

Pràctica 4 Llenguatge de Marques

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1 Exercici 1

No hem necessitat de fer cap canvi en el XSD ni en el XML donat que son correctes, es validen.

Comprovant de validació.

The screenshot shows a web-based XML validation tool. It has two main text areas for input and a 'Validate' button at the bottom right. The top area is labeled 'XML data to validate' and contains an XML document with two 'pagina' elements, one for Google and one for Wikipedia. The bottom area is labeled 'XML schema (XSD) data' and contains an XSD schema that defines the structure and types of the XML elements. A green bar at the bottom of the interface indicates the result of the validation.

```
XML data to validate
1 <?xml version="1.0" encoding="UTF-8"?>
2 <adreesInternet xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:ndNameSpaceSchemaLocation="adreesInternet.xsd">
3   <pagina>
4     <nom>Google</nom>
5     <descripcio>Enciclopedia</descripcio>
6     <url>http://www.google.com</url>
7   </pagina>
8   <pagina>
9     <nom>Wikipedia</nom>
10    <descripcio>Es ballard</descripcio>
11    <url>http://http://www.esballard.org</url>
12  </pagina>
13 </adreesInternet>

XML schema (XSD) data
1 <?xml schema="xmlns:xsi="http://www.w3.org/2001/XMLSchema">
2   <xsi:element name="adreesInternet">
3     <xsi:complexType>
4       <xsi:sequence>
5         <xsi:element name="pagina" maxOccurs="unbounded">
6           <xsi:complexType>
7             <xsi:sequence>
8               <xsi:element name="nom" type="xsi:string"/>
9               <xsi:element name="descripcio" type="xsi:string"/>
10              <xsi:element name="url" type="xsi:string"/>
11            </xsi:sequence>
12          </xsi:complexType>
13        </xsi:element>
14      </xsi:sequence>
15    </xsi:complexType>
16  </xsi:element>

Validate
```

Document Valid

2 Exercici 2

He canviat el format de la data per a que s'adeqüi a les restriccions de xs:date, pero segueix donant error encara que té el format AAAA-MM-DD.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="persones">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="persona" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="llocatge" type="xs:string"/>
              <xs:element name="edat" type="xs:integer"/>
              <xs:element name="data_naixement" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

Comprovant de validació.

The screenshot shows an XML validation interface with three main sections: 'XML data to validate', 'XML schema (XSD) data', and 'Errors'.

XML data to validate: Contains an XML snippet with two 'persona' elements. The first has 'llocatge=111', 'edat=36', and 'data_naixement=1985-10-30'. The second has 'llocatge=111', 'edat=45', and 'data_naixement=1979-10-30'. A red dot is next to the second 'persona' element.

XML schema (XSD) data: Contains the XSD schema code shown in the previous block.

Errors: A table with one error entry:

Severity	Location	Filename	Message
Error	5:49	sample.xml	cc-datatype-valid.1.2.1: '1985-10-3' is not a valid value for 'date'.

3 Exercici 3

Es poden aplicar restriccions a l'element fent ús de xs: restrictions dins el simpletype.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="edat">
    <xs:simpleType>
      <xs:restriction base="xs:integer">
        <xs:minInclusive value="0" />
        <xs:maxInclusive value="105" />
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:schema>
```

4 Exercici 4

5 Exercici 5

El tipus sequence ens indica que només es mostraran en aquest ordre.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="capell">
    <xs:sequence>
      <xs:element name="color" type="xs:string"></xs:element>
      <xs:element name="model" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

6 Exercici 6

El tipus choice ens permet elegir un tipus o un altre.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="vehicle">
    <xs:choice>
      <xs:element name="cotxe" type="xs:string"/></xs:element>
      <xs:element name="moto" type="xs:string"/></xs:element>
      <xs:element name="camió" type="xs:string"/></xs:element>
    </xs:choice>
  </xs:complexType>
</xs:schema>
```

7 Exercici 7

El tipus xs:all ens indica que hi ha de ser tot a l'element.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="camiseta">
    <xs:all>
      <xs:element name="talla" type="xs:string"/></xs:element>
      <xs:element name="color" type="xs:string"/></xs:element>
      <xs:element name="preu" type="xs:integer"/></xs:element>
    </xs:all>
  </xs:complexType>
</xs:schema>
```

8 Exercici 8

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="empleat">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="nom" type="xs:string"/>
        <xs:element name="direccio" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="carrer" type="xs:string"/>
              <xs:element name="numero" type="xs:integer"/>
              <xs:element name="ciutat" type="xs:string"/>
              <xs:element name="provincia" type="xs:string"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="telefono">
          <xs:simpleType>
            <xs:restriction base="xs:integer">
              <xs:totalDigits value="9"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="codi" type="xs:string" use="required"/>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

Comprovant de validació.

The screenshot shows a web-based XML validation interface. It has two main text areas: 'XML data to validate' and 'XML schema (XSD) data'. The 'XML data to validate' area contains an XML document with a root element 'empleat' that has a 'codi' attribute and a sequence of child elements: 'nom', 'direccio' (which is a complex type with 'carrer', 'numero', 'ciutat', and 'provincia' children), and 'telefono'. The 'XML schema (XSD) data' area contains the XSD schema definition for the 'empleat' element, which matches the one shown in the previous block. A 'Validate' button is located at the bottom right of the interface. Below the interface, a green bar displays the text 'Document Valid'.

9 Exercici 9

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="pelicula">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="director" type="xs:string"/>
        <xs:element name="repartiment" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="interpret" type="xs:string" maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="titol" type="xs:string" use="required"/>
      <xs:attribute name="minuts" type="xs:integer" use="required"/>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

Comprovant de validació.

The screenshot shows a web-based XML validation interface. It has two main text areas: 'XML data to validate' and 'XML schema (XSD) data'. The 'XML data to validate' area contains an XML document for a movie titled 'Brazil' with 142 minutes, directed by Terry Gilliam, and featuring a cast of six actors. The 'XML schema (XSD) data' area contains the XSD schema defined in the exercise. A 'Validate' button is located at the bottom right of the interface. Below the interface, a green bar displays the text 'Document Valid'.

XML data to validate

```
1 <?xml version="1.0"?>
2 <pelicula titol="Brazil" minuts="142" xmlns:xs="http://www.w3.org/2001/XMLSchema" instance="xs:noNamespaceSchemaLocation="exercici9.xsd">
3   <director>Terry Gilliam</director>
4   <repartiment>
5     <interpret>Jonathan Pryce</interpret>
6     <interpret>Robert De Niro</interpret>
7     <interpret>Ala Greist</interpret>
8     <interpret>Michael Palin</interpret>
9     <interpret>Ian Holm</interpret>
10    <interpret>Don McKinn</interpret>
11  </repartiment>
12 </pelicula>
```

XML schema (XSD) data

```
7 <xs:element name="repartiment" maxOccurs="unbounded">
8   <xs:complexType>
9     <xs:sequence>
10      <xs:element name="interpret" type="xs:string" maxOccurs="unbounded"/>
11    </xs:sequence>
12  </xs:complexType>
13 </xs:element>
14 </xs:sequence>
15 <xs:attribute name="titol" type="xs:string" use="required"/>
16 <xs:attribute name="minuts" type="xs:integer" use="required"/>
17 </xs:complexType>
18 </xs:element>
19 </xs:schema>
```

Validate

Document Valid

10 Exercici 10

Tinc un error de validació a la línia 26 que no he pogut solucionar, no em deixa aplicar la restricció. A més, encara tenc l'error de la data de l'exercici anterior.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="institut">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="alumne" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="dades" maxOccurs="1">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="nom" type="xs:string" />
                    <xs:element name="l·linatge" type="xs:string" />
                    <xs:element name="dni" maxOccurs="unbounded">
                      <xs:simpleType>
                        <xs:restriction base="xs:integer">
                          <xs:totalDigits value="9" />
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            <xs:element name="comentaris" maxOccurs="1" minOccurs="0">
              <xs:simpleType>
                <xs:restriction>
                  <xs:minLength value="5"></xs:minLength>
                  <xs:maxLength value="50"></xs:maxLength>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
    <xs:attribute name="titol" type="xs:string" use="required" />
    <xs:attribute name="minuts" type="xs:integer" use="required" />
  </xs:complexType>
</xs:element>
</xs:schema>
```


Comprovant de validació.

XML data to validate

```
15 <dni>56656566/dni>
16 </dades>
17 <comentari>castic/comentari>
18 </alumn>
19 <alumn data_naixement="1975-3-3">
20 <dades>
21 <nom-barth/nom>
22 <llinatges>Vader</llinatges>
23 <dni>100000012/dni>
24 </dades>
25 <comentari>Misterides/comentari>
26 </alumn>
27 </institut>
```

XML schema (XSD) data

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
3 <xs:element name="institut">
4 <xs:complexType>
5 <xs:sequence>
6 <xs:element name="alumn" maxOccurs="unbounded">
7 <xs:complexType>
8 <xs:sequence>
9 <xs:element name="dades" maxOccurs="1">
10 <xs:complexType>
11 <xs:sequence>
12 <xs:element name="nom" type="xs:string" />
13 <xs:element name="llinatges" type="xs:string" />
```

Validate

Errors

Severity	Location	Filename	Message
	26:52	schema.xsd	enc-sample-type-2.b: A element was found that has neither a base [attribute] nor a element among its [children]. One is required.
	3:37	sample.xml	enc-datatype-value.1.2.3: 2005-1-1 is not a valid value for 'date'.