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| **Session** | 2025-2026 (ODD) | **Course Name** | Web Technology Lab |
| **Semester** | 3 | **Course Code** | 23CT1301 |
| **Roll No** | 75 | **Name of Student** | Shrived Rathod |

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| **Practical**  **Number** | **5[A]** |
| **Course Outcome** | 1. Understand various internet technologies. 2. Design the web pages using HTML and CSS. 3. Implement the XML technology to store the data. 4. Develop the interactive web pages using JavaScript. |
| **Aim** | [A] Introduction to XML. Program to demonstrate the use of External and Internal  DTD.(Write an XML file which will display the employee information which includes the  following: 1) Employee ID 2) Name of Employee 3) Department of Employee 4) Designation of  Employee 5) Email of Employee 6) Salary of Employee |
| **Problem**  **Definition** | To create an XML file that stores employee details and validate it using Internal and External DTD. |
| **Theory** | XML is a markup language used to store and share structured data. It allows users to define their own tags to represent information clearly. To make sure XML data follows proper rules, we use DTD (Document Type Definition). Internal DTD is written inside the same XML file, while External DTD is placed in a separate file and linked to XML. Both methods check that all tags and elements are written correctly. By applying DTD, XML becomes well-structured and valid. Employee details such as ID, name, department, designation, email, and salary can be stored with the help of XML and DTD. |
| **Procedure And**  **Execution** | 1. Write an XML file with Internal DTD inside it.  2. Add tags for employee details: id, name, department, designation, email, salary.  3. Write another XML file that links with an External DTD.  4. In the external DTD file, define the structure for employee elements.  5. Save and run the XML files in a browser or XML viewer to check structure. |

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|  | **Introduction to XML + Internal & External DTD:-**  **Step 1 — Internal DTD:-**    <?xml version="1.0" encoding="UTF-8"?>  <!DOCTYPE employees [  <!ELEMENT employees (employee+)>  <!ELEMENT employee (id, name, department, designation, email, salary)>  <!ELEMENT id (#PCDATA)>  <!ELEMENT name (#PCDATA)>  <!ELEMENT department (#PCDATA)>  <!ELEMENT designation (#PCDATA)>  <!ELEMENT email (#PCDATA)>  <!ELEMENT salary (#PCDATA)>  ]>  <employees>  <employee>  <id>201</id>  <name>Rohan Mehta</name>  <department>IT</department>  <designation>Software Engineer</designation>  <email>rohan.mehta@gmail.com</email>  <salary>55000</salary>  </employee>  <employee>  <id>202</id>  <name>Pooja Sharma</name>  <department>HR</department>  <designation>HR Manager</designation>  <email>pooja.sharma@gmail.com</email>  <salary>60000</salary>  </employee>  </employees>  **Step 2 — External DTD:-**  1.Make a new file employees.dtd  <!ELEMENT employees (employee+)>  <!ELEMENT employee (id, name, department, designation, email, salary)>  <!ELEMENT id (#PCDATA)>  <!ELEMENT name (#PCDATA)>  <!ELEMENT department (#PCDATA)>  <!ELEMENT designation (#PCDATA)>  <!ELEMENT email (#PCDATA)>  <!ELEMENT salary (#PCDATA)>  2.Make a new file A-external-dtd.xml and link the DTD  <?xml version="1.0" encoding="UTF-8"?>  <!DOCTYPE employees SYSTEM "employees.dtd">  <employees>  <employee>  <id>203</id>  <name>Vikas Jain</name>  <department>Finance</department>  <designation>Accountant</designation>  <email>vikas.jain@gmail.com</email>  <salary>48000</salary>  </employee>  <employee>  <id>204</id>  <name>Neha Verma</name>  <department>Marketing</department>  <designation>Executive</designation>  <email>neha.verma@gmail.com</email>  <salary>42000</salary>  </employee>  </employees> |

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|  | **Output:** |
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| **Output Analysis** | The XML file shows employee information in a tree format. Internal DTD validates inside the same file, and external DTD validates using a separate file. |
| **Link of**  **Student**  **Github**  **Profile** | https://github.com/ShrivedRathod/WT\_Lab.git |
| **Conclusion** | Thus, XML with employee details was created and validated successfully using both Internal and External DTD. |
| **Plag Report** | 4% |
| **Date** | 06 September 2025 |