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| **Session** | **2024-25 (ODD)** | | **Course Name** | **Web Technology Lab** | |
| **Semester** | **3** | | **Course Code** | **23CT1301** | |
| **Roll No** | **53** | | **Name of Student** | **Kartik Sheshraoji Tale** | |
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| Practical Number | | 8 | | | |
| 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] Write a program in JavaScript to demonstrate the use of While and For Loop.  [B] Write a program in JavaScript to demonstrate the use of Conditional Statements and Functions. | | | |
| Problem Definition | | To write a JavaScript program that demonstrates the use of **while** and **for** loops for repeating tasks or printing numbers. To write a JavaScript program that uses **conditional statements** and **functions** to make decisions based on given conditions. | | | |
| Theory  (100 words) | | In JavaScript, **loops** and **conditional statements** are important control structures. A **for loop** is used when the number of iterations is known, while a **while loop** executes repeatedly as long as a specified condition remains true. They help in performing repetitive tasks efficiently without rewriting code. **Conditional statements** like if, else if, and else allow the program to make decisions based on conditions. **Functions** are reusable blocks of code designed to perform specific tasks. Together, loops, conditions, and functions make programs logical, organized, and efficient by controlling the flow of execution based on given situations. | | | |
| Procedure and Execution  (100 Words) | | Step for Implementation:  [A]  1. Start the program.  2. Declare a variable to use in the loop.  3. Use a **while loop** to print numbers or repeat a task until a condition is false.  4. Use a **for loop** to perform the same task for a fixed number of times.  5 Display the output on the web page or console.  6 End the program.  [B]  1. Start the program.  2. Define a **function** to perform a specific task.  3. Use **if, else if, and else** statements inside the function to check conditions.  4. Call the function with different inputs.  5. Display the result based on the condition.  6. End the program. | | | |
| Code:  [A]  <!DOCTYPE html>  <html>  <head>    <title>While and For Loop</title>  </head>  <body>    <h2>Demonstration of While and For Loop</h2>    <script>      document.write("<b>Using While Loop:</b><br>");      let i = 1;      while (i <= 5) {        document.write("Number is: " + i + "<br>");        i++;      }      document.write("<br><b>Using For Loop:</b><br>");      for (let j = 1; j <= 5; j++) {        document.write("Square of " + j + " is: " + (j \* j) + "<br>");      }    </script>  </body>  </html>  [B]  <!DOCTYPE html>  <html>  <head>    <title>Conditional Statements and Functions</title>  </head>  <body>    <h2>Conditional Statements and Functions in JavaScript</h2>    <script>      function checkNumber(num) {        if (num > 0) {          document.write("The number " + num + " is Positive.<br>");        } else if (num < 0) {          document.write("The number " + num + " is Negative.<br>");        } else {          document.write("The number is Zero.<br>");        }      }      checkNumber(10);      checkNumber(-5);      checkNumber(0);    </script>  </body>  </html> | | | |
| Output: [A]  [B] | | | |
| Output Analysis | | The program prints numbers using **while** and **for** loops, showing that both can repeat tasks efficiently until the condition becomes false. The program checks conditions using **if-else** inside a function and displays correct results based on input, proving proper decision-making in JavaScript. | | | |
| Link of student Github profile where lab assignment has been uploaded | | <https://github.com/kartiktale12/WebTechnology> | | | |
| Conclusion | | Loops make programs efficient by repeating tasks automatically. **While** and **for** loops help perform repetitive operations without writing extra code. Functions and conditional statements help in **decision-making** and **code reusability**, making programs organized and logical. | | | |
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| Date | | 27/10/2025 | | | |