Calculator Program

Aim: To develop a simple calculator using HTML and JavaScript.
Description: This program takes two numbers as input and performs addition operation.
Program:

```
<!DOCTYPE html>
<html>
<head>
  <title>Calculator</title>
</head>
<body>
  <h2>Simple Calculator</h2>
  <input type="number" id="num1" placeholder="Enter first number">
  <input type="number" id="num2" placeholder="Enter second number">
  <button onclick="add()">Add</button>
  <p id="result"></p>

  <script>
    function add() {
      let a = parseInt(document.getElementById("num1").value);
      let b = parseInt(document.getElementById("num2").value);
      document.getElementById("result").innerText = "Sum = " + (a + b);
    }
  </script>
</body>
</html>
```

Output: Displays the sum of two entered numbers.
Result: Successfully created a calculator using JavaScript.

Digital Clock

Aim: To develop a digital clock using JavaScript.
Description: This program displays the current time and updates every second.
Program:

```
<!DOCTYPE html>
<html>
<head>
  <title>Digital Clock</title>
</head>
<body>
  <h2>Digital Clock</h2>
  <h1 id="clock"></h1>

  <script>
    function updateClock() {
      let now = new Date();
      document.getElementById("clock").innerText =
        now.getHours() + ":" + now.getMinutes() + ":" + now.getSeconds();
    }
    setInterval(updateClock, 1000);
  </script>
</body>
</html>
```

Output: Displays the current time in HH:MM:SS format.
Result: Successfully created a real-time digital clock.

To-Do List

Aim: To create a simple to-do list application using JavaScript.
Description: This program allows the user to add tasks to a list dynamically.
Program:

```
<!DOCTYPE html>
<html>
<head>
  <title>To-Do List</title>
</head>
<body>
```

```
  <h2>My To-Do List</h2>
  <input type="text" id="task" placeholder="Enter a task">
  <button onclick="addTask()">Add</button>
  <ul id="list"></ul>

  <script>
    function addTask() {
      let task = document.getElementById("task").value;
      if (task !== "") {
        let li = document.createElement("li");
        li.innerText = task;
        document.getElementById("list").appendChild(li);
        document.getElementById("task").value = "";
      }
    }
  </script>
</body>
</html>
```

Output: Displays a list of tasks entered by the user.
Result: Successfully created a to-do list application.

Random Number Generator

Aim: To generate a random number using JavaScript.
Description: This program generates a random number between 1 and 100 when a button is clicked.
Program:

```
<!DOCTYPE html>
<html>
<head>
  <title>Random Number</title>
</head>
<body>
  <h2>Random Number Generator (1–100)</h2>
  <button onclick="generate()">Generate</button>
  <p id="number"></p>

  <script>
    function generate() {
      let num = Math.floor(Math.random() * 100) + 1;
      document.getElementById("number").innerText = "Generated Number: " + num;
    }
  </script>
</body>
</html>
```

Output: Displays a random number between 1 and 100.
Result: Successfully created a random number generator.

Age Calculator

Aim: To calculate age based on year of birth using JavaScript.
Description: This program calculates age from the entered birth year and displays it.
Program:

```
<!DOCTYPE html>
<html>
<head>
  <title>Age Calculator</title>
</head>
<body>
  <h2>Age Calculator</h2>
  <label>Enter your birth year: </label>
  <input type="number" id="year">
  <button onclick="calculateAge()">Calculate</button>
  <p id="result"></p>

  <script>
    function calculateAge() {
      let year = document.getElementById("year").value;
      let currentYear = new Date().getFullYear();
```

```
            let age = currentYear - year;
            document.getElementById("result").innerText = "Your age is " + age + " years.";
          }
        </script>
      </body>
      </html>
```

Output: Displays the calculated age.
Result: Successfully created an age calculator.