Name: Nisarg Amlani.k.

Roll : CE001 ID : 22ceueg082

Lab: 3

Library.xml File

Code:

```
<?xml version="1.0" encoding="utf-8" ?>
<library>
  <categories id="cat-1">
      <name>
          Fiction
      </name>
      <books>
          <book id="b-001">
              <title>1984</title>
              <bookAuthor id="A101">George Orwell/bookAuthor>
              <publication year="1949"/>
              <price currency="USD">9.99</price>
          </book>
          <book id="b-002">
              <title>To Kill a Mockingbird</title>
              <bookAuthor id="A102">Harper Lee/bookAuthor>
              <publication year="1960"/>
              <price currency="USD">7.99</price>
          </book>
      </books>
  </categories>
  <categories id="cat-2">
      <name>
          Science
      </name>
      <books>
          <book id="b-003">
              <title>A Brief History of Time</title>
              <bookAuthor id="A103">Stephen Hawking
```

```
<publication year="1988"/>
               <price currency="USD">15.00</price>
           </book>
       </books>
   </categories>
   <authors>
       <author id="A101">
           <authorName>George Orwell</authorName>
           <nationality>British</nationality>
      </author>
       <author id="A102">
           <authorName>Harper Lee</authorName>
           <nationality>American/nationality>
       </author>
       <author id="A103">
           <authorName>Stephen Hawking</authorName>
           <nationality>British</nationality>
       </author>
  </authors>
</library>
```

Library.xsd File

Code:

```
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
   <!-- Define the root element "library" -->
  <xs:element name="library">
       <xs:complexType>
           <xs:sequence>
               <!-- Define the "categories" element -->
               <xs:element name="categories" maxOccurs="unbounded">
                   <xs:complexType>
                       <xs:sequence>
                           <xs:element name="name" type="xs:string"/>
                           <xs:element name="books">
                               <xs:complexType>
                                   <xs:sequence>
                                       <xs:element name="book" maxOccurs="unbounded">
                                            <xs:complexType>
                                                <xs:sequence>
                                                    <xs:element name="title"</pre>
type="xs:string"/>
                                                    <xs:element name="bookAuthor">
```

```
<xs:complexType>
                                                              <xs:simpleContent>
                                                                   <xs:extension</pre>
base="xs:string">
                                                                       <xs:attribute</pre>
name="id" type="xs:string"
use="required"/>
                                                                   </xs:extension>
                                                              </xs:simpleContent>
                                                          </xs:complexType>
                                                      </xs:element>
                                                      <xs:element name="publication">
                                                          <xs:complexType>
                                                              <xs:attribute name="year"</pre>
type="xs:int" use="required"/>
                                                          </r></xs:complexType>
                                                      </xs:element>
                                                      <xs:element name="price">
                                                          <xs:complexType>
                                                              <xs:simpleContent>
                                                                   <xs:extension</pre>
base="xs:decimal">
                                                                       <xs:attribute</pre>
name="currency" type="xs:string"
use="required"/>
                                                                   </xs:extension>
                                                              </xs:simpleContent>
                                                          </xs:complexType>
                                                      </xs:element>
                                                  </xs:sequence>
                                                  <xs:attribute name="id"</pre>
type="xs:string" use="required"/>
                                             </xs:complexType>
                                         </r></r></r/>
                                     </xs:sequence>
                                 </r></r></r/>
                            </xs:element>
                        </xs:sequence>
                        <xs:attribute name="id" type="xs:string" use="required"/>
                    </r></xs:complexType>
               </xs:element>
                <!-- Define the "authors" element -->
               <xs:element name="authors">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="author" maxOccurs="unbounded">
                                 <xs:complexType>
                                     <xs:sequence>
                                         <xs:element name="authorName"</pre>
type="xs:string"/>
                                         <xs:element name="nationality"</pre>
type="xs:string"/>
```

Validation Output:

Document Valid