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, mobileno, 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>
        <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>
        <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>
        <mobileno>456456</mobileno>
        <distinction>Pass</distinction>
    </student>
</studentlist>
```

CSS:

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

id,
regno,
name,
avg,
dob,
time,
mobileno,
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>
```

```xml
        <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>
        <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>
</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>
```

```xml
    <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>
        <mobileno>456456</mobileno>
        <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>
        <mobileno>456456</mobileno>
        <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>
        <mobileno>456456</mobileno>
        <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>
```

```
        <mobileno>456456</mobileno>
        <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>
        <mobileno>456456</mobileno>
        <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>
        <mobileno>456456</mobileno>
        <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 = "mobileno" type = "xs:positiveInteger"/>
         <xs:element name = "distinction" type = "xs:string"/>
      </xs:sequence>
   </xs:complexType>
</xs:schema>
```

Output: