



Experiment No.4
Implement vanilla JavaScript for form validations with DOM elements.
Date of Performance:
Date of Submission:
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Experiment 4

Aim: To implement Javascript basics

Theory:

JavaScript is a lightweight, cross-platform, and interpreted compiled programming language which is also known as the scripting language for web pages. It is well-known for the development of web pages, many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments. Javascript is both an imperative and declarative type of language. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

Code:

Html Code:

```
<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

  </head>

  <body>

    <h2>JavaScript variables</h2>

    <p id="demo"></p>

    <h2>Javascript Function</h2>

    <p id="demo1"></p>

    <h2>Javascript Condition(if..else)</h2>

    <p id="demo2"></p>

    <h2>Javascript loop(for loop)</h2>

    <p id="demo3"></p>

    <h2>JavaScript events</h2>

    <button onclick="document.getElementById('id1').style.color = 'red'">

      Click Me!
```



```
</button>
<p id="demo4"></p>
<h2>Javascript DOM CSS</h2>
<h1 id="id1">My Heading 1</h1>
<p id="p1">Hello World!</p>
<p>The paragraph above was changed by a script.</p>
<p>Please input a number between 1 and 10:</p>
<input id="num">
<button type="button" onclick="myFunction()">Submit</button>
<p id="demo5"></p>
<script src="first.js"></script>
</body>
</html>
```

Javascript Code:

```
var x = 5;
var y = 6;
var z = x + y;
document.getElementById("demo").innerHTML = "The value of z is: " + z;
function myFunction(p1, p2) {
  return p1 * p2;
}
document.getElementById("demo1").innerHTML = "the value of function multiplication is:" +
  myFunction(4, 3);
var a = 4;
var b = "";
if (a % 2 == 0) {
  b = "even no";
} else {
  b = "odd no";
}
```



```
document.getElementById("demo2").innerHTML = "the number is: " + b;

const cars = ["python", "java", "C", "C++", "HTML", "React"];

let text = "";

for (let i = 0; i < cars.length; i++)
    { text += cars[i] + "<br>";
    }

document.getElementById("demo3").innerHTML = text;

document.getElementById("p1").innerHTML = "Mokshad Sankhe";

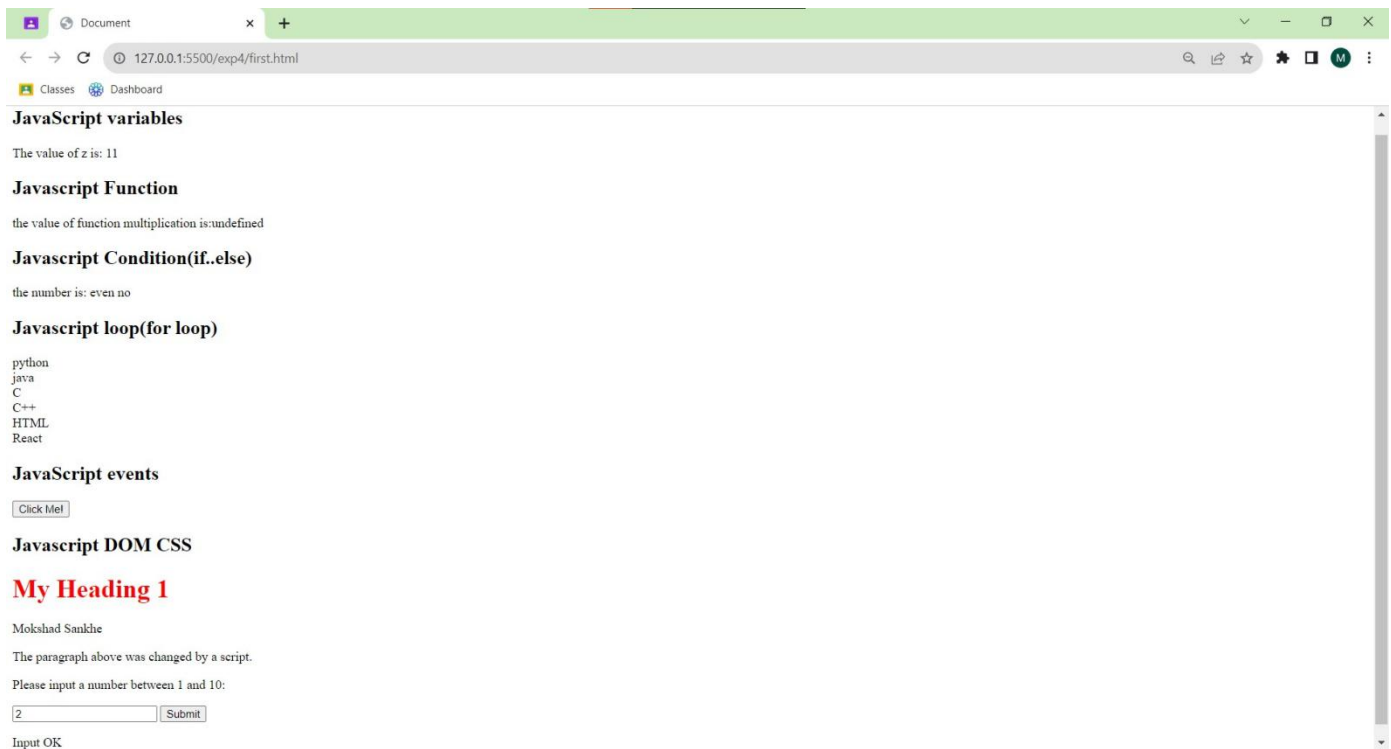
function myFunction() {
    // Get the value of the input field with id="numb"
    let num = document.getElementById("num").value;
    // If num is Not a Number or less than one or greater than 10
    let text;
    if (isNaN(num) || num < 1 || num > 10)
        { text = "Input not valid";
        } else {
            text = "Input OK";
        }
    document.getElementById("demo5").innerHTML = text;
}
```



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Output:



Conclusion:

The JavaScript DOM is a fundamental aspect of web development, enabling the creation of dynamic and interactive web experiences. By providing a structured representation of a document and a comprehensive API for manipulating it, the DOM empowers developers to build responsive and engaging interfaces. Mastery of DOM manipulation is essential for any web developer, serving as the foundation for both basic scripting tasks and advanced application development. As web technologies continue to evolve, the principles of DOM interaction remain a cornerstone of effective web development.



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