



Simple XML Schema

```
<?xml version="1.0"?> <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://interoperabilnost.hr"
xmlns="http://interoperabilnost.hr" 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:sequence>
  </xs:complexType>
</xs:element>
</xs:schema>
```

Simple Types

- xs:string
- xs:decimal
- xs:integer
- xs:boolean
- xs:date
- xs:time

```
<xs:element name="start_date" type="xs:date"/>
```

XML Facets

- xs:minInclusive
- xs:maxInclusive • xs:minExclusive
- xs:maxExclusive
- xs:enumeration
- xs:pattern
- xs:whiteSpace
- xs:length
- xs:minLength
- xs:maxLength
- xs:totalDigits
- xs:fractionDigits

Min-max

```
<xs:element name="age">
  <xs:simpleType>
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="120"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Enumeration

```
<xs:element name="car" type="carType"/>

<xs:simpleType name="carType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Audi"/>
    <xs:enumeration value="Golf"/>
    <xs:enumeration value="BMW"/>
  </xs:restriction>
</xs:simpleType>
```

Pattern

- regex

```
<xs:restriction base="xs:string">
  <xs:pattern value="[a-z]+"/>
</xs:restriction>
```

WhiteSpace

- preserve: keep whitespaces
- replace: replace whitespace characters with spaces
- collapse: collapse all whitespace characters to a single space

```
<xs:restriction base="xs:string">
  <xs:whiteSpace value="preserve"/>
</xs:restriction>
```

Complex Elements

- empty elements
- elements that contain only other elements
- elements that contain only text
- elements that contain both other elements and text

Complex Example

```
<xs:element name="employee" type="personinfo"/>
<xs:element name="student" type="personinfo"/>

<xs:complexType name="personinfo">
  <xs:sequence>
    <xs:element name="firstname" type="xs:string"/>
    <xs:element name="lastname" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

<xs:element name="professor"
  type="fullpersoninfo">
<xs:complexType name="fullpersoninfo">
  <xs:complexContent>
    <xs:extension base="personinfo">
      <xs:sequence>
        <xs:element name="address" type="xs:string"/>
        <xs:element name="city" type="xs:string"/>
        <xs:element name="country" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Empty Element

```
<xs:complexType name="prodtype">
  <xs:attribute name="prodid" type="xs:positiveInteger"/>
</xs:complexType>
```

Text only + attribute

```
<xs:complexType name="shoetype">
  <xs:simpleContent>
    <xs:extension base="xs:integer">
      <xs:attribute name="country" type="xs:string" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
```

Element Indicators

- All - any order, only once
- Choice - order, at most once
- Sequence - order, only once
- minOccurs
- maxOccurs

Data Types

String

- xs:string

Date

| Name | Description |
|---------------|---------------------|
| xs:date | YYYY-MM-DD |
| xs:dateTime | YYYY-MM-DDThh:mm:ss |
| xs:duration | PnYnMnDTnHnMnS |
| xs:gDay | DD |
| xs:gMonth | MM |
| xs:gMonthDay | MM-DD |
| xs:gYear | YYYY |
| xs:gYearMonth | YYYY-MM |
| xs:time | hh:mm:ss |

Numeric

- xs:byte
- xs:decimal
- xs:int
- xs:integer
- xs:long
- xs:negativeInteger
- xs:nonNegativeInteger
- xs:nonPositiveInteger
- xs:positiveInteger
- xs:short
- xs:unsignedLong
- xs:unsignedInt
- xs:unsignedShort
- xs:unsignedByte
- xs:float
- xs:double

Boolean

- xs:boolean