

# XML - Report

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### XML - Report

#### 0. 목차

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# 1. Contacts6.xsd, Contacts6.xml 를 이용

네임스페이스는 "file:/Users/gilwoongkang/1903\_note/XML/Homework" 로 이용했습니다.

## 1-1.Contacts6A.xsd, Contacts6A.xml 파일 작성

### Contacts6A.xsd

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:contacts="file:/Users/gilwoongkang/1903_note/XML/Homework"
  targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework"
  elementFormDefault="qualified">

  <group name="NameGroup">
    <sequence>
      <element name="first" type="string" minOccurs="1"
maxOccurs="unbounded"/>
      <element name="middle" type="string" minOccurs="0" maxOccurs="1"/>
      <element name="last" type="string"/>
    </sequence>
  </group>
  <complexType name="NameType">
    <group ref="contacts:NameGroup"/>
    <attribute name="title" type="string"/>
  </complexType>

  <complexType name="LocationType">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="address" type="string"/>
      <sequence>
        <element name="latitude" type="float"/>
        <element name="longitude" type="float"/>
      </sequence>
    </choice>
  </complexType>

  <complexType name="KnowsType" >
    <attribute name="contacts" type="IDREFS"/>
  </complexType>

  <complexType name="DescriptionType" mixed="true">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="em" type="string"/>
      <element name="strong" type="string"/>
      <element name="br" type="string"/>
    </choice>
  </complexType>

  <complexType name="PhoneType">
    <simpleContent>
```

```

        <extension base="string">
            <attribute name="kind" type="string" default="Home" />
        </extension>
    </simpleContent>
</complexType>

<simpleType name="ContactTagsType">
    <restriction base="string">
        <enumeration value="author" />
        <enumeration value="xml" />
        <enumeration value="poetry" />
        <enumeration value="consultant" />
        <enumeration value="w3c" />
    </restriction>
</simpleType>

<simpleType name="ContactTagsListType">
    <list itemType="contacts:ContactTagsType" />
</simpleType>
<attributeGroup name="ContactAttributes">
    <attribute name="version" type="decimal" fixed="1.0" />
    <attribute name="source" type="string" />
</attributeGroup>

<element name="contacts">
    <complexType>
        <sequence>
            <element name="contact" minOccurs="0" maxOccurs="unbounded">
                <complexType>
                    <sequence>
                        <element name="name" type="contacts:NameType" />
                        <element name="location"
type="contacts:LocationType" />
                        <element name="phone" type="contacts:PhoneType" />
                        <element name="knows" type="contacts:KnowsType" />
                        <element name="description"
type="contacts:DescriptionType" />
                    </sequence>
                    <attribute name="tags"
type="contacts:ContactTagsListType" />
                    <attribute name="person" type="ID" />
                </complexType>
            </element>
        </sequence>
        <attributeGroup ref="contacts:ContactAttributes" />
    </complexType>
</element>

</schema>

```

## Contacts6A.xml

```
<?xml version="1.0" encoding="UTF-8"?>

<contacts xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework
contacts6A.xsd"
  source="Beginning XML 5E" version="1.0">

  <contact person="Joe_Fawcett" tags="author xml poetry">
    <name>
      <first>Joseph</first>
      <first>John</first>
      <last>Fawcett</last>
    </name>
    <location>
      <address>Exeter, UK</address>
      <latitude>50.7218</latitude>
      <longitude>-3.533617</longitude>
    </location>
    <phone kind="Home">001-234-567-8910</phone>
    <knows contacts="Liam_Quin Danny_Ayers"/>
    <description> Joseph is a developer and author for Beginning XML<em>5th
      edition </em>.<br/>Joseph <strong>loves</strong> XML!
    </description>
  </contact>
  <contact person="Liam_Quin" tags="author consultant w3c">
    <name>
      <first>Liam</first>
      <last>Quin</last>
    </name>
    <location>
      <address>Ontario, Canada</address>
    </location>
    <phone>+1 613 476 8769</phone>
    <knows contacts="Joe_Fawcett Danny_Ayers"/>
    <description>XML Activity Lead at W3C</description>
  </contact>
  <contact person="Danny_Ayers" tags="author">
    <name>
      <first>Danny</first>
      <last>Ayers</last>
    </name>
    <location>
      <address>...</address>
    </location>
    <phone>...</phone>
    <knows contacts="Joe_Fawcett"/>
```

```

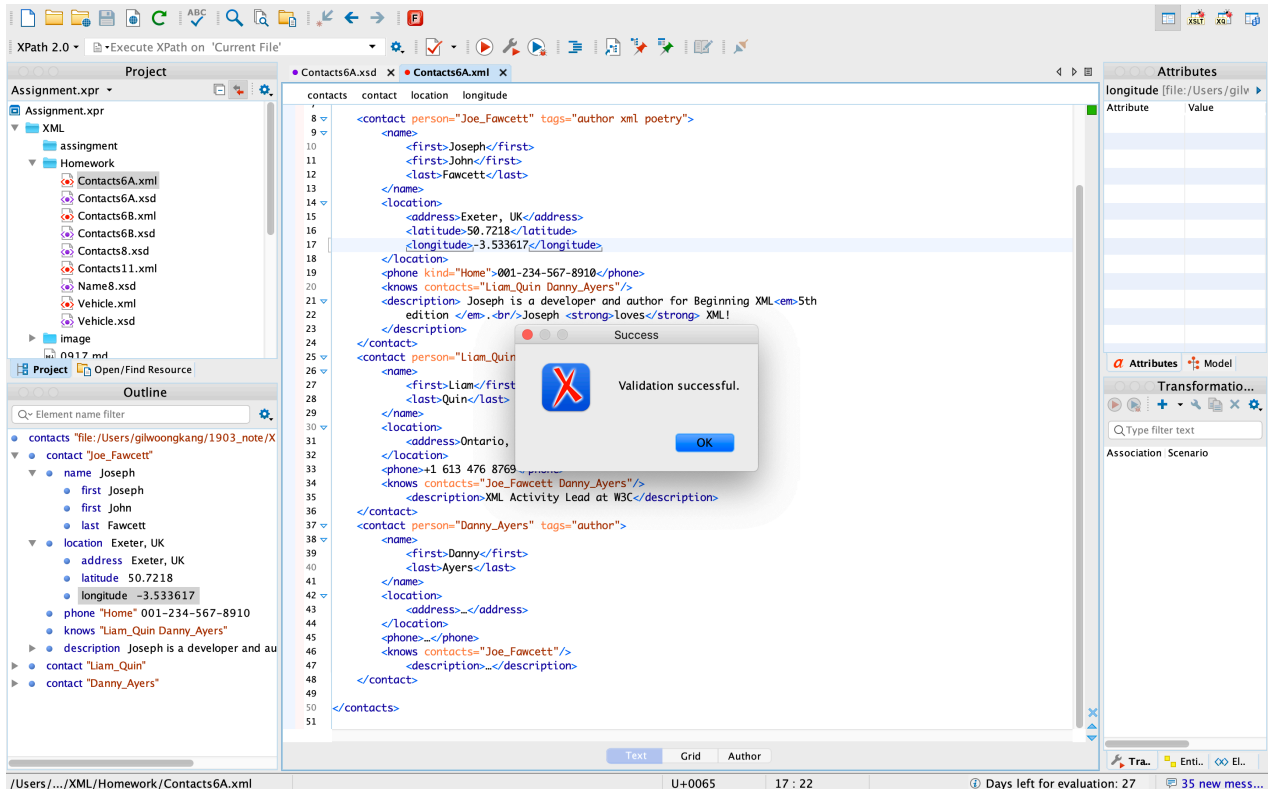
<description>...</description>

</contact>

</contacts>

```

## Validation Check



## 1-2 Contacts6B.xsd, Contacts6B.xml 파일작성

### Contacts6B.xsd

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
  targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework"
  elementFormDefault="qualified">

  <xs:group name="NameGroup">
    <xs:sequence>
      <xs:element name="first" type="xs:string" minOccurs="1"
maxOccurs="unbounded"/>
      <xs:element name="middle" type="xs:string" minOccurs="0"
maxOccurs="1"/>
      <xs:element name="last" type="xs:string"/>
    </xs:sequence>
  </xs:group>

  <xs:complexType name="NameType">
    <xs:group ref="NameGroup"/>
    <xs:attribute name="title" type="xs:string"/>
  </xs:complexType>

```

```

</xs:complexType>

<xs:complexType name="LocationType">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element name="address" type="xs:string"/>
    <xs:sequence>
      <xs:element name="latitude" type="xs:float"/>
      <xs:element name="longitude" type="xs:float"/>
    </xs:sequence>
  </xs:choice>
</xs:complexType>
<xs:complexType name="KnowsType" >
  <xs:attribute name="contacts" type="xs:IDREFS"/>
</xs:complexType>
<xs:complexType name="DescriptionType" mixed="true">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element name="em" type="xs:string"/>
    <xs:element name="strong" type="xs:string"/>
    <xs:element name="br" type="xs:string"/>
  </xs:choice>
</xs:complexType>

<xs:complexType name="PhoneType">
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="kind" type="xs:string" default="Home" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="ContactTagsType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="author"/>
    <xs:enumeration value="xml"/>
    <xs:enumeration value="poetry"/>
    <xs:enumeration value="consultant"/>
    <xs:enumeration value="w3c"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ContactTagsListType">
  <xs:list itemType="ContactTagsType"/>
</xs:simpleType>
<xs:attributeGroup name="ContactAttributes">
  <xs:attribute name="version" type="xs:decimal" fixed="1.0" />
  <xs:attribute name="source" type="xs:string"/>
</xs:attributeGroup>

<xs:element name="contacts">

```

```

<xs:complexType>
  <xs:sequence>
    <xs:element name="contact" minOccurs="0" maxOccurs="unbounded">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="name" type="NameType"/>
          <xs:element name="location" type="LocationType"/>
          <xs:element name="phone" type="PhoneType"/>
          <xs:element name="knows" type="KnowsType"/>
          <xs:element name="description"
type="DescriptionType"/>
        </xs:sequence>
        <xs:attribute name="tags" type="ContactTagsListType"/>
        <xs:attribute name="person" type="xs:ID"/>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:attributeGroup ref="ContactAttributes"/>
</xs:complexType>
</xs:element>

</xs:schema>

```

## Contacts6B.xml

```

<?xml version="1.0" encoding="UTF-8"?>

<contacts xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework
contacts6B.xsd"
  source="Beginning XML 5E" version="1.0">

  <contact person="Joe_Fawcett" tags="author xml poetry">
    <name>
      <first>Joseph</first>
      <first>John</first>
      <last>Fawcett</last>
    </name>
    <location>
      <address>Exeter, UK</address>
      <latitude>50.7218</latitude>
      <longitude>-3.533617</longitude>
    </location>
    <phone kind="Home">001-234-567-8910</phone>
    <knows contacts="Liam_Quin Danny_Ayers"/>
    <description> Joseph is a developer and author for Beginning XML<em>5th
      edition </em>.<br/>Joseph <strong>loves</strong> XML!
    </description>
  </contact>

```

```

</contact>
<contact person="Liam_Quin" tags="author consultant w3c">
  <name>
    <first>Liam</first>
    <last>Quin</last>
  </name>
  <location>
    <address>Ontario, Canada</address>
  </location>
  <phone>+1 613 476 8769</phone>
  <knows contacts="Joe_Fawcett Danny_Ayers"/>
  <description>XML Activity Lead at W3C</description>
</contact>
<contact person="Danny_Ayers" tags="author">
  <name>
    <first>Danny</first>
    <last>Ayers</last>
  </name>
  <location>
    <address>...</address>
  </location>
  <phone>...</phone>
  <knows contacts="Joe_Fawcett"/>
  <description>...</description>
</contact>

</contacts>

```

## Validation Check

The screenshot shows an XML editor interface with a project tree on the left, a central XML document view, and a right-hand sidebar with 'Attributes' and 'Model' tabs. A 'Success' dialog box is overlaid on the XML view, indicating that the validation was successful. The XML document contains two contact entries: one for 'Liam\_Quin' and one for 'Danny\_Ayers'. The 'Liam\_Quin' entry includes details like first/last name, location, phone, and a list of contacts known by him. The 'Danny\_Ayers' entry includes first/last name, location, phone, and a list of contacts known by him. The 'Attributes' tab on the right shows the attributes of the selected 'contact' element, including 'person' and 'tags'.

Project: Assignment.xpr

Outline:

- contacts "file:///Users/gilwoongkang/1903\_note/X"
  - contact "Joe\_Fawcett"
    - name
      - first Liam
      - last Quin
    - location Ontario, Canada
    - phone +1 613 476 8769
    - knows "Joe\_Fawcett Danny\_Ayers"
    - description XML Activity Lead at W3C
  - contact "Danny\_Ayers"

XML Document:

```

<contacts>
  <contact person="Joe_Fawcett" tags="author xml poetry">
    <name>
      <first>Joseph</first>
      <first>John</first>
      <last>Fawcett</last>
    </name>
    <location>
      <address>Exeter, UK</address>
      <latitude>50.7218</latitude>
      <longitude>-3.53617</longitude>
    </location>
    <phone kind="Home">001-234-567-8910</phone>
    <knows contacts="Liam_Quin Danny_Ayers"/>
    <description> Joseph is a developer and author for Beginning XML <em>5th edition</em>. <br/> Joseph <strong>loves</strong> XML!
  </contact>
  <contact person="Liam_Quin">
    <name>
      <first>Liam</first>
      <last>Quin</last>
    </name>
    <location>
      <address>Ontario,
    </location>
    <phone>+1 613 476 8769</phone>
    <knows contacts="Joe_Fawcett Danny_Ayers"/>
    <description>XML Activity Lead at W3C</description>
  </contact>
  <contact person="Danny_Ayers" tags="author">
    <name>
      <first>Danny</first>
      <last>Ayers</last>
    </name>
    <location>
      <address>...</address>
    </location>
    <phone>...</phone>
    <knows contacts="Joe_Fawcett"/>
    <description>...</description>
  </contact>
</contacts>

```

Validation successful.

Attributes:

Attribute	Value
person	Liam_Quin
tags	author consul...



## 2. Contacts8.xsd, Contacts11.xml를 이용

### 2-1 Contacts8.xsd, Name8.xsd, Contacts11.xml 파일 작성

#### Contacts8.xsd

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:contacts="file:/Users/gilwoongkang/1903_note/XML/Homework"
  xmlns:name="file:/Users/gilwoongkang/1903_note/XML/Homework/name"
  targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework"
  elementFormDefault="qualified">

  <import namespace="file:/Users/gilwoongkang/1903_note/XML/Homework/name"
    schemaLocation="./name/Name8.xsd"/>

  <complexType name="LocationType">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="address" type="string"/>
      <sequence>
        <element name="latitude" type="float"/>
        <element name="longitude" type="float"/>
      </sequence>
    </choice>
  </complexType>

  <complexType name="PhoneType">
    <simpleContent>
      <extension base="string">
        <attribute name="kind" type="string" default="Home" />
      </extension>
    </simpleContent>
  </complexType>

  <complexType name="KnowsType">
    <attribute name="contacts" type="IDREFS"/>
  </complexType>

  <complexType name="DescriptionType" mixed="true">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="em" type="string"/>
      <element name="strong" type="string"/>
      <element name="br" type="string"/>
    </choice>
  </complexType>

  <simpleType name="ContactTagsType">
```

```

    <restriction base="string">
        <enumeration value="author"/>
        <enumeration value="xml"/>
        <enumeration value="poetry"/>
        <enumeration value="consultant"/>
        <enumeration value="w3c"/>
    </restriction>
</simpleType>

<simpleType name="ContactTagsListType">
    <list itemType="contacts:ContactTagsType"/>
</simpleType>

<attributeGroup name="ContactAttributes">
    <attribute name="version" type="decimal" fixed="1.0" />
    <attribute name="source" type="string"/>
</attributeGroup>

<element name="contacts">
    <complexType>
        <sequence>
            <element name="contact" minOccurs="0" maxOccurs="unbounded">
                <complexType>
                    <sequence>
                        <element ref="name:name"/>
                        <element name="location"
type="contacts:LocationType"/>
                        <element name="phone" type="contacts:PhoneType"/>
                        <element name="knows" type="contacts:KnowsType"/>
                        <element name="description"
type="contacts:DescriptionType"/>
                    </sequence>
                    <attribute name="person" type="ID"/>
                    <attribute name="tags"
type="contacts:ContactTagsListType"/>
                </complexType>
            </element>
        </sequence>
        <attributeGroup ref="contacts:ContactAttributes"/>
    </complexType>
</element>
</schema>

```

## Name8.xsd

```

<?xml version="1.0" encoding="UTF-8"?>

<schema xmlns="http://www.w3.org/2001/XMLSchema"
    xmlns:target="file:/Users/gilwoongkang/1903_note/XML/Homework/name"

```

```

targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework/name"
elementFormDefault="qualified">

<group name="NameGroup">
  <sequence>
    <element name="first" type="string" minOccurs="1"
maxOccurs="unbounded"/>
    <element name="middle" type="string" minOccurs="0" maxOccurs="1"/>
    <element name="last" type="string"/>
  </sequence>
</group>

<complexType name="NameType">
  <group ref="target:NameGroup"/>
  <attribute name="title" type="string"/>
</complexType>

<element name="name" type="target:NameType"/>

</schema>

```

## Contacts11.xml

```

<?xml version="1.0" encoding="UTF-8"?>

<contacts xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
  xmlns:name="file:/Users/gilwoongkang/1903_note/XML/Homework/name"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework/
Contacts8.xsd"
  source="Beginning XML 5E" version="1.0">

  <contact person="Joe_Fawcett" tags="author xml poetry">
    <name:name title="Mr.">
      <name:first>Joseph</name:first>
      <name:middle>John</name:middle>
      <name:last>Fawcett</name:last>
    </name:name>
    <location>
      <address>Exeter, UK</address>
      <latitude>50.7218</latitude>
      <longitude>-3.533617</longitude>
    </location>
    <phone kind="Home">001-234-567-8910</phone>
    <knows contacts="Liam_Quin Danny_Ayers"/>
    <description> Joseph is a developer and author for Beginning
XML<em>5th
          edition </em>.<br/>Joseph <strong>loves</strong> XML!
    </description>
  </contact>

```

```

</contact>
<contact person="Liam_Quin" tags="author consultant w3c">
  <name:name>
    <name:first>Daniel</name:first>
    <name:middle>John</name:middle>
    <name:last>Ayers</name:last>
  </name:name>
  <location>
    <address>Ontario, Canada</address>
  </location>
  <phone>+1 613 476 8769</phone>
  <knows contacts="Joe_Fawcett Danny_Ayers" />
  <description>XML Activity Lead at W3C</description>
</contact>
<contact person=" Danny_Ayers" tags="author">
  <name:name>
    <name:first>Danny</name:first>
    <name:last>Ayers</name:last>
  </name:name>
  <location>
    <address>...</address>
  </location>
  <phone>...</phone>
  <knows contacts="Joe_Fawcett" />
  <description>...</description>
</contact>
</contacts>

```

## Validation Check

The screenshot shows the XMLSpy interface with the following components:

- Project Pane (Left):** Displays the project structure, including 'Assignment.xpr', 'XML', 'name', and 'Contacts8.xsd'.
- Outline Pane (Bottom Left):** Shows the element hierarchy for the selected file, including 'contacts', 'contact', 'name', 'location', 'phone', 'knows', and 'description'.
- Main Editor (Center):** Displays the XML code for the 'contacts' file. The code is as follows:
 

```

<?xml version="1.0" encoding="UTF-8"?>
<contacts xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework/ Contacts8.xsd"
  source="Beginning XML SE" version="1.0">
  <contact person="Joe_Fawcett" tags="author xml poetry">
    <name:name title="Mr.">
      <name:first>Joseph</name:first>
      <name:middle>John</name:middle>
      <name:last>Fawcett</name:last>
    </name:name>
    <location>
      <address>Exeter, UK</address>
      <latitude>50.7218</latitude>
      <longitude>-3.5336</longitude>
    </location>
    <phone kind="Home">001-234-567-8910</phone>
    <knows contacts="Liam_Quin Danny_Ayers" />
    <description>XML Activity Lead at W3C</description>
  </contact>
  <contact person="Liam_Quin" tags="author consultant w3c">
    <name:name>
      <name:first>Daniel</name:first>
      <name:middle>John</name:middle>
      <name:last>Ayers</name:last>
    </name:name>
    <location>
      <address>Ontario, Canada</address>
    </location>
    <phone>+1 613 476 8769</phone>
    <knows contacts="Joe_Fawcett Danny_Ayers" />
    <description>XML Activity Lead at W3C</description>
  </contact>
  <contact person=" Danny_Ayers" tags="author">
    <name:name>
      <name:first>Danny</name:first>
      <name:last>Ayers</name:last>
    </name:name>
    <location>
      <address>...</address>
    </location>
    <phone>...</phone>
    <knows contacts="Joe_Fawcett" />
    <description>...</description>
  </contact>
</contacts>

```
- Validation Dialog (Center):** A 'Success' dialog box with a red 'X' icon and the text 'Validation successful.' and an 'OK' button.
- Attributes Pane (Right):** Shows the attributes of the selected element, including 'source', 'version', 'xmlns', 'xmlns:xsi', and 'xsi:schemaLocation'.

## 2-2 Contacts8.xsd, Name8.xsd, Contacts11.xml 파일 수정

### Contacts8.xsd

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:contacts="file:/Users/gilwoongkang/1903_note/XML/Homework"
  targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework"
  elementFormDefault="qualified">

  <include schemaLocation="Name8.xsd"/>

  <complexType name="LocationType">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="address" type="string"/>
      <sequence>
        <element name="latitude" type="float"/>
        <element name="longitude" type="float"/>
      </sequence>
    </choice>
  </complexType>

  <complexType name="PhoneType">
    <simpleContent>
      <extension base="string">
        <attribute name="kind" type="string" default="Home" />
      </extension>
    </simpleContent>
  </complexType>

  <complexType name="KnowsType">
    <attribute name="contacts" type="IDREFS"/>
  </complexType>

  <complexType name="DescriptionType" mixed="true">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="em" type="string"/>
      <element name="strong" type="string"/>
      <element name="br" type="string"/>
    </choice>
  </complexType>

  <simpleType name="ContactTagsType">
    <restriction base="string">
      <enumeration value="author"/>
      <enumeration value="xml"/>
      <enumeration value="poetry"/>
      <enumeration value="consultant"/>
      <enumeration value="w3c"/>
    </restriction>
  </simpleType>
</schema>
```

```

        </restriction>
    </simpleType>

    <simpleType name="ContactTagsListType">
        <list itemType="contacts:ContactTagsType" />
    </simpleType>

    <attributeGroup name="ContactAttributes">
        <attribute name="version" type="decimal" fixed="1.0" />
        <attribute name="source" type="string" />
    </attributeGroup>

    <element name="contacts">
        <complexType>
            <sequence>
                <element name="contact" minOccurs="0" maxOccurs="unbounded">
                    <complexType>
                        <sequence>
                            <element ref="contacts:name" />
                            <element name="location"
type="contacts:LocationType" />
                            <element name="phone" type="contacts:PhoneType" />
                            <element name="knows" type="contacts:KnowsType" />
                            <element name="description"
type="contacts:DescriptionType" />
                        </sequence>
                        <attribute name="person" type="ID" />
                        <attribute name="tags"
type="contacts:ContactTagsListType" />
                    </complexType>
                </element>
            </sequence>
            <attributeGroup ref="contacts:ContactAttributes" />
        </complexType>
    </element>
</schema>

```

## Name8.xsd

```

<?xml version="1.0" encoding="UTF-8"?>

<schema xmlns="http://www.w3.org/2001/XMLSchema"
    xmlns:target="file:/Users/gilwoongkang/1903_note/XML/Homework"
    targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework"
    elementFormDefault="qualified">

    <group name="NameGroup">

```

```

        <sequence>
            <element name="first" type="string" minOccurs="1"
maxOccurs="unbounded" />
            <element name="middle" type="string" minOccurs="0" maxOccurs="1" />
            <element name="last" type="string" />
        </sequence>
    </group>

    <complexType name="NameType">
        <group ref="target:NameGroup" />
        <attribute name="title" type="string" />
    </complexType>

    <element name="name" type="target:NameType" />

</schema>

```

## Contacts11.xml

```

<?xml version="1.0" encoding="UTF-8"?>

<contacts xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
xmlns:name="file:/Users/gilwoongkang/1903_note/XML/Homework"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework/
Contacts8.xsd"
source="Beginning XML 5E" version="1.0">

    <contact person="Joe_Fawcett" tags="author xml poetry">
        <name:name title="Mr.">
            <name:first>Joseph</name:first>
            <name:middle>John</name:middle>
            <name:last>Fawcett</name:last>
        </name:name>
        <location>
            <address>Exeter, UK</address>
            <latitude>50.7218</latitude>
            <longitude>-3.533617</longitude>
        </location>
        <phone kind="Home">001-234-567-8910</phone>
        <knows contacts="Liam_Quin Danny_Ayers" />
        <description> Joseph is a developer and author for Beginning
XML<em>5th
                edition </em>.<br/>Joseph <strong>loves</strong> XML!
        </description>
    </contact>
    <contact person="Liam_Quin" tags="author consultant w3c">
        <name:name>

```

```

        <name:first>Daniel</name:first>
        <name:middle>John</name:middle>
        <name:last>Ayers</name:last>
    </name:name>
    <location>
        <address>Ontario, Canada</address>
    </location>
    <phone>+1 613 476 8769</phone>
    <knows contacts="Joe_Fawcett Danny_Ayers"/>
    <description>XML Activity Lead at W3C</description>
</contact>
<contact person=" Danny_Ayers" tags="author">
    <name:name>
        <name:first>Danny</name:first>
        <name:last>Ayers</name:last>
    </name:name>
    <location>
        <address>...</address>
    </location>
    <phone>...</phone>
    <knows contacts="Joe_Fawcett"/>
    <description>...</description>
</contact>
</contacts>

```

## Validation Check

The screenshot shows an XML editor interface with a project tree on the left, a central XML document view, and a right-hand panel with 'Attributes' and 'Model' tabs. A 'Validation successful.' dialog box is overlaid on the XML document. The XML document contains a root element 'contacts' with two child elements 'contact'. The first 'contact' element has attributes 'person="Joe\_Fawcett"' and 'tags="author xml poetry"', and contains sub-elements for 'name', 'location', 'phone', 'knows', and 'description'. The second 'contact' element has attributes 'person="Danny\_Ayers"' and 'tags="author"', and contains sub-elements for 'name', 'location', 'phone', 'knows', and 'description'. The 'knows' attribute in both elements points to a file 'Contacts8.xsd'. The 'description' attribute in the first element points to a file 'XML Activity Lead at W3C'. The 'location' attribute in the second element points to a file '...'. The 'phone' attribute in the second element points to a file '...'. The 'name' attribute in the second element points to a file '...'. The 'description' attribute in the second element points to a file '...'. The 'knows' attribute in the second element points to a file 'Joe\_Fawcett'.

Project: Assignment.xpr

- XML
  - assignment
    - Homework
      - Contacts6A.xml
      - Contacts6A.xsd
      - Contacts6B.xml
      - Contacts6B.xsd
      - Contacts8.xml
      - Contacts8.xsd
      - Contacts11.xml
      - Name8.xsd
      - Vehicle.xml
      - Vehicle.xsd
    - image

Outline: Element name filter

- contacts "file:/Users/gilwoongkang/1903\_note/X
  - contact "Joe\_Fawcett"
    - name: name Daniel
    - location Ontario, Canada
    - phone +1 613 476 8769
    - knows "Joe\_Fawcett Danny\_Ayers"
    - description XML Activity Lead at W3C
  - contact "Danny\_Ayers"

Validation successful.

Attributes: description [file:/Users/gi...]

Model: Transformation...

Association Scenario

Days left for evaluation: 27

35 new mess...



## 3. Vehicle 스키마 및 인스턴스 작성

### 3-1. Vehicle.xsd

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:db="file:/Users/gilwoongkang/1903_note/XML/Homework"
  targetNamespace="file:/Users/gilwoongkang/1903_note/XML/Homework"
  elementFormDefault="qualified">

  <complexType name="DriveTrainType">
    <sequence>
      <element name="Engine" type="string"/>
      <element name="Transmission" type="string"/>
    </sequence>
  </complexType>

  <complexType name="VehicleType">
    <sequence>
      <element name="Body" type="string"/>
      <element name="DriveTrain" type="db:DriveTrainType"/>
    </sequence>
  </complexType>

  <complexType name="AutomobileType">
    <complexContent>
      <extension base="db:VehicleType">
        <sequence>
          <element name="Trunk" type="string"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>

  <complexType name="SedanType">
    <complexContent>
      <extension base="db:AutomobileType"/>
    </complexContent>
  </complexType>

  <complexType name="ConvertibleType">
    <complexContent>
      <extension base="db:AutomobileType">
        <sequence>
          <element name="OperatingRoof" type="string"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
```

```

<complexType name="TruckType">
  <complexContent>
    <extension base="db:VehicleType">
      <sequence>
        <element name="Compartment" type="string"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>

<element name="Vehicle" type="db:VehicleType"/>

<element name="Vehicles">
  <complexType>
    <sequence>
      <element ref="db:Vehicle" minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
  </complexType>
</element>
</schema>

```

## 3-2. Vehicle.xml

```

<?xml version="1.0" encoding="UTF-8"?>

<Vehicles xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework
Vehicle.xsd">

  <Vehicle xsi:type="ConvertibleType">
    <Body>My Car</Body>
    <DriveTrain>
      <Engine>My Engine</Engine>
      <Transmission>My Transmission</Transmission>
    </DriveTrain>
    <Trunk>Back Trunk</Trunk>
    <OperatingRoof>OperationRoof</OperatingRoof>
  </Vehicle>

  <Vehicle xsi:type="SedanType">
    <Body>Sedan Body</Body>
    <DriveTrain>
      <Engine>Sedan Engine</Engine>
      <Transmission>Sedan Transmission</Transmission>
    </DriveTrain>
    <Trunk>Sedan Trunk</Trunk>
  </Vehicle>
</Vehicles>

```

```

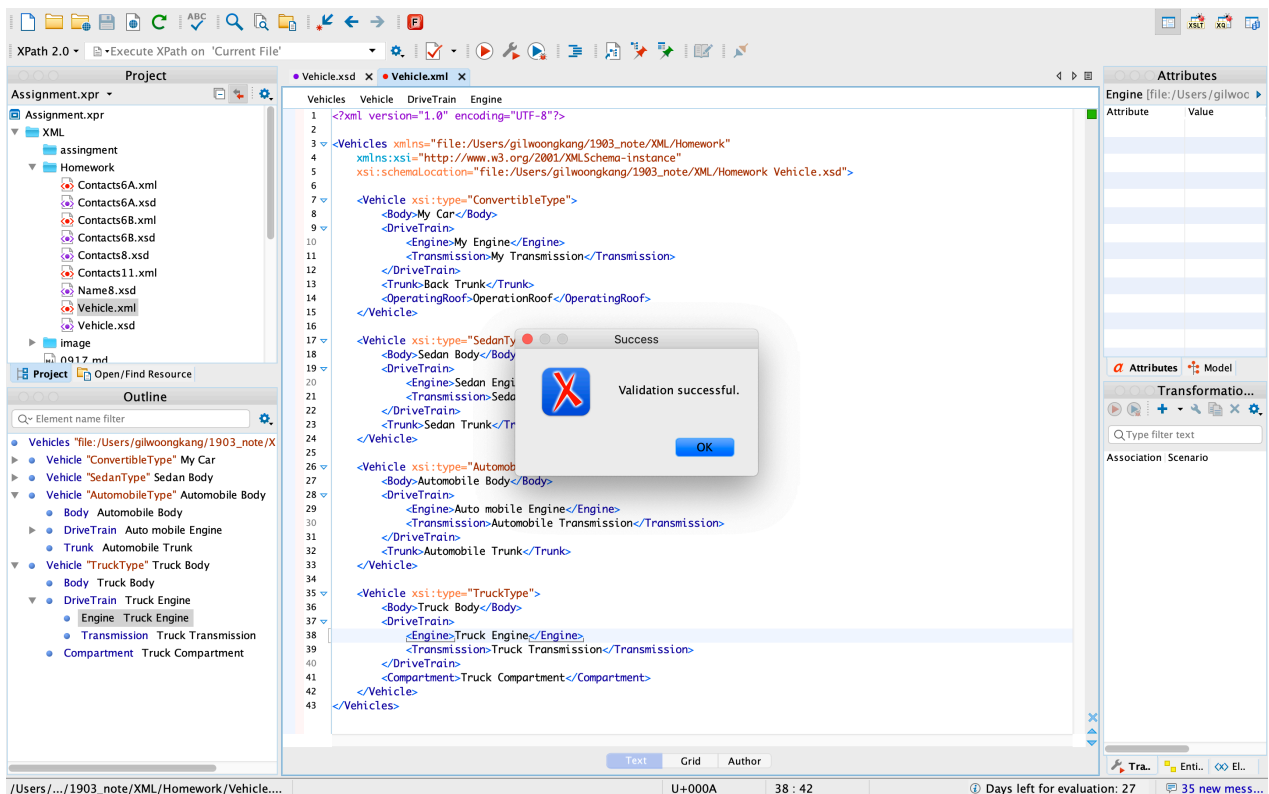
</Vehicle>

<Vehicle xsi:type="AutomobileType">
  <Body>Automobile Body</Body>
  <DriveTrain>
    <Engine>Auto mobile Engine</Engine>
    <Transmission>Automobile Transmission</Transmission>
  </DriveTrain>
  <Trunk>Automobile Trunk</Trunk>
</Vehicle>

<Vehicle xsi:type="TruckType">
  <Body>Truck Body</Body>
  <DriveTrain>
    <Engine>Truck Engine</Engine>
    <Transmission>Truck Transmission</Transmission>
  </DriveTrain>
  <Compartment>Truck Compartment</Compartment>
</Vehicle>
</Vehicles>

```

### 3-3. Validation Check



The screenshot shows the XMLSpy application interface. The main window displays an XML document with the following structure:

```

1 <?xml version="1.0" encoding="UTF-8"?>
2
3 <Vehicles xmlns="file:/Users/gilwoongkang/1903_note/XML/Homework"
4   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
5   xsi:schemaLocation="file:/Users/gilwoongkang/1903_note/XML/Homework Vehicle.xsd">
6
7   <Vehicle xsi:type="ConvertibleType">
8     <Body>My Car</Body>
9     <DriveTrain>
10       <Engine>My Engine</Engine>
11       <Transmission>My Transmission</Transmission>
12     </DriveTrain>
13     <Trunk>Back Trunk</Trunk>
14     <OperatingRoof>OperationRoof</OperatingRoof>
15   </Vehicle>
16
17   <Vehicle xsi:type="SedanType">
18     <Body>Sedan Body</Body>
19     <DriveTrain>
20       <Engine>Sedan Engine</Engine>
21       <Transmission>Sedan Transmission</Transmission>
22     </DriveTrain>
23     <Trunk>Sedan Trunk</Trunk>
24   </Vehicle>
25
26   <Vehicle xsi:type="AutomobileType">
27     <Body>Automobile Body</Body>
28     <DriveTrain>
29       <Engine>Auto mobile Engine</Engine>
30       <Transmission>Automobile Transmission</Transmission>
31     </DriveTrain>
32     <Trunk>Automobile Trunk</Trunk>
33   </Vehicle>
34
35   <Vehicle xsi:type="TruckType">
36     <Body>Truck Body</Body>
37     <DriveTrain>
38       <Engine>Truck Engine</Engine>
39       <Transmission>Truck Transmission</Transmission>
40     </DriveTrain>
41     <Compartment>Truck Compartment</Compartment>
42   </Vehicle>
43 </Vehicles>

```

A 'Success' dialog box is displayed over the XML document, indicating that the validation was successful. The dialog box has a red 'X' icon and the text 'Validation successful.' with an 'OK' button.

The left sidebar shows the project structure, including the 'Assignment.xpr' file and the 'Vehicle.xml' file. The right sidebar shows the 'Attributes' and 'Model' views.

The status bar at the bottom indicates the file path: 'file:/Users/gilwoongkang/1903\_note/XML/Homework/Vehicle.xml', the encoding: 'U+000A', and the page number: '38 : 42'. It also shows the evaluation status: 'Days left for evaluation: 27' and '35 new mess...'.