

Web Technologies

Lab Assignment –6

Write XML files using the following DTD or Schema. Validate each XML file using the online validator tool at <http://www.xmlvalidation.com/>.

1.

```
<!DOCTYPE NEWSPAPER [  
  <!ELEMENT NEWSPAPER (ARTICLE+)>  
  <!ELEMENT ARTICLE (HEADLINE,BYLINE,LEAD,BODY,NOTES)>  
  <!ELEMENT HEADLINE (#PCDATA)>  
  <!ELEMENT BYLINE (#PCDATA)>  
  <!ELEMENT LEAD (#PCDATA)>  
  <!ELEMENT BODY (#PCDATA)>  
  <!ELEMENT NOTES (#PCDATA)>  
  <!ATTLIST ARTICLE AUTHOR CDATA #REQUIRED>  
  <!ATTLIST ARTICLE EDITOR CDATA #IMPLIED>  
  <!ATTLIST ARTICLE DATE CDATA #IMPLIED>  
  <!ATTLIST ARTICLE EDITION CDATA #IMPLIED>  

```

2.

```
<!ELEMENT collection (description,recipe*)>  
<!ELEMENT description ANY>  
<!ELEMENT recipe (title,ingredient*,preparation,comment?,nutrition)>  
<!ELEMENT title (#PCDATA)>  
<!ELEMENT ingredient (ingredient*,preparation)?>  
<!ATTLIST ingredient name CDATA #REQUIRED  
  amount CDATA #IMPLIED  
  unit CDATA #IMPLIED>  
<!ELEMENT preparation (step*)>  
<!ELEMENT step (#PCDATA)>  
<!ELEMENT comment (#PCDATA)>  
<!ELEMENT nutrition EMPTY>  
<!ATTLIST nutrition protein CDATA #REQUIRED  
  carbohydrates CDATA #REQUIRED  
  fat CDATA #REQUIRED  
  calories CDATA #REQUIRED  
  alcohol CDATA #IMPLIED>
```

3.

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" >

  <xs:element name="Employee_Info" type="EmployeeInfoType" />
  <xs:complexType name="EmployeeInfoType">
    <xs:sequence>
      <xs:element ref="Employee" minOccurs="0" maxOccurs="unbounded"
/>
    </xs:sequence>
  </xs:complexType>

  <xs:element name="Employee" type="EmployeeType" />
  <xs:complexType name="EmployeeType">
    <xs:sequence >
      <xs:element ref="Name" />
      <xs:element ref="Department" />
      <xs:element ref="Telephone" />
      <xs:element ref="Email" />
    </xs:sequence>
    <xs:attribute name="Employee_Number" type="xs:int" use="required"/>
  </xs:complexType>

  <xs:element name="Name" type="xs:string" />
  <xs:element name="Department" type="xs:string" />
  <xs:element name="Telephone" type="xs:string" />
  <xs:element name="Email" type="xs:string" />

</xs:schema>
```