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Internet Programming

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Experiment no. 6

Title: Design a Web pages using Javascript Variables, Operators, Conditions, Loops, Functions, Events, Classes and Objects.

Problem Definition: create a web page

Pre-requisites: HTML and CSS

Theory/Procedure:

4 Ways to Declare a JavaScript Variable:

Using var

Using let

Using const

Using nothing

What are Variables?

Variables are containers for storing data (storing data values).

Types of JavaScript Operators

There are different types of JavaScript operators:

Arithmetic Operators

Assignment Operators

Comparison Operators

Logical Operators

Conditional Operators

Type Operators

A JavaScript function is a block of code designed to perform a particular task.

A JavaScript function is executed when "something" invokes it (calls it).

ECMAScript 2015, also known as ES6, introduced JavaScript Classes.

JavaScript Classes are templates for JavaScript Objects.

JavaScript Class Syntax

Use the keyword class to create a class.

Always add a method named constructor():

Program:

```
<!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>
  <script>
    document.write("<h1>Javascript Variables</h1>");
    document.write("This <strong>text</strong> is written using javascript<br>");
    name = "Zaid"
    surname = "Ansari"
    document.write("My name is "+name+" "+surname)

    document.write("<h1>Javascript Operators</h1>");
    const x = 4;
    const y = 5;
    const z = y + x;
    document.write("x = "+x+" y = "+y+"<br>z = x + y = "+z)
    document.write("<h1>Javascript Conditionals</h1>");
    const age = 17;
    document.write("Age = "+age);
    if (age>=18){
      document.write("<br>You can drive")
    }
    else{
      document.write("<br>You cannot drive")
    }

    document.write("<h1>Javascript Loops</h1>")

    for (i=0;i<=5;i++){
      document.write("Looped "+(i+1)+" time<br>")
    }

    document.write("<h1>Javascript Functions</h1>")

    function hello_world(name){
      document.write("Hello! Welcome "+name)
    }
    hello_world("Mohammad")
  </script>
</body>
</html>
```

```
    document.write("<h1>Javascript Events</h1>")
</script>
<button>Change Color</button>
<script>
    const btn = document.querySelector('button');

    function random(number) {
        return Math.floor(Math.random() * (number+1));
    }

    btn.addEventListener('click', () => {
        const rndCol = `rgb(${random(255)}, ${random(255)}, ${random(255)})`;
        document.body.style.backgroundColor = rndCol;
    });

    document.write("<h1>Javascript Class and Objects</h1>")

    class Car {
        constructor(name, year){
            this.name = name;
            this.year = year;
        }
    }

    let mycar1 = new Car("Audi", 2022);
    let mycar2 = new Car("BMW", 2021);
    document.write(mycar1.name + " " + mycar1.year+"<br>")
    document.write(mycar2.name + " " + mycar2.year)
</script>

</body>
</html>
```

Output:

Javascript Variables

This **text** is written using javascript
My name is Zaid Ansari

Javascript Operators

$x = 4$ $y = 5$
 $z = x + y = 9$

Javascript Conditionals

Age = 17
You cannot drive

Javascript Loops

Looped 1 time
Looped 2 time
Looped 3 time
Looped 4 time
Looped 5 time
Looped 6 time

Javascript Functions

Hello! Welcome Mohammad

Javasript Events

Change Color

Javascript Class and Objects

Audi 2022
BMW 2021

Reference:

<https://www.w3schools.com/js>