XML Schema

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An XML Schema describes the structure of an XML document, just like a DTD.

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

An XML document validated against an XML Schema is both "Well Formed" and "Valid".

XML Schema

XML Schema is an XML-based alternative to DTD:

<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>

The Schema above is interpreted like this:

* <xs:element name="note"> defines the element called "note"
* <xs:complexType> the "note" element is a complex type
* <xs:sequence> the complex type is a sequence of elements
* <xs:element name="to" type="xs:string"> the element "to" is of type string (text)
* <xs:element name="from" type="xs:string"> the element "from" is of type string
* <xs:element name="heading" type="xs:string"> the element "heading" is of type string
* <xs:element name="body" type="xs:string"> the element "body" is of type string

XML Schemas are More Powerful than DTD

* XML Schemas are written in XML
* XML Schemas are extensible to additions
* XML Schemas support data types
* XML Schemas support namespaces

Why Use an XML Schema?

With XML Schema, your XML files can carry a description of its own format.

With XML Schema, independent groups of people can agree on a standard for interchanging data.

With XML Schema, you can verify data.

XML Schemas Support Data Types

One of the greatest strengths of XML Schemas is the support for data types:

* It is easier to describe document content
* It is easier to define restrictions on data
* It is easier to validate the correctness of data
* It is easier to convert data between different data types

XML Schemas use XML Syntax

Another great strength about XML Schemas is that they are written in XML:

* You don't have to learn a new language
* You can use your XML editor to edit your Schema files
* You can use your XML parser to parse your Schema files
* You can manipulate your Schemas with the XML DOM
* You can transform your Schemas with XSLT

If you want to study XML Schema, please read our [XML Schema Tutorial](https://www.w3schools.com/xml/schema_intro.asp).