Experiment No. 07 : Design an XML document,
XML DTD and XML Schema for a given database.

XML Document:
```
<?xml version="1.0" standalone="no"?>
<!DOCTYPE college SYSTEM "ameya.dtd">
<college>
<University>
 <Dept>
   <did>01</did>
   <dName>Computer Science</dName>
   <HOD>Mrs. Deepika maam</HOD>
 </Dept>

 <Course>
   <cid>UCS502</cid>
   <cName>ADBMS</cName>
   <credits>4</credits>
 </Course>

 <student>
   <sid>S01</sid>
   <sName>
<Fname>Ameya</Fname>
<Lname>Amanagi</Lname>
   </sName>
   <email>ameya@gamil.com</email>
   <age>20</age>
 </student>

 <professor>
   <pid>P01</pid>
   <pName>Mrs. Mrunal maam</pName>
   <phone>1234567890</phone>
 </professor>
</University>
</college>
```

3 errors have been found!

Click on ►✖ to jump to the error. In the document, you can point at ✖ with your mouse to see the error message.
Errors in the XML document:
►✖ 3: 8 Document root element "colle", must match DOCTYPE root "college".
►✖ 3: 8 Element type "colle" must be declared.
►✖ 33:8 The end-tag for element type "colle" must end with a '>' delimiter.

XML dtd:
```
<!ELEMENT college (University+)>
<!ELEMENT University (Dept, Course, student,
professor)>
<!ELEMENT Dept (did, dName, HOD)>
<!ELEMENT did (#PCDATA)>
<!ELEMENT dName (#PCDATA)>
<!ELEMENT HOD (#PCDATA)>

<!ELEMENT Course (cid, cName, credits)>
<!ELEMENT cid (#PCDATA)>
<!ELEMENT cName (#PCDATA)>
<!ELEMENT credits (#PCDATA)>

<!ELEMENT student (sid, sName, email, age)>
<!ELEMENT sid (#PCDATA)>
<!ELEMENT sName (Fname, Lname)>
<!ELEMENT Fname (#PCDATA)>
<!ELEMENT Lname (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT age (#PCDATA)>

<!ELEMENT professor (pid, pName, phone)>
<!ELEMENT pid (#PCDATA)>
<!ELEMENT pName (#PCDATA)>
<!ELEMENT phone (#PCDATA)>
```
No errors were found

The following files have been uploaded so far:
XML document: 🖉
ameya.dtd   🖉

XML schema :

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

  <xs:element name="college">
   <xs:complexType>
    <xs:sequence>
     <xs:element name="University"
type="UniversityType"/>
    </xs:sequence>
   </xs:complexType>
  </xs:element>

  <xs:complexType name="UniversityType">
   <xs:sequence>
    <xs:element name="Dept" type="DeptType"/>
    <xs:element name="Course"
type="CourseType"/>
    <xs:element name="student"
type="StudentType"/>
    <xs:element name="professor"
type="ProfessorType"/>
   </xs:sequence>
  </xs:complexType>

  <xs:complexType name="DeptType">
   <xs:sequence>
    <xs:element name="did" type="xs:string"/>
    <xs:element name="dName"
type="xs:string"/>
    <xs:element name="HOD" type="xs:string"/>
   </xs:sequence>
  </xs:complexType>

  <xs:complexType name="CourseType">
   <xs:sequence>
    <xs:element name="cid" type="xs:string"/>
    <xs:element name="cName"
type="xs:string"/>
    <xs:element name="credits"
type="xs:integer"/>
   </xs:sequence>
  </xs:complexType>

  <xs:complexType name="StudentType">
   <xs:sequence>
    <xs:element name="sid" type="xs:string"/>
    <xs:element name="sName"
type="NameType"/>
    <xs:element name="email" type="xs:string"/>
    <xs:element name="age" type="xs:integer"/>
   </xs:sequence>
  </xs:complexType>

  <xs:complexType name="NameType">
   <xs:sequence>
    <xs:element name="Fname"
type="xs:string"/>
    <xs:element name="Lname"
type="xs:string"/>
   </xs:sequence>
  </xs:complexType>

  <xs:complexType name="ProfessorType">
   <xs:sequence>
    <xs:element name="pid" type="xs:string"/>
    <xs:element name="pName"
type="xs:string"/>
    <xs:element name="phone"
type="xs:string"/>
   </xs:sequence>
  </xs:complexType>

</xs:schema>
```

No errors were found

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XML schema: 🖉
ameya.dtd   🖉