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| **Session** | **2024-25 (ODD)** | **Course Name** | **Web Technology Lab** |
| **Semester** | **3** | **Course Code** | **23CT1301** |
| **Roll No** | **61** | **Name of Student** | **Oman Chavhan** |

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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 program in JSON to store information related to programming books along with edition and author name |
| Problem Definition | Write a program in JSON to store information related to programming books along with edition and author name |
| Theory  (100 words) | JSON, short for JavaScript Object Notation, is a lightweight format for storing and sharing data. It is widely used because it is easy to read for humans and simple for machines to process. JSON represents data in key–value pairs, where keys are strings and values can be numbers, text, arrays, objects, or booleans. It is language-independent but closely related to JavaScript syntax, making it popular in web development. JSON is often used for communication between servers and clients, replacing heavier formats like XML. Its simplicity, flexibility, and efficiency make it a standard for modern data exchange. |
| Procedure and Execution  (100 Words) | Step for Implementation:  To implement JSON, start by creating data in a structured format using key–value pairs inside curly braces. Each key must be a string, while values can be strings, numbers, arrays, objects, or booleans. Save the data in a .json file if used externally, or write it directly within a program. Next, load or parse the JSON data depending on the programming language. In JavaScript, JSON.parse() converts JSON text to an object, and JSON.stringify() changes an object into JSON. After parsing, the data can be accessed, modified, and transferred between client and server for smooth communication.. |

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|  | <!DOCTYPE html>  <html lang="en">    <head>      <meta charset="UTF-8" />      <meta name="viewport" content="width=device-width, initial-scale=1.0" />      <title>JSON example</title>        <style>    body {      background-color: rgb(173, 147, 147);      font-family: Arial, sans-serif;      color: #333;      padding: 20px;    }    h1 {      color: rgb(128, 77, 89);      text-align: center;      background-color: beige;    }    h3 {      color: #a85b5b;      margin-left: 20px;      text-align: center;      background-color: azure;    }    .separator {      border-top: 2px solid #9b4b4b;      margin: 20px 0;    }  </style>      <script language="javascript">        var object1 = { language: "Java", author: "herbert schildt",year:"1995" };        document.write("<h1>JSON with JavaScript example</h1>");        document.write("<br>");        document.write("<h3>Language = " + object1.language + "</h3>");        document.write("<h3>Author = " + object1.author + "</h3>");        document.write("<h3>year = " + object1.year + "</h3>");        document.write("<hr />");          var object2 = { language: "C++", author: "E-Balagurusamy", year:"1979"};        document.write("<br>");        document.write("<h3>Language = " + object2.language + "</h3>");        document.write("<h3>Author =" + object2.author + "</h3>");        document.write("<h3>year = " + object2.year + "</h3>");        document.write("<hr />");        var object3 = { language: "python", author: "Guido van Rossum", year:"1991"};        document.write("<br>");        document.write("<h3>Language = " + object3.language + "</h3>");        document.write("<h3>Author =" + object3.author + "</h3>");        document.write("<h3>year = " + object3.year + "</h3>");        document.write("<hr />");        var object4 = { language: "C", author: "Dennis Ritchie", year:"1978"};        document.write("<br>");        document.write("<h3>Language = " + object4.language + "</h3>");        document.write("<h3>Author =" + object4.author + "</h3>");        document.write("<h3>year = " + object4.year + "</h3>");        document.write("<hr />");        document.write( object1.language + " programming language can be studied " +"frombook written by " +object1.author +" in year"+ object1.year);        document.write("<br>");        document.write("<hr />");        document.write( object2.language + " programming language can be studied " +"frombook written by " +object2.author +" in year"+ object2.year);        document.write("<hr />");        // document.write("<br>");        document.write( object3.language + " programming language can be studied " +"frombook written by " +object3.author +" in year"+ object3.year);        // document.write("<br>");        document.write("<hr />");        document.write( object4.language + " programming language can be studied " +"frombook written by " +object4.author +" in year"+ object4.year);        document.write("<hr />");        document.write("<br>");      </script>    </head>    <body></body>  </html> |

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|  | Output: |
| Output Analysis | **Code run successfully.** |
| Link of student Github profile where lab assignment has been uploaded |  |
| Conclusion | **Implemented JSON concept successfully.** |
| Plag Report  (Similarity index <  12%) |  |
| Date | **24/08/2025** |