

## Program 2 (DTD) :

Write a xml schema document (xsd) document for representing the structure of employee information

### emps2.xsd:

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs=http://www.w3.org/2001/XMLSchema
  elementFormDefault="qualified"
  attributeFormDefault="unqualified">
  <xs:element name="emps" type="empstype">
    <xs:annotation>
      <xs:documentation>
        this element stores about various employees
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:simpleType name="salarytype">
    <xs:restriction base="xs:double">
      <xs:minInclusive value="5000"></xs:minInclusive>
      <xs:maxInclusive value="35000"></xs:maxInclusive>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="desigtype">
    <xs:restriction base="xs:string">
      <xs:enumeration value="projectmanager"></xs:enumeration>
      <xs:enumeration value="teamleader"></xs:enumeration>
      <xs:enumeration value="developer"></xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="deptnametype">
    <xs:restriction base="xs:string">
      <xs:enumeration value="testing"></xs:enumeration>
      <xs:enumeration value="design"></xs:enumeration>
      <xs:enumeration value="programming"></xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="workingtype">
    <xs:restriction base="xs:string">
      <xs:enumeration value="yes"></xs:enumeration>
      <xs:enumeration value="no"></xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:attributeGroup name="empattributes">
    <xs:attribute name="empno" type="xs:ID" use="required">
```

```

    </xs:attribute>
    <xs:attribute name="mgrid" type="xs:IDREF"
use="optional">
    </xs:attribute>
    <xs:attribute name="working" default="yes"
use="optional" type="workingtype">
    </xs:attribute>
</xs:attributeGroup>
<xs:complexType name="empnametype">
    <xs:sequence>
        <xs:element name="firstname" type="xs:string">
        </xs:element>
        <xs:element name="lastname" type="xs:string">
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="emptytype">
    <xs:sequence>
        <xs:element name="name" type="empnametype">
        </xs:element>
        <xs:element name="salary" type="salarytype">
        </xs:element>
        <xs:element name="desig" type="desigtype">
        </xs:element>
    </xs:sequence>
    <xs:attributeGroup
ref="empattributes"></xs:attributeGroup>
</xs:complexType>
<xs:complexType name="depttype">
    <xs:sequence>
        <xs:element name="name" type="deptnametype">
        </xs:element>
        <xs:element name="desc"
type="xs:string"></xs:element>
    </xs:sequence>
    <xs:attribute name="deptno"
use="required"></xs:attribute>

</xs:complexType>
<xs:complexType name="empstype">

    <xs:sequence>
        <xs:element name="emp" type="emptytype"
minOccurs="1" maxOccurs="20"></xs:element>
        <xs:element name="dept" type="depttype"
minOccurs="1"></xs:element>
    </xs:sequence>
</xs:complexType>
</xs:schema>

```

### Employee2.xml:

```
<?xml version="1.0"?>
<emps xmlns="http://www.w3schools.com"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="emps2.xsd" >
    <emp empno="e201" working="yes">
        <name>
            <firstname> raj </firstname>
            <lastname> kumar </lastname>
        </name>
        <salary>10000</salary>
        <desig>projectmanager</desig>
    </emp>
    <emp empno="e102" mgrid="e201" working="yes">
        <name>
            <firstname> durga </firstname>
            <lastname> rao </lastname>
        </name>
        <salary>16500</salary>
        <desig> teamlead </desig>
    </emp>
    <dept deptno="d101">
        <name>testing</name>
        <desc> tests the projects </desc>
    </dept>
</emps>
```