Lab no:8

- ## TASK:1
- ## Create an XML document structuring information for a store. (shopping store of your choice)

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<store>
    <name>The Body Shop</name>
    <location>Shop#7 ,Dolmen Mall</location>
    <employees>3</employees>
    <category>
        <base>
            <item_1>Matte Clay Concealer</item_1>
            <item_2>All in one face base</item_2>
            <item_3>insta glow CC</item_3>
        </base>
        <Bronzers>
            <item_1>Shimmer waves</item_1>
            <item_2>Honey Bronze(Baked to last Bronzer)</item_2>
            <item_3>All in one Blush</item_3>
        </Bronzers>
        <Nail_Paints>
            <item_1>Matte Nail paint</item_1>
            <item_2>Wooden nail brush</item_2>
        </Nail_Paints>
        <Lipsticks>
            <item_1>Shine lip liquid</item_1>
            <item_2>Lip balm pot</item_2>
            <item_3>Matte lip liquid</item_3>
        </Lipsticks>
    </category>
</store>
```

- ## TASK:2
- ## Create DTD for store XML Document. And validate on http://www.w3schools.com/xml/xml_validator.asp

DTD: (Validation)

```
<?xml version="1.0" encoding="ISO-8859-1"?>

<!DOCTYPE store
[
<!ELEMENT store (name+,location+,employees+,category+)>
```

```
<!ELEMENT name (#PCDATA)>
<!ELEMENT location (#PCDATA)>
<!ELEMENT employees (#PCDATA)>
<!ELEMENT category (base,Bronzers,Nail_Paints,Lipsticks)>
<!ELEMENT base (item_1,item_2,item_3)>
<!ELEMENT item_1 (#PCDATA)>
<!ELEMENT item_2 (#PCDATA)>
<!ELEMENT item_3 (#PCDATA)>
<!ELEMENT Bronzers (item_1,item_2,item_3)>
<!ELEMENT item_1 (#PCDATA)>
<!ELEMENT item_2 (#PCDATA)>
<!ELEMENT item_3 (#PCDATA)>
<!ELEMENT Nail_Paints (item_1,item_2,item_3)>
<!ELEMENT item_1 (#PCDATA)>
<!ELEMENT item_2 (#PCDATA)>
<!ELEMENT item_3 (#PCDATA)>
<!ELEMENT Lipsticks (item_1,item_2,item_3)>
<!ELEMENT item_1 (#PCDATA)>
<!ELEMENT item_2 (#PCDATA)>
<!ELEMENT item_3 (#PCDATA)>
]>
<store>
   <name>The Body Shop</name>
   <location>Shop#3 First floor,Boulevard Mall</location>
   <employees>3</employees>
   <category>
     <base>
        <item_1>Matte Clay Concealer</item_1>
        <item_2>All in one face base</item_2>
        <item_3>insta glow CC</item_3>
     </base>
     <Bronzers>
         <item_1>Shimmer waves</item_1>
        <item_2>Honey Bronze(Baked to last Bronzer)</item_2>
        <item_3>All in one Blush</item_3>
     </Bronzers>
     <Nail_Paints>
         <item_1>Matte Nail paint</item_1>
        <item_2>Wooden nail brush</item_2>
     </Nail_Paints>
     <Lipsticks>
         <item_1>Shine lip liquid</item_1>
        <item_2>Lip balm pot</item_2>
        <item_3>Matte lip liquid</item_3>
     </Lipsticks>
   </category>
</store>
```
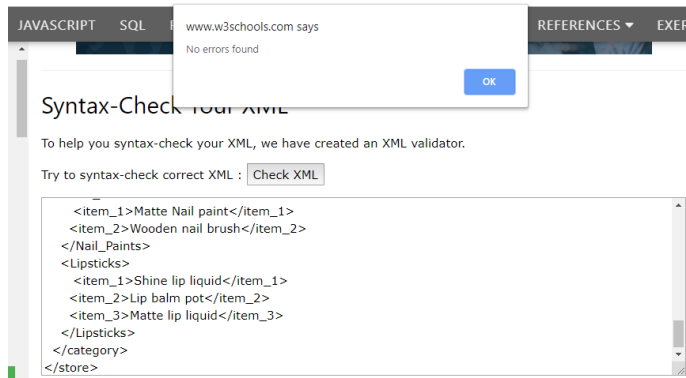
- **TASK:3**
- Write XML Schema for the following XML document and then validate the XML document along with its schema on the following website:
- http://www.utilities-online.info/xsdvalidation/#.UlFx2tKmhIg

XML

```
<?xml version="1.0" ?>
<movies>
  <movie genre="crime">
    <title lang="en">The Godfather</title>
    <year>1972</year>
    <rating>9.2</rating>
  </movie>
  <movie genre="horror">
    <title lang="en">The conjuring</title>
    <year>2013</year>
    <rating>7.5</rating>
  </movie>
  <movie genre="adventure">
    <title lang="en">Everest</title>
    <year>2015</year>
    <rating>7.4</rating>
  </movie>
</movies>
```

XML Schema:

```
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="movies">
    <xs:complexType mixed="true">
      <xs:sequence>
        <xs:element name="movie" maxOccurs="unbounded" minOccurs="0">
          <xs:complexType mixed="true">
```

```
                <xs:sequence>
                   <xs:element name="title">
                      <xs:complexType>
                         <xs:simpleContent>
                            <xs:extension base="xs:string">
                               <xs:attribute type="xs:string" name="lang" use="optional"/>
                            </xs:extension>
                         </xs:simpleContent>
                      </xs:complexType>
                   </xs:element>
                   <xs:element type="xs:short" name="year"/>
                   <xs:element type="xs:float" name="rating"/>
                </xs:sequence>
                <xs:attribute type="xs:string" name="genre" use="optional"/>
             </xs:complexType>
          </xs:element>
       </xs:sequence>
    </xs:complexType>
 </xs:element>
</xs:schema>
```

XML

```
<movies>
  <movie genre="crime">
    <title lang="en">The Godfather</title>
    <year>1972</year>
    <rating>9.2</rating>
  </movie>
  <movie genre="horror">
    <title lang="en">The conjuring</title>
    <year>2013</year>
    <rating>7.5</rating>
  </movie>
  <movie genre="adventure">
    <title lang="en">Everest</title>
    <year>2015</year>
    <rating>7.4</rating>
  </movie>

</movies>
```

XSD Schema

```
    <xs:sequence>
      <xs:element name="title">
        <xs:complexType>
          <xs:simpleContent>
            <xs:extension base="xs:string">
              <xs:attribute type="xs:string" name="lang" use="optional"/>
            </xs:extension>
          </xs:simpleContent>
        </xs:complexType>
      </xs:element>
      <xs:element type="xs:short" name="year"/>
      <xs:element type="xs:float" name="rating"/>
    </xs:sequence>
    <xs:attribute type="xs:string" name="genre" use="optional"/>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:schema>
```

[Check XML Well Formed]   [Check XSD Validity]

[Validate XML against XSD]

Result

The XML is Well Formed and Valid.