**Experiment 5**

**Develop HTML page named as “newpaper.html” having variety of HTML semantic elements with background colors, text-colors & size for figure, table, aside, section, article, header, footer… etc**

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

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

**<title>The Daily Chronicle</title>**

**<style>**

**body {**

**font-family: 'Georgia', serif;**

**line-height: 1.6;**

**color: #333;**

**max-width: 1200px;**

**margin: 0 auto;**

**padding: 20px;**

**background-color: #f4f4f4;**

**}**

**header {**

**background-color: #1a1a1a;**

**color: #fff;**

**padding: 20px;**

**text-align: center;**

**}**

**header h1 {**

**margin: 0;**

**font-size: 2.5em;**

**}**

**nav {**

**background-color: #333;**

**color: #fff;**

**padding: 10px;**

**}**

**nav ul {**

**list-style-type: none;**

**padding: 0;**

**margin: 0;**

**display: flex;**

**justify-content: center;**

**}**

**nav ul li {**

**margin: 0 10px;**

**}**

**nav ul li a {**

**color: #fff;**

**text-decoration: none;**

**}**

**main {**

**display: flex;**

**margin-top: 20px;**

**}**

**section {**

**flex: 2;**

**margin-right: 20px;**

**}**

**article {**

**background-color: #fff;**

**padding: 20px;**

**margin-bottom: 20px;**

**box-shadow: 0 0 10px rgba(0,0,0,0.1);**

**}**

**article h2 {**

**color: #1a1a1a;**

**font-size: 1.8em;**

**}**

**aside {**

**flex: 1;**

**background-color: #e6e6e6;**

**padding: 20px;**

**box-shadow: 0 0 10px rgba(0,0,0,0.1);**

**}**

**figure {**

**margin: 0;**

**text-align: center;**

**}**

**figure img {**

**max-width: 100%;**

**height: auto;**

**}**

**figcaption {**

**font-style: italic;**

**color: #666;**

**font-size: 0.9em;**

**}**

**table {**

**width: 100%;**

**border-collapse: collapse;**

**margin-bottom: 20px;**

**}**

**th, td {**

**border: 1px solid #ddd;**

**padding: 10px;**

**text-align: left;**

**}**

**th {**

**background-color: #f2f2f2;**

**}**

**footer {**

**background-color: #1a1a1a;**

**color: #fff;**

**text-align: center;**

**padding: 10px;**

**margin-top: 20px;**

**}**

**</style>**

**</head>**

**<body>**

**<header>**

**<h1>The Daily Chronicle</h1>**

**</header>**

**<nav>**

**<ul>**

**<li><a href="#">Home</a></li>**

**<li><a href="#">Politics</a></li>**

**<li><a href="#">Technology</a></li>**

**<li><a href="#">Sports</a></li>**

**<li><a href="#">Entertainment</a></li>**

**</ul>**

**</nav>**

**<main>**

**<section>**

**<article>**

**<h2>Breaking News: Major Technological Breakthrough</h2>**

**<p>Scientists have announced a groundbreaking discovery in the field of quantum computing, potentially revolutionizing the tech industry.</p>**

**<figure>**

**<img src="https://www.cnet.com/a/img/resize/c7cb26e927bebaa784fb55a01e71d7fecb15d2e3/hub/2019/06/26/3f76e99d-8055-46f3-8f27-558ee276b665/20180405-ibm-q-quantum-computer-02.jpg?auto=webp&fit=crop&height=675&width=1200" alt="Quantum Computer">**

**<figcaption>A state-of-the-art quantum computer at the research facility</figcaption>**

**</figure>**

**</article>**

**<article>**

**<h2>Local Sports Team Wins Championship</h2>**

**<p>In a thrilling match, our local team secured victory in the national championship, bringing pride to our city.</p>**

**<table>**

**<tr>**

**<th>Team</th>**

**<th>Score</th>**

**</tr>**

**<tr>**

**<td>Local Heroes</td>**

**<td>3</td>**

**</tr>**

**<tr>**

**<td>Visiting Challengers</td>**

**<td>2</td>**

**</tr>**

**</table>**

**</article>**

**</section>**

**<aside>**

**<h3>Weather Update</h3>**

**<p>Expect sunny skies with a high of 75°F (24°C) today.</p>**

**<h3>Upcoming Events</h3>**

**<ol>**

**<li>City Festival - This Weekend</li>**

**<li>Tech Conference - Next Month</li>**

**<li>Charity Run - In Two Weeks</li>**

**<ol>**

**</aside>**

**</main>**

**<footer>**

**<p>&copy; 2023 The Daily Chronicle. All rights reserved.</p>**

**</footer>**

**</body>**

**</html>**

**Experiment 6**

**Apply HTML, CSS and JavaScript to design a simple calculator to perform the following operations: sum,product, difference, remainder, quotient, power, square-root and square**

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

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

**<title>Simple Calculator</title>**

**<style>**

**body {**

**font-family: Arial, sans-serif;**

**display: flex;**

**justify-content: center;**

**align-items: center;**

**height: 100vh;**

**margin: 0;**

**background-color: #f0f0f0;**

**}**

**.calculator {**

**background-color: #fff;**

**border-radius: 8px;**

**box-shadow: 0 0 10px rgba(0,0,0,0.1);**

**padding: 20px;**

**width: 300px;**

**}**

**#display {**

**width: 100%;**

**height: 40px;**

**font-size: 1.5em;**

**text-align: right;**

**margin-bottom: 10px;**

**padding: 5px;**

**box-sizing: border-box;**

**}**

**.buttons {**

**display: grid;**

**grid-template-columns: repeat(4, 1fr);**

**gap: 10px;**

**}**

**button {**

**padding: 10px;**

**font-size: 1.2em;**

**border: none;**

**background-color: #e0e0e0;**

**cursor: pointer;**

**border-radius: 4px;**

**}**

**button:hover {**

**background-color: #d0d0d0;**

**}**

**.operator {**

**background-color: #f0a030;**

**color: white;**

**}**

**.operator:hover {**

**background-color: #e09020;**

**}**

**</style>**

**</head>**

**<body>**

**<div class="calculator">**

**<input type="text" id="display" readonly>**

**<div class="buttons">**

**<button onclick="appendToDisplay('7')">7</button>**

**<button onclick="appendToDisplay('8')">8</button>**

**<button onclick="appendToDisplay('9')">9</button>**

**<button class="operator" onclick="setOperation('+')">&plus;</button>**

**<button onclick="appendToDisplay('4')">4</button>**

**<button onclick="appendToDisplay('5')">5</button>**

**<button onclick="appendToDisplay('6')">6</button>**

**<button class="operator" onclick="setOperation('-')">&minus;</button>**

**<button onclick="appendToDisplay('1')">1</button>**

**<button onclick="appendToDisplay('2')">2</button>**

**<button onclick="appendToDisplay('3')">3</button>**

**<button class="operator" onclick="setOperation('\*')">&times;</button>**

**<button onclick="appendToDisplay('0')">0</button>**

**<button onclick="appendToDisplay('.')">.</button>**

**<button class="operator" onclick="calculate()">&equals;</button>**

**<button class="operator" onclick="setOperation('/')">&divide;</button>**

**<button class="operator" onclick="setOperation('%')">%</button>**

**<button class="operator" onclick="setOperation('^')">x<sup>y</sup></button>**

**<button class="operator" onclick="squareRoot()">√</button>**

**<button class="operator" onclick="square()">x<sup>2</sup></button>**

**<button onclick="clearDisplay()">C</button>**

**</div>**

**</div>**

**<script>**

**let display = document.getElementById('display');**

**let currentValue = '';**

**let operation = '';**

**let previousValue = '';**

**function appendToDisplay(value) {**

**currentValue += value;**

**display.value = currentValue;**

**}**

**function clearDisplay() {**

**currentValue = '';**

**operation = '';**

**previousValue = '';**

**display.value = '';**

**}**

**function setOperation(op) {**

**if (currentValue !== '') {**

**if (previousValue !== '') {**

**calculate();**

**}**

**operation = op;**

**previousValue = currentValue;**

**currentValue = '';**

**}**

**}**

**function calculate() {**

**if (previousValue !== '' && currentValue !== '') {**

**let result;**

**const prev = parseFloat(previousValue);**

**const current = parseFloat(currentValue);**

**switch(operation) {**

**case '+':**

**result = prev + current;**

**break;**

**case '-':**

**result = prev - current;**

**break;**

**case '\*':**

**result = prev \* current;**

**break;**

**case '/':**

**result = prev / current;**

**break;**

**case '%':**

**result = prev % current;**

**break;**

**case '^':**

**result = Math.pow(prev, current);**

**break;**

**}**

**display.value = result;**

**previousValue = result.toString();**

**currentValue = '';**

**operation = '';**

**}**

**}**

**function squareRoot() {**

**if (currentValue !== '') {**

**const result = Math.sqrt(parseFloat(currentValue));**

**display.value = result;**

**currentValue = result.toString();**

**}**

**}**

**function square() {**

**if (currentValue !== '') {**

**const result = Math.pow(parseFloat(currentValue), 2);**

**display.value = result;**

**currentValue = result.toString();**

**}**

**}**

**</script>**

**</body>**

**</html>**