**Unit 4**

“Entities are just like autotext entries or shortcuts. With an entity, you define its name and the text it should expand into when referenced in your document. Then, when you type the entity reference in an XML document or DTD, it is replaced with text you defined.”

**Entities (General and Parameter)**

* We learned about entities already with built-in entities, such as &amp; &lt; &gt; &quot; &apost;

* **Internal General Entities**
  + Are used in the XML documents
  + Act as shortcuts
  + They help authors of XML documents by not requiring them to reenter repeating data or long sections of data.
  + There are parsed and unparsed, we will only learn about **parsed** general entities.
  + **To create one:**
    - **In DTD:**

<!ENTITY wow “Wonders of the World”>

* + - **In XML doc:**

<story> The first and most interesting fact about the gardens ….Regardless of the final outcome, it is interesting to note that the imagination of the poets and ancient historians have created one of the **&wow;.** </story>

* **External General Entities**
  + - **In DTD:**

<!ENTITY wow SYSTEM "wonders\_of\_world.ent">

* + - **In XML doc:**

<story> The first and most interesting fact about the gardens ….Regardless of the final outcome, it is interesting to note that the imagination of the poets and ancient historians have created one of the **&wow;.** </story>

* + - In the external Entity file wonder\_of\_world.ent

The Colossus of Rhodes, The Great Pyramid of Giza, The Hanging Gardens of Babylon, The Lighthouse of Alexandria, The Mausoleum at Halicarnassus, The Statue of Zeus at Olympia, The Temple of Artemis at Ephesus

* **Parameter Entities**
  + Parameter entities reference information inside of the DTD
  + You must declare the parameter entity **before** it’s used in the DTD
  + It’s another way to use a shortcut for repeating information that occurs within your DTD.

**<!ENTITY % p "(#PCDATA)">**

<!ENTITY **% p** "(#PCDATA)">  
<!ELEMENT ancient\_wonders (wonder+)>  
<!ELEMENT wonder (name+, location, height, history,

main\_image, source\*)>  
<!ELEMENT name **%p;>**  
<!ATTLIST name  
 language CDATA #REQUIRED>  
<!ELEMENT location **%p;**>  
<!ELEMENT height **%p;**>

**DTD Data Types:**

CDATA, ENTITY, ENTITIES, ID, IDREF, IDREFS, NMTOKEN, NMTOKENS, PCDATA

**Notation**

The name of a notation declared elsewhere in the DTD using the NOTATION statement. Only required when declaring an unparsed entity through the use of the non-XML data (NDATA) keyword. ***We will not use these.***