we want to make sure they are well formed documents. To determine whether or not XML documents are well formed, we need to use an XML parser.

Programs such as Dreamweaver or Cooktop have XML parsers built into the software application, but you can also check for well formed XML with most Internet browsers. The most recent versions of Internet Explorer, Netscape, Mozilla or Firefox have at least some simple XML parsing functionality built in and can check XML documents for well formed markup.

Each parser can have different error messages for the same mistake, but the most common errors are not having closing tags, element names not matching up, not closing quotation marks for attributes, and incorrect order.

Since XML requires elements to have opening and closing tags, missing a closing tag will cause what XML calls a "fatal" error - the parser will shut down and give an error message.

To see what message you might get with different parsers for this error, use this [modified email XML document](). You will see the error message that your browser generates. To see the code, go ahead and view the source (from your browser menu, choose View > Source or Page Source, depending on the browser). Notice that the <sender> element is missing a closing tag.

When creating elements, you can use a mixture of characters, both upper and lower case, as well as symbols and numbers. However, XML is less forgiving then HTML; in XML, case matters. For example, <sender> and <Sender> are two separate types of elements. HTML would read them as the same element. So another common error when coding in XML is accidentally mixing cases between opening and closing tags. Take a look at this