<?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>

The purpose of an XML Schema is to define the legal building blocks of an XML document:

* the elements and attributes that can appear in a document
* the number of (and order of) child elements
* data types for elements and attributes
* default and fixed values for elements and attributes

One of the greatest strength of XML Schemas is the support for data types.

* It is easier to describe allowable document content
* It is easier to validate the correctness of data
* It is easier to define data facets (restrictions on data)
* It is easier to define data patterns (data formats)
* It is easier to convert data between different data types

A well-formed XML document is a document that conforms to the XML syntax rules, like:

* it must begin with the XML declaration
* it must have one unique root element
* start-tags must have matching end-tags
* elements are case sensitive
* all elements must be closed
* all elements must be properly nested
* all attribute values must be quoted
* entities must be used for special characters

XML

<?xml version="1.0"?>  
<note>  
  <to>Tove</to>  
  <from>Jani</from>  
  <heading>Reminder</heading>  
  <body>Don't forget me this weekend!</body>  
</note>

A DTD File

<!ELEMENT note (to, from, heading, body)>  
<!ELEMENT to (#PCDATA)>  
<!ELEMENT from (#PCDATA)>  
<!ELEMENT heading (#PCDATA)>  
<!ELEMENT body (#PCDATA)>

## An XML Schema

?xml version="1.0"?>  
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"  
targetNamespace="https://www.w3schools.com"  
xmlns="https://www.w3schools.com"  
elementFormDefault="qualified">  
  
<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>

Reference

<!DOCTYPE note SYSTEM  
"https://www.w3schools.com/xml/note.dtd">

<note  
xmlns="https://www.w3schools.com"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:schemaLocation="https://www.w3schools.com/xml note.xsd">