**XML – DTD**

An XML document with correct syntax is called "Well Formed".

An XML document validated against a DTD is both "Well Formed" and "Valid".

## What is a DTD?

DTD stands for Document Type Definition.

A DTD defines the structure and the legal elements and attributes of an XML document.

## Valid XML Documents

A "Valid" XML document is "Well Formed", as well as it conforms to the rules of a DTD:

<?xml version="1.0" encoding="UTF-8"?>  
<!DOCTYPE note SYSTEM "Note.dtd">  
<note>  
<to>Tove</to>  
<from>Jani</from>  
<heading>Reminder</heading>  
<body>Don't forget me this weekend!</body>  
</note>

**Valor do Atributo:**

* value: valor default do atributo.
* #REQUIRED: valor do atributo requerido.
* #IMPLIED: valor do atributo opcional.
* #FIXED value: atributo com valor fixo.
* **+** (1:n)
* **\*** (0:N)
* **?** (0:1)

**IDREF** - The value is the id of another element, ou seja, faz referencia a outro element.

**XML Schema – XSD**

XSD Example

<?xml version="1.0"?>  
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  
<xs:element name="note">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element name="to" type="xs:string"/>  
      <xs:element name="from" type="xs:string"/>  
      <xs:element name="heading" type="xs:string"/>  
      <xs:element name="body" type="xs:string"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>  
  
</xs:schema>

**Exemplo de restrição**

This example defines an element called "age" with a restriction. The value of age can NOT be lower than 0 or greater than 100:

<xs:element name="age">

  <xs:simpleType>

    <xs:restriction base="xs:integer">

**<xs:minInclusive value="0"/>**

**<xs:maxInclusive value="100"/>**

    </xs:restriction>

  </xs:simpleType>

</xs:element>