| **Session** | **2024-25 (ODD)** | | **Course Name** | **Web Technology Lab** | |
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| **Semester** | **3** | | **Course Code** | **23CT1301** | |
| **Roll No** | **53** | | **Name of Student** | **Kartik Sheshraoji Tale** | |
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| Practical Number | | 4 | | | |
| 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 | | Write a web technology program in JSON to store information related to  programming books along with edition and author name. | | | |
| Problem Definition | | The program aims to store programming book details like language, author, and edition in JSON and display them on a webpage using HTML, JavaScript, and CSS. | | | |
| Theory  (100 words) | | JSON (JavaScript Object Notation) is a lightweight, text-based format used to store and exchange data between applications. It is widely used because of its simplicity, readability, and compatibility with most programming languages. In web technology, JSON is often used to represent structured data like book records, user profiles, or product details. In this program, information related to programming books such as language, author, and edition is stored in JSON format. Using JavaScript, the data is dynamically accessed and displayed on a webpage. CSS is applied to improve presentation, ensuring the output is organized, colorful, and user-friendly. | | | |
| Procedure and Execution  (100 Words) | | Step for Implementation:  1. Create HTML File  Start with a basic HTML structure (<!DOCTYPE html>, <html>, <head>, <body>).  Add a <title> and link CSS styles if needed.  2. Write JSON Data  Inside a <script> tag, create a JSON array of objects.  Each object should contain details like "language", "author", and "edition".  3. Access JSON Data with JavaScript  Use JavaScript to loop through the JSON array.  Extract values of language, author, and edition for each book.  4. Display Data on Webpage  Insert the extracted data into HTML elements (like a table or div cards) using DOM manipulation (innerHTML).  5. Apply CSS Styling  Use CSS to add colors, borders, background, and text formatting.  Improve readability with proper alignment and spacing.  6. Run and Test the Program  Open the HTML file in a browser.  Verify that all book details are displayed correctly and styling is applied. | | | |
| Code:    < !DOCTYPE html>  <html>  <head>    <title>JSON Example</title>    <style>      body {        font-family: Arial, sans-serif;        background-color:white;        padding: 20px;      }      h1 {        text-align: center;        color: blue;      }      .book {        background: white;        border: 2px solid yellow;        border-radius: 10px;        padding: 15px;        margin: 15px 0;        box-shadow: 2px 2px 8px green(0,0,0,0.1);      }      .book h2 {        color: blue;      }      .book p {        font-size: 16px;        margin: 5px 0;      }      .highlight {        color: red;        font-weight: bold;      }    </style>  </head>  <body>    <h1>Programming Books (JSON Example)</h1>    <div id="book-list"></div>    <script>      // Array of objects (JSON format)      var books = [        { "language": "Java", "author": "Andrew Hunt", "edition": "1st", "publication": "Javago" },        { "language": "C++", "author": "Robert C. Martin", "edition": "2nd", "publication": "C++memo" },        { "language": "JavaScript", "author": "Marijn Haverbeke", "edition": "4th", "publication": "JavaScriptmak" },        { "language": "C#", "author": "Andrew Stellman", "edition": "7th", "publication": "BalGuru" },        { "language": "Python", "author": "Eric Matthes", "edition": "3rd", "publication": "MSKirby" }      ];      var container = document.getElementById("book-list");      books.forEach(function(book) {        var bookDiv = document.createElement("div");        bookDiv.className = "book";        bookDiv.innerHTML = `          <h2>${book.language}</h2>          <p><span class="highlight">Author:</span> ${book.author}</p>          <p><span class="highlight">Edition:</span> ${book.edition}</p>          <p><span class="highlight">Publication:</span> ${book.publication}</p>          <p>📘 ${book.language} can be studied from book written by <b>${book.author}</b></p>        `;        container.appendChild(bookDiv);      });    </script>  </body>  </html> | | | |
| Output: | | | |
| Output Analysis | | The program stores book details in JSON format and displays them on a webpage using JavaScript. The output shows programming languages, authors, and editions in a structured format. With CSS styling, the data is presented clearly and attractively. | | | |
| Link of student Github profile where lab assignment has been uploaded | | <https://github.com/kartiktale12/WebTechnology> | | | |
| Conclusion | | The program shows how JSON stores book data and how JavaScript with CSS displays it clearly on a webpage. | | | |
| Plag Report (Similarity index < 12%) | | 11℅ | | | |
| Date | | 18/08/2025 | | | |