Complete JavaScript and HTML Code Scripts (1 to 40)

1. JavaScript to perform Arithmetic Operations

```
<!DOCTYPE html>

<html>

<body>

  <script>

    let a = 10, b = 5;

    console.log("Addition: " + (a + b));

    console.log("Subtraction: " + (a - b));

    console.log("Multiplication: " + (a * b));

    console.log("Division: " + (a / b));

  </script>

</body>

</html>
```

2. JavaScript to display simple messages

```
<!DOCTYPE html>

<html>

<body>

  <script>

    alert("Hello, welcome to JavaScript!");

    console.log("This is a simple message.");

  </script>

</body>

</html>
```

3. JavaScript to find Even and Odd Numbers

```
<!DOCTYPE html>

<html>

<body>

  <script>

    let num = 7;

    console.log(num % 2 === 0 ? "Even" : "Odd");

  </script>

</body>

</html>
```

4. JavaScript to check if a number is positive or negative

```
<!DOCTYPE html>

<html>

<body>

  <script>

    let num = -5;

    console.log(num > 0 ? "Positive" : num < 0 ? "Negative" : "Zero");

  </script>

</body>

</html>
```

5. JavaScript to perform 4 Array functions

```
<!DOCTYPE html>

<html>

<body>

  <script>

    let arr = [5, 10, 15, 20];

    console.log(arr.length);       // Length of array

    console.log(arr.join('-'));    // Join elements

    console.log(arr.reverse());    // Reverse the array

    arr.push(25);                  // Add new element

    console.log(arr);

  </script>

</body>

</html>
```

6. JavaScript to perform 4 String functions

```
<!DOCTYPE html>

<html>

<body>

  <script>

    let str = "JavaScript";

    console.log(str.length);       // Length of string

    console.log(str.toUpperCase()); // Convert to uppercase

    console.log(str.substring(0, 4)); // Extract substring

    console.log(str.replace("Script", "Code")); // Replace part of string

  </script>

</body></html>
```

7. JavaScript to find the cube of a number using a function

```
<!DOCTYPE html>

<html>

<body>

  <script>

    function cube(num) {

      return num * num * num;

    }

    console.log("Cube: " + cube(3));

  </script>

</body>

</html>
```

8. JavaScript to find the multiplication of a number using a function

```
<!DOCTYPE html>

<html>

<body>

  <script>

    function multiply(a, b) {

      return a * b;

    }

    console.log("Multiplication: " + multiply(4, 5));

  </script>

</body>

</html>
```

9. JavaScript to demonstrate use of Switch-case (3 cases)

```
<!DOCTYPE html>
<html>
<body>
  <script>
    let choice = 2;
    switch (choice) {
      case 1:
        console.log("Option 1 Selected");
        break;
      case 2:
        console.log("Option 2 Selected");
        break;
      case 3:
        console.log("Option 3 Selected");
        break;
      default:
        console.log("Invalid Option");
    }
  </script>
</body>
</html>
```

10. HTML webpage for a simple registration form with major controls

```
<!DOCTYPE html>

<html>

<body>

  <form>

    <label>First Name:</label>

    <input type="text" name="firstname" /><br>

    <label>Last Name:</label>

    <input type="text" name="lastname" /><br>

    <label>Email:</label>

    <input type="email" name="email" /><br>

    <input type="submit" value="Register" />

  </form>

</body>

</html>
```

11. JavaScript to demonstrate use of onBlur Event

```
<!DOCTYPE html>

<html>

<body>

  <form>

    <label>Enter your name:</label>

    <input type="text" onblur="alert('Input field lost focus!')" />

  </form>

</body>

</html>
```

12. JavaScript to demonstrate use of onFocus Event

```
<!DOCTYPE html>

<html>

<body>

  <form>

    <label>Enter your email:</label>

    <input type="email" onfocus="alert('Input field is focused!')" />

  </form>

</body>

</html>
```

13. JavaScript to demonstrate use of onChange Event

```
<!DOCTYPE html>

<html>

<body>

  <form>

    <label>Select your country:</label>

    <select onchange="alert('You selected: ' + this.value)">

      <option value="India">India</option>

      <option value="USA">USA</option>

      <option value="UK">UK</option>

    </select>

  </form>

</body>

</html>
```

14. JavaScript to demonstrate 4 Date class functions

```
<!DOCTYPE html>

<html>

<body>

  <script>

    let now = new Date();

    console.log("Current Date: " + now.toDateString());

    console.log("Current Time: " + now.toTimeString());

    console.log("Year: " + now.getFullYear());

    console.log("Month: " + (now.getMonth() + 1)); // Months are 0-based

  </script>

</body>

</html>
```

15. JavaScript to demonstrate 4 Math class functions

```
<!DOCTYPE html>

<html>

<body>

  <script>

    console.log("Square Root of 16: " + Math.sqrt(16));

    console.log("Power (2^3): " + Math.pow(2, 3));

    console.log("Random Number (0-1): " + Math.random());

    console.log("Absolute Value of -5: " + Math.abs(-5));

  </script>

</body>

</html>
```

16. JavaScript to demonstrate use of Window.open() method

```
<!DOCTYPE html>

<html>

<body>

  <button onclick="openNewWindow()">Open Google</button>

  <script>

    function openNewWindow() {

      window.open("https://www.google.com", "_blank", "width=500,height=500");

    }

  </script>

</body>

</html>
```

17. JavaScript to create a Cookie

```
<!DOCTYPE html>

<html>

<body>

  <script>

    document.cookie = "username=SAP; expires=Fri, 31 Dec 2024 12:00:00 UTC; path=/";

    console.log("Cookie Set: " + document.cookie);

  </script>

</body>

</html>
```

18. JavaScript to find if a character is a vowel using a Regular Expression

```
<!DOCTYPE html>

<html>

<body>

  <script>

    function isVowel(char) {

      return /^[aeiouAEIOU]$/.test(char);

    }

    console.log("Is 'a' a vowel? " + isVowel('a'));

    console.log("Is 'b' a vowel? " + isVowel('b'));

  </script>

</body>

</html>
```

19. JavaScript to find if a character is uppercase using a Regular Expression

```
<!DOCTYPE html>

<html>

<body>

  <script>

    function isUpperCase(char) {

      return /^[A-Z]$/.test(char);

    }

    console.log("Is 'A' uppercase? " + isUpperCase('A'));

    console.log("Is 'a' uppercase? " + isUpperCase('a'));

  </script>

</body>

</html>
```

20. JavaScript to find if a character is lowercase using a Regular Expression

```
<!DOCTYPE html>

<html>

<body>

  <script>

    function isLowerCase(char) {

      return /^[a-z]$/.test(char);

    }

    console.log("Is 'a' lowercase? " + isLowerCase('a'));

    console.log("Is 'A' lowercase? " + isLowerCase('A'));

  </script>

</body>

</html>
```

21. HTML webpage with Rollover Effect

```
<!DOCTYPE html>

<html>

<body>

  <img src="image1.jpg" onmouseover="this.src='image2.jpg'"
onmouseout="this.src='image1.jpg'" alt="Image" width="200">

</body>

</html>
```

22. HTML webpage for implementing a pull-down menu

```
<!DOCTYPE html>

<html>

<body>

  <form>

    <label>Select an option:</label>
```

```
      <select>
        <option value="Option1">Option 1</option>
        <option value="Option2">Option 2</option>
        <option value="Option3">Option 3</option>
      </select>
    </form>
</body>
</html>
```

23. HTML webpage to disable mouse right-click

```
<!DOCTYPE html>
<html>
<body oncontextmenu="return false">
  <h1>Right-click is disabled on this page!</h1>
</body>
</html>
```

24. HTML webpage for creating rotating banners

```
<!DOCTYPE html>
<html>
<body>
  <img id="banner" src="image1.jpg" alt="Banner" width="500">
  <script>
    const images = ["image1.jpg", "image2.jpg", "image3.jpg"];
    let index = 0;
    setInterval(() => {
      index = (index + 1) % images.length;
      document.getElementById("banner").src = images[index];
    }, 3000);
  </script>
</body>
</html>
```

25. HTML webpage for creating a slideshow using banners

```
<!DOCTYPE html>
<html>
<body>
  <img id="slideshow" src="image1.jpg" alt="Slideshow" width="500">
  <button onclick="previous()">Previous</button>
  <button onclick="next()">Next</button>
  <script>
    const slides = ["image1.jpg", "image2.jpg", "image3.jpg"];
    let currentIndex = 0;
    function updateSlide() {
      document.getElementById("slideshow").src = slides[currentIndex];
    }
    function previous() {
      currentIndex = (currentIndex - 1 + slides.length) % slides.length;
      updateSlide();
    }
    function next() {
      currentIndex = (currentIndex + 1) % slides.length;
      updateSlide();
    }
  </script>
</body>
</html>
```

26. JavaScript to accept a full name and separate it into first, middle, and last names

```
<!DOCTYPE html>
<html>
<body>
  <form>
    <label>Enter Full Name:</label>
    <input type="text" id="fullname" />
    <button type="button" onclick="processName()">Submit</button>
  </form>
  <p id="output"></p>
  <script>
    function processName() {
      let name = document.getElementById("fullname").value.trim();
      let parts = name.split(" ");
      let first = parts[0] || "";
      let middle = parts.length > 2 ? parts[1] : "";
      let last = parts.length > 1 ? parts[parts.length - 1] : "";
      document.getElementById("output").innerText =
        `First: ${capitalize(first)}, Middle: ${capitalize(middle)}, Last: ${capitalize(last)}`;
    }
    function capitalize(str) {
      return str.charAt(0).toUpperCase() + str.slice(1).toLowerCase();
    }
  </script>
</body>
```

```
</html>
```

27. JavaScript to replace a specified string value with another

```
<!DOCTYPE html>
<html>
<body>
  <script>
    let str = "I will fail";
    let updatedStr = str.replace("fail", "pass");
    console.log("Original: " + str);
    console.log("Updated: " + updatedStr);
  </script>
</body>
</html>
```

28. JavaScript slideshow with next/previous transition between slides

```
<!DOCTYPE html>
<html>
<body>
  <img id="slide" src="image1.jpg" alt="Slideshow" width="500">
  <button onclick="prev()">Previous</button>
  <button onclick="next()">Next</button>
  <script>
    const images = ["image1.jpg", "image2.jpg", "image3.jpg"];
    let idx = 0;
    function update() {
      document.getElementById("slide").src = images[idx];
    }
```

```
    function prev() {
      idx = (idx - 1 + images.length) % images.length;
      update();
    }
    function next() {
      idx = (idx + 1) % images.length;
      update();
    }
  </script>
</body>
</html>
```

29. HTML script for a drop-down list displaying city descriptions and images

```
<!DOCTYPE html>
<html>
<body>
  <form>
    <label>Select City:</label>
    <select onchange="showCityInfo(this.value)">
      <option value="New Delhi">New Delhi</option>
      <option value="Mumbai">Mumbai</option>
      <option value="Bangalore">Bangalore</option>
    </select>
  </form>
  <table border="1">
    <tr>
      <td>Description</td>
```

```
        <td>Image</td>
      </tr>
      <tr>
        <td id="description"></td>
        <td><img id="cityImage" src="" alt="City" width="200"></td>
      </tr>
    </table>
    <script>
      const cityData = {
        "New Delhi": { desc: "Capital city of India, known for its rich history.", img: "delhi.jpg"
},
        "Mumbai": { desc: "Financial capital of India, home to Bollywood.", img: "mumbai.jpg"
},
        "Bangalore": { desc: "Known as the Silicon Valley of India.", img: "bangalore.jpg" },
      };
      function showCityInfo(city) {
        document.getElementById("description").innerText = cityData[city].desc;
        document.getElementById("cityImage").src = cityData[city].img;
      }
    </script>
</body>
</html>
```

30. JavaScript function to check if a string is a palindrome

```
<!DOCTYPE html>
```

```
<html>
<body>
  <form>
    <label>Enter a String:</label>
    <input type="text" id="text" />
    <button type="button" onclick="checkPalindrome()">Check</button>
  </form>
  <p id="result"></p>
  <script>
    function checkPalindrome() {
      let str = document.getElementById("text").value;
      let reversed = str.split("").reverse().join("");
      document.getElementById("result").innerText =
        str === reversed ? "It is a palindrome." : "It is not a palindrome.";
    }
  </script>
</body>
</html>
```

31. HTML script with radio buttons for Fruits/Vegetables and corresponding options

```
<!DOCTYPE html>
<html>
<body>
  <form>
    <input type="radio" name="category" value="fruits" onclick="showOptions('fruits')">
Fruits
```

```
    <input type="radio" name="category" value="vegetables"
onclick="showOptions('vegetables')"> Vegetables

    <br><br>

    <select id="options">

      <option>Select an option</option>

    </select>

  </form>

  <script>

    const data = {

      fruits: ["Apple", "Banana", "Orange"],

      vegetables: ["Carrot", "Potato", "Tomato"]

    };

    function showOptions(category) {

      const select = document.getElementById("options");

      select.innerHTML = ""; // Clear previous options

      data[category].forEach(item => {

        let option = document.createElement("option");

        option.text = item;

        select.add(option);

      });

    }

  </script>

</body>

</html>
```

32. JavaScript to modify the status bar using MouseOver and MouseOut

```
<!DOCTYPE html>

<html>

<body>

  <a href="#" onmouseover="window.status='MSBTE'; return true;" onmouseout="window.status=''; return true;">Hover over me</a>

</body>

</html>
```

33. JavaScript to display all properties of the window object

```
<!DOCTYPE html>

<html>

<body>

  <script>

    for (let prop in window) {

      console.log(prop + ": " + window[prop]);

    }

  </script>

</body>

</html>
```

34. JavaScript to prompt the user for a color and set it as the new webpage background

```
<!DOCTYPE html>

<html>

<body>

  <button onclick="changeBackground()">Change Background</button>

  <script>
```

```
    function changeBackground() {
      let color = prompt("Enter a color:");
      if (color) {
        document.body.style.backgroundColor = color;
      }
    }
  </script>
</body>
</html>
```

35. JavaScript program for scrolling text on the status line

```
<!DOCTYPE html>
<html>
<body>
  <script>
    let text = "Welcome to MSBTE! ";
    let index = 0;
    function scrollText() {
      window.status = text.substring(index) + text.substring(0, index);
      index = (index + 1) % text.length;
    }
    setInterval(scrollText, 200);
  </script>
</body>
</html>
```

36. JavaScript program to create rotating banner ads with URL links

```
<!DOCTYPE html>
```

```
<html>
<body>
  <a id="bannerLink" href="https://example1.com" target="_blank">
    <img id="banner" src="image1.jpg" alt="Banner" width="500">
  </a>
  <script>
    const ads = [
      { img: "image1.jpg", link: "https://example1.com" },
      { img: "image2.jpg", link: "https://example2.com" },
      { img: "image3.jpg", link: "https://example3.com" }
    ];
    let currentAd = 0;
    setInterval(() => {
      currentAd = (currentAd + 1) % ads.length;
      document.getElementById("banner").src = ads[currentAd].img;
      document.getElementById("bannerLink").href = ads[currentAd].link;
    }, 3000);
  </script>
</body>
</html>
```

37. HTML webpage to validate an Aadhaar card number format

```
<!DOCTYPE html>

<html>

<body>

  <form>

    <label>Enter Aadhaar Number:</label>

    <input type="text" id="aadhaar" />

    <button type="button" onclick="validateAadhaar()">Validate</button>

  </form>

  <p id="result"></p>

  <script>

    function validateAadhaar() {

      const aadhaar = document.getElementById("aadhaar").value;

      const pattern = /^\d{4}[-.]?\d{4}[-.]?\d{4}$/;

      const result = pattern.test(aadhaar) ? "Valid Aadhaar Number" : "Invalid Aadhaar
Number";

      document.getElementById("result").innerText = result;

    }

  </script>

</body>

</html>
```

38. HTML script to disable textboxes and change colors on submission

```
<!DOCTYPE html>
<html>
<body>
  <form>
    <label>First Name:</label>
    <input type="text" id="fname" /><br>
    <label>Middle Name:</label>
    <input type="text" id="mname" /><br>
    <label>Surname:</label>
    <input type="text" id="lname" /><br>
    <button type="button" onclick="disableFields()">Submit</button>
  </form>
  <script>
    function disableFields() {
      ["fname", "mname", "lname"].forEach(id => {
        const field = document.getElementById(id);
        field.disabled = true;
        field.style.backgroundColor = "red";
      });
    }
  </script>
</body>
</html>
```

39. JavaScript to find the area of a triangle (sides 5, 6, 7)

```
<!DOCTYPE html>

<html>

<body>

  <script>

    const a = 5, b = 6, c = 7;

    const s = (a + b + c) / 2; // Semi-perimeter

    const area = Math.sqrt(s * (s - a) * (s - b) * (s - c));

    console.log("Area of the triangle: " + area.toFixed(2));

  </script>

</body>

</html>
```

40. HTML script for a frame structure (Frame1, Frame2, Frame3)

```
<!DOCTYPE html>

<html>

<head>

  <title>Frame Structure</title>

</head>

<frameset rows="20%,*">

  <!-- Frame1 at the top -->

  <frame name="Frame1" srcdoc="

    <!DOCTYPE html>

    <html>

    <body>

      <h1 style='text-align: center;'>Frame 1</h1>

    </body>
```

```
  </html>
" />

<!-- Frame2 and Frame3 side-by-side -->
<frameset cols="30%,*">
  <frame name="Frame2" srcdoc="
    <!DOCTYPE html>
    <html>
    <body>
      <h3>Navigation</h3>
      <ul>
        <li><a href='fruits.html' target='Frame3'>Fruits</a></li>
        <li><a href='flowers.html' target='Frame3'>Flowers</a></li>
        <li><a href='cities.html' target='Frame3'>Cities</a></li>
      </ul>
    </body>
    </html>
  " />
  <frame name="Frame3" srcdoc="
    <!DOCTYPE html>
    <html>
    <body>
      <h1>Welcome</h1>
      <p>Click on links in Frame2 to view content here.</p>
    </body>
    </html>
```

```
      " />
   </frameset>
</frameset>
</html>
```