

EP Practical – 2

190031920

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Pre-Lab Task:

Problem Description

1. Write a program for Students information, and the XML file is created that contains Student [id, regno, name, avg, dob, time, mobilenno, distinction], the information about five students of different categories and displaying the XML file.

Sample Template:

```
<students_info>
<student>
<regno>170024</regno>
<name>ABC</name>
<avg>92</avg>
<dob>15-08-1992</dob>
<time></time>
<mobile no="9849984900"/>
<distinction>YES</distinction>
</student>
...
...
</students_info>
```

XML CODE :

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="prestyles.css"?>
<studentlist>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
```

```
<dob>27-05-2002</dob>
<time>2:00 PM</time>
<mobilen>456456</mobilen>
<distinction>Pass</distinction>
</student>
<student>
  <id>66</id>
  <regno>1920</regno>
  <name>Nikhil</name>
  <avg>98</avg>
  <dob>27-05-2002</dob>
  <time>2:00 PM</time>
  <mobilen>456456</mobilen>
  <distinction>Pass</distinction>
</student>
<student>
  <id>66</id>
  <regno>1920</regno>
  <name>Nikhil</name>
  <avg>98</avg>
  <dob>27-05-2002</dob>
  <time>2:00 PM</time>
  <mobilen>456456</mobilen>
  <distinction>Pass</distinction>
</student>
<student>
  <id>66</id>
  <regno>1920</regno>
  <name>Nikhil</name>
  <avg>98</avg>
  <dob>27-05-2002</dob>
  <time>2:00 PM</time>
  <mobilen>456456</mobilen>
  <distinction>Pass</distinction>
</student>
<student>
  <id>66</id>
  <regno>1920</regno>
```

```
<name>Nikhil</name>
<avg>98</avg>
<dob>27-05-2002</dob>
<time>2:00 PM</time>
<mobilenumber>456456</mobilenumber>
<distinction>Pass</distinction>
</student>
</studentlist>
```

CSS:

```
studentlist {
  color: white;
  background-color: rgb(0, 0, 0);
  width: 100%;
}

id,
regno,
name,
avg,
dob,
time,
mobilenumber,
distinction {
  display: block;
}

id {
  margin-top: 14px;
  font-size: 25px;
  font-weight: bold;
  color: green;
}
```

Output:

```
66
1920
Nikhil
98
27-05-2002
2:00 PM
456456
Pass

66
1920
Nikhil
98
27-05-2002
2:00 PM
456456
Pass

66
1920
Nikhil
98
27-05-2002
2:00 PM
456456
Pass

66
1920
Nikhil
98
27-05-2002
2:00 PM
456456
Pass

66
```

In Lab Task:

1. Create a DTD for Student information and the XML file contains, Student [id, regno, name, avg, dob, time, mobileno, distinction], the information about five students of different categories and displaying the XML file. for minimum 5 students.

student_dtd_internal.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE studentlist [
<!ELEMENT studentlist (student*)>
<!ELEMENT student (id, regno, name, avg, dob, time, mobileno
, distinction) >
<!ELEMENT id (#PCDATA)>
<!ELEMENT regno (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT avg (#PCDATA)>
<!ELEMENT dob (#PCDATA)>
<!ELEMENT time (#PCDATA)>
<!ELEMENT mobileno (#PCDATA)>
<!ELEMENT distinction (#PCDATA)>
]>
<studentlist>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>27-05-2002</dob>
    <time>2:00 PM</time>
    <mobileno>456456</mobileno>
    <distinction>Pass</distinction>
  </student>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>27-05-2002</dob>
    <time>2:00 PM</time>
```

```
        <mobilenumber>456456</mobilenumber>
        <distinction>Pass</distinction>
    </student>
    <student>
        <id>66</id>
        <regno>1920</regno>
        <name>Nikhil</name>
        <avg>98</avg>
        <dob>27-05-2002</dob>
        <time>2:00 PM</time>
        <mobilenumber>456456</mobilenumber>
        <distinction>Pass</distinction>
    </student>
    <student>
        <id>66</id>
        <regno>1920</regno>
        <name>Nikhil</name>
        <avg>98</avg>
        <dob>27-05-2002</dob>
        <time>2:00 PM</time>
        <mobilenumber>456456</mobilenumber>
        <distinction>Pass</distinction>
    </student>
    <student>
        <id>66</id>
        <regno>1920</regno>
        <name>Nikhil</name>
        <avg>98</avg>
        <dob>27-05-2002</dob>
        <time>2:00 PM</time>
        <mobilenumber>456456</mobilenumber>
        <distinction>Pass</distinction>
    </student>
</studentlist>
```

Student.dtd :

```
<!ELEMENT studentlist (student*)>
<!ELEMENT student (id, regno, name, avg, dob, time, mobileno
, distinction) >
<!ELEMENT id (#PCDATA)>
<!ELEMENT regno (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT avg (#PCDATA)>
<!ELEMENT dob (#PCDATA)>
<!ELEMENT time (#PCDATA)>
<!ELEMENT mobileno (#PCDATA)>
<!ELEMENT distinction (#PCDATA)>
```

student_dtd_external.xml :

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE studentlist SYSTEM "student.dtd">
<studentlist>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>27-05-2002</dob>
    <time>2:00 PM</time>
    <mobileno>456456</mobileno>
    <distinction>Pass</distinction>
  </student>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>27-05-2002</dob>
    <time>2:00 PM</time>
    <mobileno>456456</mobileno>
    <distinction>Pass</distinction>
  </student>
```

```
<student>
  <id>66</id>
  <regno>1920</regno>
  <name>Nikhil</name>
  <avg>98</avg>
  <dob>27-05-2002</dob>
  <time>2:00 PM</time>
  <mobilenumber>456456</mobilenumber>
  <distinction>Pass</distinction>
</student>
<student>
  <id>66</id>
  <regno>1920</regno>
  <name>Nikhil</name>
  <avg>98</avg>
  <dob>27-05-2002</dob>
  <time>2:00 PM</time>
  <mobilenumber>456456</mobilenumber>
  <distinction>Pass</distinction>
</student>
<student>
  <id>66</id>
  <regno>1920</regno>
  <name>Nikhil</name>
  <avg>98</avg>
  <dob>27-05-2002</dob>
  <time>2:00 PM</time>
  <mobilenumber>456456</mobilenumber>
  <distinction>Pass</distinction>
</student>
</studentlist>
```


Post Lab Task

1. Create a **XSD** for Student information and the XML file contains, **Student [id, regno, name, avg, dob, time, mobileno, distinction]**, the information about five students of different categories and displaying the XML file. for minimum 5 students.

Student.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<studentlist xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:noNamespaceSchemaLocation="student.xsd">
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>2002-05-27</dob>
    <time>02:00:00</time>
    <mobilenno>456456</mobilenno>
    <distinction>Pass</distinction>
  </student>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>2002-05-27</dob>
    <time>02:00:00</time>
    <mobilenno>456456</mobilenno>
    <distinction>Pass</distinction>
  </student>
  <student>
    <id>66</id>
    <regno>1920</regno>
    <name>Nikhil</name>
    <avg>98</avg>
    <dob>2002-05-27</dob>
    <time>02:00:00</time>
```

```

        <mobilenno>456456</mobilenno>
        <distinction>Pass</distinction>
    </student>
    <student>
        <id>66</id>
        <regno>1920</regno>
        <name>Nikhil</name>
        <avg>98</avg>
        <dob>2002-05-27</dob>
        <time>02:00:00</time>
        <mobilenno>456456</mobilenno>
        <distinction>Pass</distinction>
    </student>
    <student>
        <id>66</id>
        <regno>1920</regno>
        <name>Nikhil</name>
        <avg>98</avg>
        <dob>2002-05-27</dob>
        <time>02:00:00</time>
        <mobilenno>456456</mobilenno>
        <distinction>Pass</distinction>
    </student>
</studentlist>

```

Student.xsd:

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

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

```
  <xs:element name = 'studentlist'>
```

```
    <xs:complexType>
```

```
      <xs:sequence>
```

```
        <xs:element name = 'student' type = 'StudentType' minOccurs = '0'
```

```
        maxOccurs = 'unbounded' />
```

```

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:complexType name = "StudentType">

  <xs:sequence>

    <xs:element name = "id" type = "xs:positiveInteger"/>

    <xs:element name = "regno" type = "xs:positiveInteger"/>

    <xs:element name = "name" type = "xs:string"/>

    <xs:element name = "avg" type = "xs:positiveInteger"/>

    <xs:element name = "dob" type = "xs:date"/>

    <xs:element name = "time" type = "xs:time"/>

    <xs:element name = "mobilenno" type = "xs:positiveInteger"/>

    <xs:element name = "distinction" type = "xs:string"/>

  </xs:sequence>

</xs:complexType>

</xs:schema>

```

Output:

The screenshot displays the 'Free Online XML Validator (XSD)' interface. The top navigation bar includes links for 'Products', 'Pricing', 'Download', 'Support', and 'Company'. A sidebar on the left lists various XML and JSON tools. The main content area shows a green 'Document Valid' message, indicating the XML data was successfully validated against the provided XSD schema. Below this, there is a section titled 'XML data to validate' containing the XML code from the previous block.

Free Online XML Tools

- XML Formatter
- XML Validator
- XML Validator (XSD)
- XML Validator (RelaxNG)
- XML Validator (Schematron)
- XML to XSD
- XSD to XML

Free Online Code Generation Tools

- XSD to C#
- XSD to VB.Net

Free Online JSON Tools

- JSON Formatter
- JSON Validator
- JSON Validator
- JSON to JSON Schema
- JSON Schema to JSON

Free Online XML Validator (XSD)

Validates an XML document using an XSD schema.

Document Valid

Download Free Liquid Studio Community Edition Now!

XML data to validate

```

41      <distinction>Pass</distinction>
42    </student>
43    <student>
44      <id>66</id>
45      <regno>1920</regno>
46      <name>Nikhil</name>
47      <avg>98</avg>
48      <dob>2002-05-27</dob>
49      <time>02:00:00</time>
50      <mobilenno>456456</mobilenno>

```