

Ex.No: 5: Validation of XML Documents using DTD, Schema and Conversion of XML to XHTML using XSLT

- a. Given the following DTD, Generate the corresponding XML document. Also write the XML schema for that document.

```
<!ELEMENT bib (book*)>
<!ELEMENT book (title, (author+ | editor+ ), publisher, price)>
<!ATTLIST book year CDATA #REQUIRED >
<!ELEMENT author (last, first)>
<!ELEMENT editor (last, first, affiliation)>
<!ELEMENT title (#PCDATA)> <!ELEMENT last (#PCDATA)>
<!ELEMENT first (#PCDATA)> <!ELEMENT affiliation (#PCDATA)>
<!ELEMENT publisher (#PCDATA)> <!ELEMENT price (#PCDATA)>
```

- b. Write the DTD for the following XML document.

```
<pets>
  <pet>
    <name>Tilly</name>
    <age>14</age>
    <type>cat</type>
    <color>silver</color>
  </pet>
  <pet>
    <name>Amanda</name>
    <age>10</age>
    <type>dog</type>
    <color>brown</color>
  </pet>
  <pet>
    <name>Jack</name>
    <age>3</age>
    <type>cat</type>
    <color>black</color>
  </pet>
  <pet>
    <name>Blake</name>
    <age>12</age>
    <type>dog</type>
    <color>blue</color>
  </pet>
  <pet>
    <name>Loosey</name>
    <age>1</age>
    <type>cat</type>
    <color>brown</color>
  </pet>
  <pet>
    <name>Stop</name>
    <age>5</age>
    <type>pig</type>
    <color>brown</color>
  </pet>
</pets>
```

- c. Create an XML document for the following letter as per the element names – [letter, date, addressee, name, address_one, address_two, greeting, paragraph, italics, list, item, closing]. Also validate the XML file generated by writing the appropriate DTD.

December 11, 2002
Melville Dewey
Columbia University
New York, NY

Dear Melville,

I have been reading your ideas concerning the nature of librarianship, and I find them very intriguing. I would love the opportunity to discuss with you the role of the card catalog in today's libraries considering the advent to World Wide Web. Specifically, how are things like Google and Amazon.com changing our patrons' expectations of library services? Mr. Cutter and I will be discussing these ideas at the next Annual Meeting, and we are available at the follow dates/times:

- * Monday, 2-4
- * Tuesday, 3-5
- * Thursday, 1-3

We hope you can join us.

Sincerely,
James k Robert

- d. Write the DTD and XML Schema for the following XML document.

```
<bank>
  <account account-number="A-101" branch-name="Downtown"
    balance="500">
  </account>
  <account account-number="A-102" branch-name="Perryridge"
    balance="400">
  </account>
  <account account-number="A-201" branch-name="Brighton"
    balance="900">
  </account>
  <customer customer-name="Johnson" customer-street="Alma"
    customer-city="Palo Alto">
  </customer>
  <customer customer-name="Hayes" customer-street="Main"
    customer-city="Harrison">
  </customer>
  <depositor account-number="A-101" customer-name="Johnson">
  </depositor>
  <depositor account-number="A-201" customer-name="Johnson">
  </depositor>
  <depositor account-number="A-102" customer-name="Hayes">
  </depositor>
</bank>
```

- e. Convert the XML document given in Ex.b into an XHTML document for tabular presentation Using XSLT.
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