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

a. Write the XML Schema for the following XML document.

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<bank>
<accounts>
    <savings_accounts>
      <savings_account id="a1" interest="0.03">
      <balance>2500</balance>
    </savings_account>
     <savings_account id="a2" interest="0.03">
      <balance>15075</balance>
    </savings_account>
    </savings_accounts>
  <checking_accounts>
     <checking_account id="a3">
      <balance>4025</balance>
    </checking_account>
    <checking_account id="a4">
      <balance>-125</balance>
    </checking_account>
     <checking_account id="a5">
       <balance>325</balance>
    </checking_account>
   </checking_accounts>
   </accounts>
<customers>
     <customer id="c1">
  <name>Ben Richerdson</name>
  <address>Park Drive 2</address>
    </customer>
     <customer id="c2">
  <name>Marc Wretcher</name>
  <address>Mill Drive 75</address>
    </customer>
<customer id="c3">
  <name>Angel Steady</name>
  <address>Lake Sight 15</address>
    </customer>
    </customers>
    <customer_accounts>
  <customer_account c_id="c1" ac_id="a2" />
  <customer_account c_id="c1" ac_id="a3" />
  <customer_account c_id="c2" ac_id="a4" />
  <customer_account c_id="c3" ac_id="a1" />
  <customer_account c_id="c3" ac_id="a5" />
```

```
    </customer_accounts>
    </bank>
```

b. Write the DTD for the following XML document.

```
    <Books>

        <Book>

        <Isbn> 0 – 8447 – 768 </Isbn>

        <Title> XML in a Nutshell </Title>

        <Author> Harold, Elliotte Rusty </Author>

        </Book>

            <Book>

            <Isbn> 978 – 81 – 317 – 6235 – 6 </Isbn>

            <Title> Service – Oriented Architecture </Title>

            <Author> Thomas Erl </Author>

            </Book>

                <Book>

                <Isbn> 978 – 81 – 317 – 1869 – 8 </Isbn>

                <Title> XML and WebServices </Title>

                <Author> Ron Schmelzer </Author>

                </Book>

    </Books>
```

c. Convert the following XML document into an XHTML table using XSLT.

```
    <? Xml version = "1.0"  ?>

    <? Xml : stylesheet type = "text/xsl"  href = "Students.xsl"  ?>

    <Students>

            <Student>

            <name>John</name>

            <rollno>CS101</rollno>

            <department>CSE</department>

            <cgpa>9.5</cgpa>

            </Student>

                    <Student>
```

```
                    <name>Williams</name>

                    <rollno>CE034</rollno>

                    <department>CIVIL</department>

                    <cgpa>7.4</cgpa>

                    </Student>

                        <Student>

                        <name>Rohit</name>

                        <rollno>EC087</rollno>

                        <department>ECE</department>

                        <cgpa>8.7</cgpa>

                        </Student>

            </Students>
```

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

```
<? Xml version = "1.0"  ?>
 <? Xml : stylesheet type = "text/xsl"  href = "Students.xsl"  ?>

  <Employee>

  <Emp>
  <name>Roshan</name>
  <eid>E101</eid>
  <department>HR</department>
  <doj>09-SEP-1999</doj>
  <salary>68,000</salary>
  </Emp>

        <Emp>
        <name>Mary</name>
        <eid>E233</eid>
        <department>Accounts</department>
        <doj>06-AUG-2001</doj>
        <salary>24,000</salary>
        </Emp>
            <Emp>
            <name>Sunil</name>
            <eid>E521</eid>
            <department>Engineering</department>
            <doj>04-NOV-2009</doj>
            <salary>42,000</salary>
            </Emp>
  </Employee>
```

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

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