

Web Programming Lab

Assignment – 7

Question 1: Create and Structure an XML Document (Basic XML)

*Create an XML file named **students.xml** with the following requirements:*

1. Root element: `<college>`
2. Inside it, create at least **5 student records**.
3. Each student must have:
 - o `id` (attribute)
 - o `name`
 - o `course`
 - o `year`
 - o `email`
4. The XML document must be well-formed.

Tasks:

- Write the complete XML code.
- Ensure proper indentation.
- Open the XML file in a browser and verify its structure.

Question 2: XML with DTD Validation

*Create a **DTD file** named **students.dtd** to validate the XML file created in Question 1.*

Requirements:

1. Define elements:
 - o `college`
 - o `student`
 - o `name`
 - o `course`
 - o `year`
 - o `email`
2. Define `id` as an attribute of `student`.
3. Link the DTD file to your XML document.
4. Validate the XML document using browser or online validator.

Tasks:

- Write the DTD code.
- Modify XML file to link DTD.
- Verify validation.

Question 3: XML Schema (XSD) Validation

Create an XML Schema file named students.xsd with the following conditions:

1. id must be of type string.
2. year must be an integer.
3. email must follow string type.
4. course should be restricted to only:
 - BCA
 - B.Tech
 - B.Sc
 - MCA

Tasks:

- Write complete XSD code.
- Link the XSD with XML.
- Validate the XML document.

Question 4: Parse XML using JavaScript (DOM Parser)

Create an HTML file that:

1. Loads the students.xml file.
2. Uses XMLHttpRequest to fetch XML data.
3. Displays student details in an HTML table.
4. Add a button:
 - “Load Student Data”
 - On click, XML data should appear dynamically.

Tasks:

- Write complete HTML + JavaScript code.
- Use getElementsByTagName() or querySelector().
- Display formatted output in a table.