pre-lab

1. XML - Extensible Markup Language

2. DTD - Document Type Definition

3. XSD - XML Schema Definition

4. **Rules for well formed XML**

   1. It must begin with XML Declaration
   2. It must have unique root element
   3. All start tags of XML document must match end tags
   4. Case sensitive
   5. All elements must be closed
   6. All elements must be properly nested
   7. All attribute values must be quoted
   8. XML entities must be used for special characters.

5. a) **XML Naming Rules**

   XML elements must be following these naming rules :

   → Element names are case-sensitive
   → Element names must start with a letter or underscore.
   → Element names cannot start with the letters xml (or XML, or Xml, etc)
   → Element names can contain letters, digits, hyphens, underscores and periods
   → Element names cannot contain spaces

b) XML Element

An XML element is everything from (including)
the element's start tag to (including) the
element's end tag

<price> 29.99 </price>

An element can contain

text

attributes

other elements

or mix of the above

c) XML attributes

It will provide additional information about
the element.

d) <! DOCTYPE >

Internal DTD

<! DOCTYPE <root-element-name> [
    <! ELEMENT element-name (child)>
]>

External DTD

1. private

<! DOCTYPE root-element-name SYSTEM "dtd file name">

2. public

<! DOCTYPE root-element-name PUBLIC "link for dtd file">

e) <! ELEMENT >

<! ELEMENT element-name (child) or
    element-name (child 1, child 2 .....) >

f)   <! ATTLIST element-name attribute-name
                              CDATA #IMPLIED >

g)   Simple Type

   It allows you to have text-based elements. It contains lesser attributes, child elements and cannot be left empty.

h)   complex Type

   It allows you to hold multiple attributes and elements. It can contain additional sub elements and can be left empty-

6. a) CDATA

   character Data- string which cannot be parsed by XML parser (No entities allowed)

   b) PCDATA

   parseable character Data which can be parsed by XML parser (Entities allowed)

   c) Default value

   If no value is given to the attribute then default value is considered as attribu value

   d) #REQUIRED

   There is no default value for this attribute but value must be assigned

   e) #IMPLIED

   There is no default value for this attribute

and that the attribute is optional

i) # FIXED

The value must be the value provided.
The value part represents the actual value.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SUBJECT CODE: 19CS2107

ENTERPRISE PROGRAMMING WORKBOOK

XML #1

Date of the Session: ___/___/___   **Time of the Session:**
_____to_____

Prerequisite:

☐ **Basic understanding of HTML tags.**

☐ **Differences between HTML and XML and its uses.**

☐ **Idea on tags of XML.**

Pre-Lab Task:

7) As you're in the very beginning stage of learning how to create a XML document.Write an XML to accept student details [Name, ID, Branch and CGPA] for minimum 5 students.

<class>

<student>

<name> ABC </name>

<id> 001 </id>

<branch> IT </branch>

<cgpa> 9 </cgpa>

</student>

<student>

Prelab.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<class>
    <student>
        <name>RADHAKRISHNA</name>
        <id>190031187</id>
        <branch>CSE</branch>
        <cgpa>9.67</cgpa>
    </student>
    <student>
        <name>PAVAN</name>
        <id>190031134</id>
        <branch>CSE</branch>
        <cgpa>9.00</cgpa>
```

```xml
        </student>
        <student>
            <name>MOHITH</name>
            <id>190031249</id>
            <branch>CSE</branch>
            <cgpa>9.00</cgpa>
        </student>
        <student>
            <name>NAVNEET</name>
            <id>190031177</id>
            <branch>CSE</branch>
            <cgpa>9.00</cgpa>
        </student>
        <student>
            <name>KRISHNA VAMSI</name>
            <id>190031527</id>
            <branch>CSE</branch>
            <cgpa>9.00</cgpa>
        </student>
</class>
```
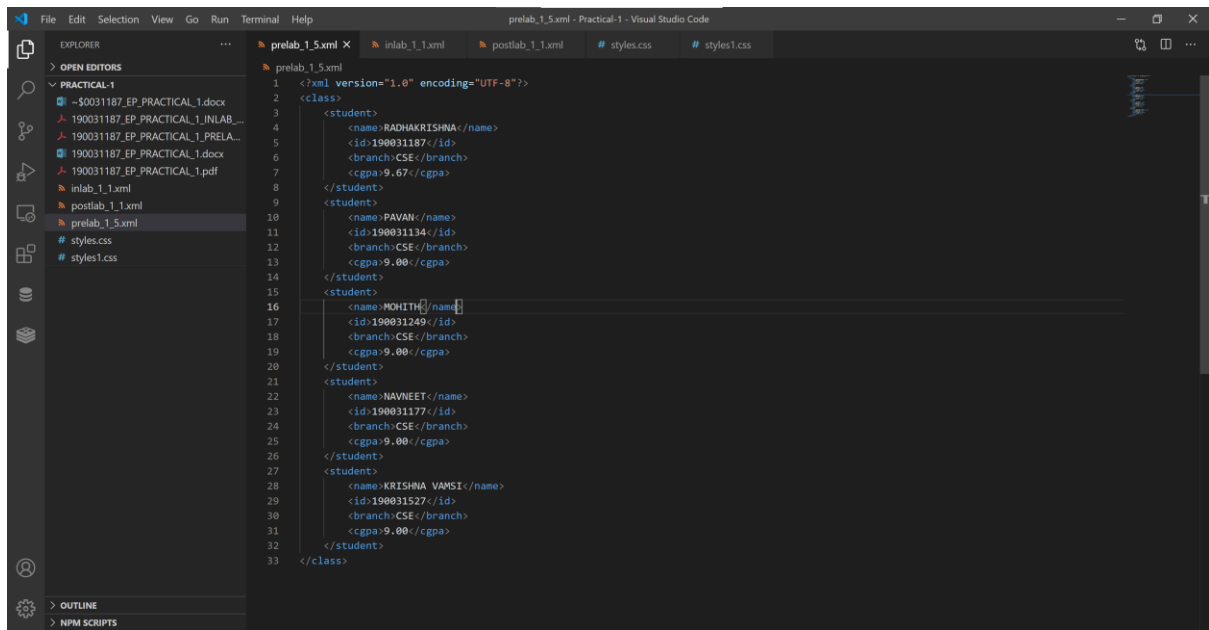
CODE

OUTPUT

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```xml
<class>
  <student>
    <name>RADHAKRISHNA</name>
    <id>190031187</id>
    <branch>CSE</branch>
    <cgpa>9.67</cgpa>
  </student>
  <student>
    <name>PAVAN</name>
    <id>190031134</id>
    <branch>CSE</branch>
    <cgpa>9.00</cgpa>
  </student>
  <student>
    <name>MOHITH</name>
    <id>190031249</id>
    <branch>CSE</branch>
    <cgpa>9.00</cgpa>
  </student>
  <student>
    <name>NAVNEET</name>
    <id>190031177</id>
    <branch>CSE</branch>
    <cgpa>9.00</cgpa>
  </student>
  <student>
    <name>KRISHNA VAMSI</name>
    <id>190031527</id>
    <branch>CSE</branch>
    <cgpa>9.00</cgpa>
  </student>
</class>
```

In Lab Task:

1) Write a program for Books store, and the XML file is created that contains the information about five books and displaying the XML file using CSS.

```
<books>

        <heading>Welcome To Enterprise Programming </heading>

        <book>

            <title>Title -: Web Programming</title>

            <author>Author -: Chrisbates</author>

            <publisher>Publisher -: Wiley</publisher>

            <edition>Edition -: 3</edition>

            <price> Price -: 300</price>

        </book>

    ….

    ….


        <books>
```

Inlab.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="styles.css"?>
<books>
    <heading>Welcome To Enterprise Programming</heading>
    <book>
        <title>Title -: Web Programming</title>
        <author>Author -: Chrisbates</author>
        <publisher>Publisher -: Wiley</publisher>
        <edition>Edition -: 3</edition>
        <price> Price -: 300</price>
    </book>
    <book>
        <title>Title -: Discrete Maths</title>
        <author>Author -: Chrisbates</author>
        <publisher>Publisher -: Wiley</publisher>
        <edition>Edition -: 3</edition>
        <price> Price -: 300</price>
    </book>
    <book>
        <title>Title -: Programming with C</title>
        <author>Author -: Dennis Ritche</author>
        <publisher>Publisher -: BalaGuru</publisher>
        <edition>Edition -: 10</edition>
```

```xml
        <price>Price -: 1500</price>
    </book>
    <book>
        <title>Title -: Chemistry in Daily life</title>
        <author>Author -: Rutherford</author>
        <publisher>Publisher -: Atom</publisher>
        <edition>Edition -: 8</edition>
        <price>Price -: 700</price>
    </book>
    <book>
        <title>Title -: Harry Potter</title>
        <author>Author -: J.K. Rowling</author>
        <publisher>Publisher -: Ray</publisher>
        <edition>Edition -: 1</edition>
        <price>Price -: 1500</price>
    </book>
</books>
```

CODE

styles.css

```css
heading{
    background-color:greenyellow;
    font-weight:bold;
    font-size:40px;
    display: block;
    text-align: center;
}

books{
```
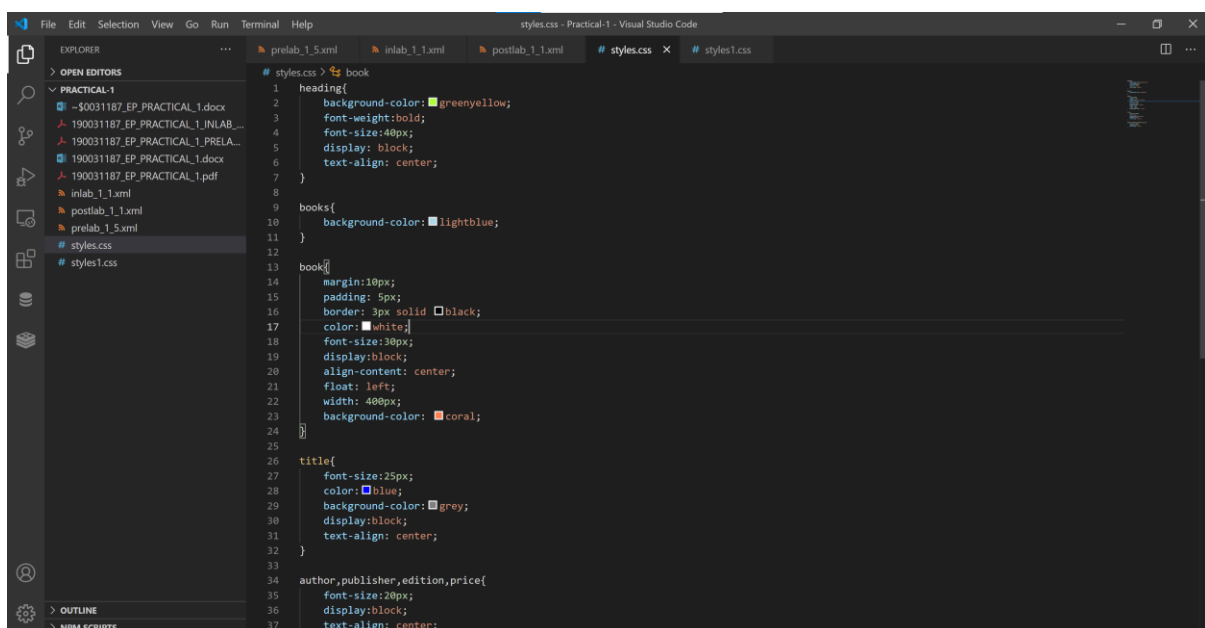
```css
        background-color:lightblue;
}

book{
    margin:10px;
    padding: 5px;
    border: 3px solid black;
    color:white;
    font-size:30px;
    display:block;
    align-content: center;
    float: left;
    width: 400px;
    background-color: coral;
}

title{
    font-size:25px;
    color:blue;
    background-color:grey;
    display:block;
    text-align: center;
}

author,publisher,edition,price{
    font-size:20px;
    display:block;
    text-align: center;
}
```

Css CODE

OUTPUT

Welcome To Enterprise Programming

Title -: Web Programming
Author -: Chrisbates
Publisher -: Wiley
Edition -: 3
Price -: 300

Title -: Discrete Maths
Author -: Chrisbates
Publisher -: Wiley
Edition -: 3
Price -: 300

Title -: Programming with C
Author -: Dennis Ritche
Publisher -: BalaGuru
Edition -: 10
Price -: 1500

Title -: Chemistry in Daily life
Author -: Rutherford
Publisher -: Atom
Edition -: 8
Price -: 700

Title -: Harry Potter
Author -: J.K. Rowling
Publisher -: Ray
Edition -: 1
Price -: 1500

Post Lab Task:

Write a program for Books store, and the XML file is created that contains the information about five books of different categories and displaying the XML file using CSS.
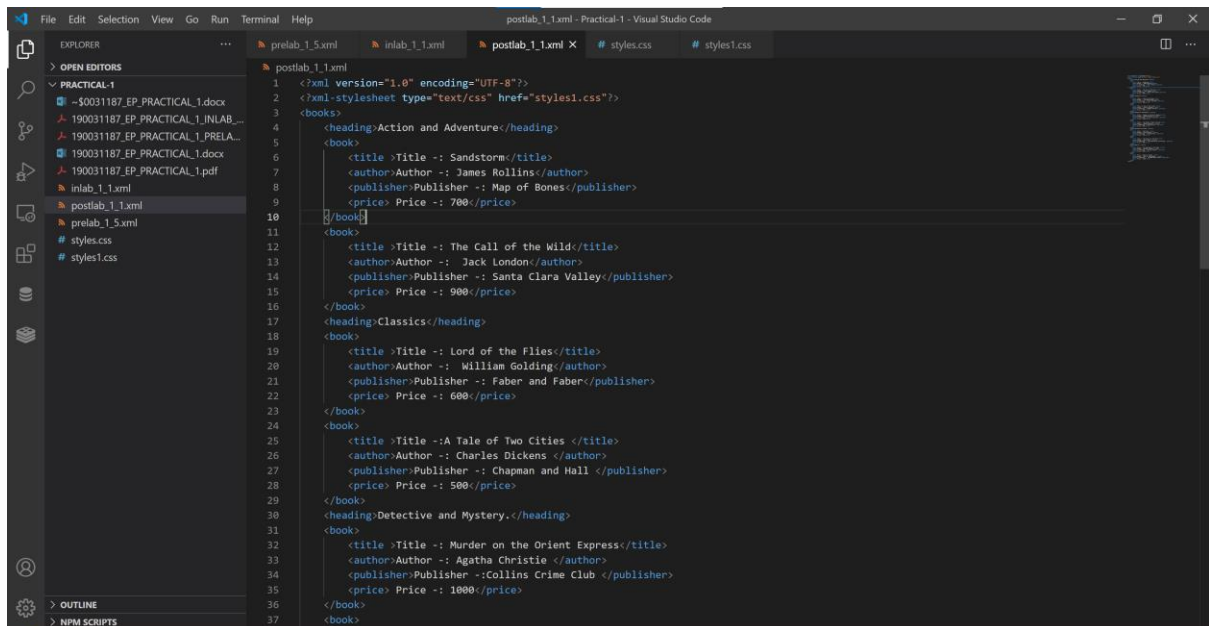
- ✓ Action and **Adventure**.
- ✓ Classics.
- ✓ Comic Book or **Graphic Novel**.
- ✓ Detective and Mystery.
- ✓ Fantasy.
- ✓ Historical Fiction.
- ✓ Horror.
- ✓ Literary Fiction.

Postlab.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="styles1.css"?>
<books>
    <heading>Action and Adventure</heading>
    <book>
        <title >Title -: Sandstorm</title>
        <author>Author -: James Rollins</author>
        <publisher>Publisher -: Map of Bones</publisher>
        <price> Price -: 700</price>
    </book>
    <book>
        <title >Title -: The Call of the Wild</title>
        <author>Author -:  Jack London</author>
        <publisher>Publisher -: Santa Clara Valley</publisher>
        <price> Price -: 900</price>
    </book>
    <heading>Classics</heading>
    <book>
        <title >Title -: Lord of the Flies</title>
        <author>Author -:  William Golding</author>
        <publisher>Publisher -: Faber and Faber</publisher>
        <price> Price -: 600</price>
    </book>
    <book>
        <title >Title -:A Tale of Two Cities </title>
        <author>Author -: Charles Dickens </author>
        <publisher>Publisher -: Chapman and Hall </publisher>
        <price> Price -: 500</price>
    </book>
    <heading>Detective and Mystery.</heading>
    <book>
        <title >Title -: Murder on the Orient Express</title>
        <author>Author -: Agatha Christie </author>
```

```xml
        <publisher>Publisher -:Collins Crime Club </publisher>
        <price> Price -: 1000</price>
    </book>
    <book>
        <title >Title -: The Murder of Roger Ackroyd</title>
        <author>Author -: Agatha Christie  </author>
        <publisher>Publisher -: HarperCollins </publisher>
        <price> Price -: 900</price>
    </book>
    <heading>Historical Fiction.</heading>
    <book>
        <title >Title -: Wolf Hall </title>
        <author>Author -: Hilary Mantel </author>
        <publisher>Publisher -: HarperCollins </publisher>
        <price> Price -: 700</price>
    </book>
    <book>
        <title >Title -: The Pillars of the Earth</title>
        <author>Author -: Ken Follett  </author>
        <publisher>Publisher -:  The Evening and the Morning </publisher>
        <price> Price -: 900</price>
    </book>
    <heading>Horror.</heading>
    <book>
        <title >Title -: The Haunting of Hill House </title>
        <author>Author -: Shirley Jackson </author>
        <publisher>Publisher -: Shirley Jackson </publisher>
        <price> Price -: 800</price>
    </book>
    <book>
        <title >Title -: House of Leaves </title>
        <author>Author -: Mark Z. Danielewski   </author>
        <publisher>Publisher -:  The Whalestoe Letters </publisher>
        <price> Price -: 1100</price>
    </book>
</books>
```

CODE

styles1.css

```css
heading{
    background-color:greenyellow;
    font-weight:bold;
    font-size:40px;
    display: block;
    text-align: center;
}
books{
    background-color:lightblue;
}

book{
    margin:10px;
    padding: 5px;
    border: 3px solid black;
    color:white;
    font-size:30px;
    display:block;
    align-content: center;
    background-color: coral;
}
title{
    font-size:25px;
    color:blue;
    background-color:grey;
    display:block;
    text-align: center;
}
author,publisher,edition,price{
    font-size:20px;
```

```
    display:block;
    text-align: center;
}
```

Css CODE

OUTPUT

Action and Adventure

Title -: Sandstorm
Author -: James Rollins
Publisher -: Map of Bones
Price -: 700

Title -: The Call of the Wild
Author -: Jack London
Publisher -: Santa Clara Valley
Price -: 900

Classics

Title -: Lord of the Flies
Author -: William Golding
Publisher -: Faber and Faber
Price -: 600

Title -:A Tale of Two Cities
Author -: Charles Dickens
Publisher -: Chapman and Hall
Price -: 500

Detective and Mystery.

Title -: Murder on the Orient Express
Author -: Agatha Christie
Publisher -:Collins Crime Club
Price -: 1000

Title -: The Murder of Roger Ackroyd
Author -: Agatha Christie
Publisher -: HarperCollins
Price -: 900

Historical Fiction.

Title -: Wolf Hall
Author -: Hilary Mantel
Publisher -: HarperCollins
Price -: 700

Title -: The Pillars of the Earth
Author -: Ken Follett
Publisher -: The Evening and the Morning
Price -: 900

Horror.

Title -: The Haunting of Hill House
Author -: Shirley Jackson
Publisher -: Shirley Jackson
Price -: 800

Title -: House of Leaves
Author -: Mark Z. Danielewski
Publisher -: The Whalestoe Letters
Price -: 1100