Assignment -02 DTD XSD XML XSL

XML file code:

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

<!-- <!DOCTYPE orders SYSTEM "order.dtd">-->

<?xml-stylesheet type='text/xsl' href='order.xsl'?>

<orders xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:noNamespaceSchemaLocation="order.xsd">

<order>

<orderid>70</orderid>

<description>Audrey Hepburn Red Gown designed by ZARA</description>

<requestdate>29/12/2021</requestdate>

<lineitem>

<movie>

<movieid>71</movieid>

<name>Funny Face</name>

<releasedate>13/02/1957</releasedate>

<genre>Drama</genre>

<actors>

<actor>

<fname>Audrey</fname>

<lname>Hepburn</lname>

<age>63</age>

</actor>
```

```xml
      </actors>
    </movie>
    <quantity>1</quantity>
    <price>500</price>
  </lineitem>
</order>
<order>
  <orderid>72</orderid>
  <description>Avatar Hoodie</description>
  <requestdate>24/12/2021</requestdate>
  <lineitem>
    <movie>
      <movieid>101</movieid>
      <name>Avatar</name>
      <releasedate>18/12/2009</releasedate>
      <genre>Science-Fiction</genre>
      <actors>
        <actor>
          <fname>Sam</fname>
          <lname>Worthington</lname>
          <age>45</age>
        </actor>
        <actor>
          <fname>Sigourney</fname>
```

```xml
<lname>Weaver</lname>
<age>72</age>
</actor>
</actors>
</movie>
<quantity>2</quantity>
<price>900</price>
</lineitem>
</order>
<order>
<orderid>73</orderid>
<description>High School Musical Mug</description>
<requestdate>21/12/2021</requestdate>
<lineitem>
<movie>
<movieid>103</movieid>
<name>High School Musical</name>
<releasedate>20/01/2006</releasedate>
<genre>Drama</genre>
<actors>
<actor>
<fname>Vanessa</fname>
<lname>Hudgens</lname>
<age>33</age>
```

```xml
    </actor>

<actor>

<fname>Zac</fname>

<lname>Efron</lname>

<age>34</age>

</actor>

</actors>

</movie>

<quantity>1</quantity>

<price>220</price>

</lineitem>

</order>

<order>

        <orderid>74</orderid>

<description>Hunger Games Sweatshirt</description>

<requestdate>25/12/2021</requestdate>

<lineitem>

<movie>

<movieid>104</movieid>

<name>Hunger Games</name>

<releasedate>23/03/2012</releasedate>

<genre>Thriller</genre>

<actors>

<actor>
```

```xml
<fname>Jennifer</fname>
<lname>Lawrence</lname>
<age>31</age>
</actor>
</actors>
</movie>
<quantity>1</quantity>
<price>999</price>
</lineitem>
</order>
<order>
<orderid>75</orderid>
<description>Ra.One Tshirt</description>
<requestdate>23/12/2021</requestdate>
<lineitem>
<movie>
<movieid>105</movieid>
<name>Ra.One</name>
<releasedate>26/10/2011</releasedate>
<genre>Science-Fiction</genre>
<actors>
<actor>
<fname>Salmaan</fname>
<lname>Khan</lname>
```

```xml
<age>55</age>

</actor>

<actor>

<fname>Akshay</fname>

<lname>Kumar</lname>

<age>50</age>

</actor>

</actors>

</movie>

<quantity>2</quantity>

<price>299</price>

</lineitem>

</order>

<order>

<orderid>77</orderid>

<description>White Pant Suit</description>

<requestdate>02/01/2022</requestdate>

<lineitem>

<movie>

<movieid>106</movieid>

<name>A Simple Favor</name>

<releasedate>14/09/2018</releasedate>

<genre>Mystery</genre>

<actors>
```

```xml
<actor>

<fname>Blake</fname>

<lname>Lively</lname>

<age>34</age>

</actor>

<actor>

<fname>Anna</fname>

<lname>Kedrick</lname>

<age>36</age>

</actor>

</actors>

</movie>

<quantity>4</quantity>

<price>1299</price>

</lineitem>

</order>

</orders>
```

XSL file code:

```xml
<?xml version="1.0" encoding="UTF-8" standalone="no"?>

<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">

<xsl:template match="/">

<html>
```

```
<body>

<h3>Orders</h3>

<table border="1">

<tr bgcolor="slategrey">

<th>Order ID</th>

<th>Description</th>

<th>Request Date</th>

<th>Movie ID</th>

<th>Movie</th>

<th>Release Date</th>

<th>Genre</th>

<th>Quantity</th>

<th>Price</th>

</tr>

<xsl:for-each select="orders/order">

<tr bgcolor="lavender">

<td><xsl:value-of select="orderid"/></td>

<td><xsl:value-of select="description"/></td>

<td><xsl:value-of select="requestdate"/></td>

<td><xsl:value-of

select="lineitem/movie/movieid"/></td>

<td><xsl:value-of

select="lineitem/movie/name"/></td>

<td><xsl:value-of
```

```
select="lineitem/movie/releasedate"/></td>

<td><xsl:value-of

select="lineitem/movie/genre"/></td>

<td><xsl:value-of

select="lineitem/quantity"/></td>

<td><xsl:value-of select="lineitem/price"/></td>

</tr>

</xsl:for-each>

</table>

<h3>Actors</h3>

<table border="2">

<tr bgcolor="slategrey">

<th>First Name</th>

<th>Last Name</th>

<th>Age</th>

</tr>

<xsl:for-each

select="orders/order/lineitem/movie/actors/actor">

<tr bgcolor="lightblue">

<td><xsl:value-of select="fname"/></td>

<td><xsl:value-of select="lname"/></td>

<td><xsl:value-of select="age"/></td>

</tr>

</xsl:for-each>
```

```xml
</table>

</body>

</html>

</xsl:template>

</xsl:stylesheet>
```

XSD File code:

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

<schema xmlns="http://www.w3.org/2001/XMLSchema">

<element name="orders">

<complexType>

<sequence>

<element name="order" minOccurs="1" maxOccurs="unbounded">

<complexType>

<sequence>

<element type="string" name="orderid"/>

<element type="string" name="description"/>

<element type="string" name="requestdate"/>

<element name="lineitem">

<complexType>

<!-- Movies Information -->

<sequence>

<element name="movie">

<complexType>
```

```xml
<sequence>

<element type="string" name="movieid"/>

<element type="string" name="name"/>

<element type="string"

name="releasedate"/>

<!-- Genre can only be 1 of 4 categories -

->

<element name="genre" >

<simpleType>

<restriction base="string">

<enumeration value="Science-Fiction"/>

<enumeration value="Mystery"/>

<enumeration value="Thriller"/>

<enumeration value="Drama"/>

</restriction>

</simpleType>

</element>

<!-- Actors Information -->

<element name="actors" maxOccurs="unbounded" minOccurs="0">

<complexType>

    <sequence>

<element name="actor" maxOccurs="unbounded"

minOccurs="0">

<complexType>
```

```xml
<sequence>
<element type="string" name="fname">
<element type="string" name="lname"/>
<!-- Age Is Optional -->
<element type="byte" name="age" minOccurs="0"/>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
<element type="byte" name="quantity" />
<!-- Price must be greater than 0 -->
<element name="price">
<simpleType>
<restriction base="integer">
<minInclusive value="0"/>
</restriction>
</simpleType>
</element>
</sequence>
```

```
</complexType>

</element>

</sequence>

</complexType>

</element>

</sequence>

</complexType>

</element>

</schema>
```

DTD File code:

```
<!ELEMENT orders (order+)>

<!ELEMENT order (orderid,description,requestdate,lineitem+)>

<!ELEMENT orderid (#PCDATA)>

<!ELEMENT description (#PCDATA)>

<!ELEMENT requestdate (#PCDATA)>

<!ELEMENT lineitem (movie+,quantity,price)>

<!ELEMENT quantity (#PCDATA)>

<!ELEMENT price (#PCDATA)>

<!-- Price Default value is 100 -->

<!ATTLIST price type CDATA "100">

<!ELEMENT movie (movieid,name,releasedate,genre,actors+)>

<!ELEMENT movieid (#PCDATA)>

<!ELEMENT name (#PCDATA)>
```

```
<!ELEMENT releasedate (#PCDATA)>

<!-- Genre can only be among the 4 values -->

<!ELEMENT genre (#PCDATA)>

<!ATTLIST genre type CDATA "Drama|Thriller|Science-Fiction|Mystery">

<!ELEMENT actors (actor+)>

<!ELEMENT actor (fname,lname,age?)>

<!ELEMENT fname (#PCDATA)>

<!ELEMENT lname (#PCDATA)>

<!ELEMENT age ANY>
```

Output:

Orders

Order ID	Description	Request Date	Movie ID	Movie	Release Date	Genre	Quantity	Price
70	Audrey Hepburn Red Gown designed by ZARA	29/12/2021	71	Funny Face	13/02/1957	Drama	1	500
72	Avatar Hoodie	24/12/2021	101	Avatar	18/12/2009	Science-Fiction	2	900
73	High School Musical Mug	21/12/2021	103	High School Musical	20/01/2006	Drama	1	220
74	Hunger Games Sweatshirt	25/12/2021	104	Hunger Games	23/03/2012	Thriller	1	999
75	Ra.One Tshirt	23/12/2021	105	Ra.One	26/10/2011	Science-Fiction	2	299
77	White Pant Suit	02/01/2022	106	A Simple Favor	14/09/2018	Mystery	4	1299

Actors

First Name	Last Name	Age
Audrey	Hepburn	63
Sam	Worthington	45
Sigourney	Weaver	72
Vanessa	Hudgens	33
Zac	Efron	34
Jennifer	Lawrence	31
Salmaan	Khan	55
Akshay	Kumar	50
Blake	Lively	34
Anna	Kedrick	36