

JSON XML Schema (JXML)

A proposal for a simple XML schema which represents JSON data.

Abstract

In order to generate, read, and process JSON data using XML Tools it is useful to model the JSON Data Model using XML instead of using the JSON Text Serialization format directly.

This proposal specifies an XML schema which directly models the JSON Data Model within XML. Simple tools can be used to translate to and from this schema to JSON Text Serialization, allowing XML tools to work with the JSON data model directly in XML.

Goals

The goals of this schema are to provide a simple XML representation of the JSON data model. By defining JSON in XML, and accompanying tools for parsing and serializing to/from JSON to XML(JXON), XML tools can be used without regards to JSON serialization itself and instead focus purely on the data model transformations.

The JXML schema is intended as a very simple schema which represents the entire JSON data model as directly as possible. It is not intended necessarily as the best schema to use to represent data in XML, but rather as a schema as close to the JSON data model as reasonable. Most likely use cases would involve transforming this to or from a more usable XML format for particular applications.

Using this schema and a supporting implementation, JSON may be 'round tripped' losslessly through XML. (JSON -> XML -> JSON) but not visa-versa.

Use Cases

- Store JSON data in an XML database.
- Use of XML tools for JSON transformations.
- Use of XML tools for JSON data validation.
- Use of XML tools to generate JSON data without regards to serialization issues.
- Use of XML tools to consume JSON data without regards to JSON parsing issues.

Schema

The schema is based on the JSON data model as described at <http://www.json.org> . It consists of the following elements

- object
- member
- boolean
- array
- string
- number
- null

Element object

Attributes: none

Child Elements: zero or more "member" elements

Text: empty

Element member

Attributes: name

Child Elements: Exactly one 'value' (object|boolean|array|string|number|null)

Text: empty

Element boolean

Attributes: none

Child Elements: none

Text: "true" or "false"

Element array

Attributes: none

Child Elements: Zero or more 'value' (object|boolean|array|string|number|null)

Text: none

Element string

Attributes: none

Child Elements: none

Text: The value of the string

Any charactors not allowed within XML must be JSON escaped. This includes the unicode range

- 0x0000 - 0x0008
- 0x000B - 0x001F
- 0xFFFE-0xFFFF

All other characters should be represented natively in XML, and when text serialized entity encoded.

Element number

Attributes: none

Child Elements: none

Text: the value of the number in XSD "double" format

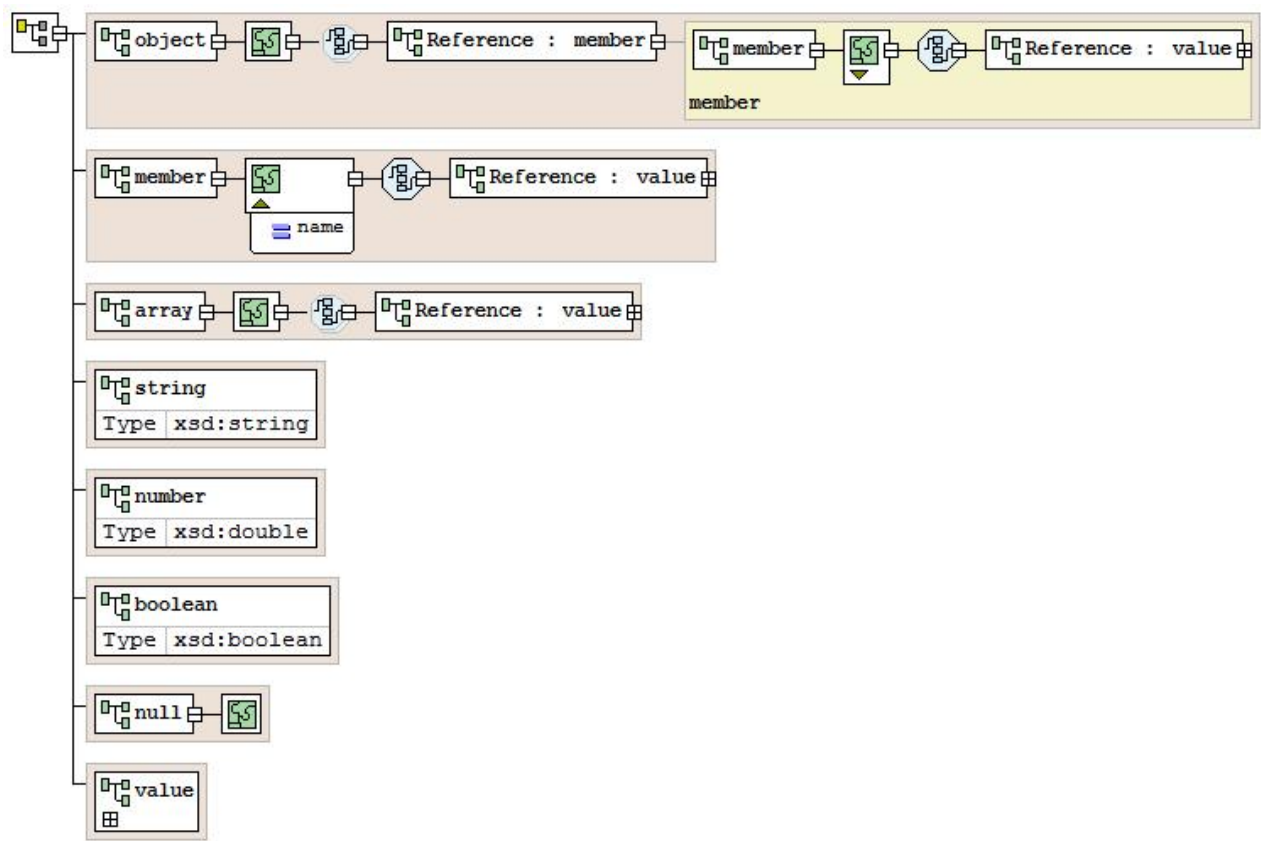
Element null

Attributes: none

Child Elements: none

Text: empty

Diagram



Implementations

The JXML schema is supported by `xmlsh` by the commands `json2xml` and `xml2json`

Download

The schema in XSD form (`jxml.xsd`) and diagram (`jxml.jpg`) may be downloaded here

Attachment	Size	Date Added
jxml.jpg	41.75 KB	2/03/2011 11:28 am
jxml.xsd	1.22 KB	2/03/2011 11:28 am

Example

JSON

```
{
  "foo":
    [true,null,1.23,
      {
        "bar": "spam"
      }
    ]
}
```

JXML

```
<object xmlns="http://www.xmlsh.org/jxml">
  <member name="foo">
    <array>
      <boolean>true</boolean>
      <null/>
```

```
<number>1.23</number>
<object>
  <member name="bar">
    <string>spam</string>
  </member>
</object>
</array>
</member>
</object>
```

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