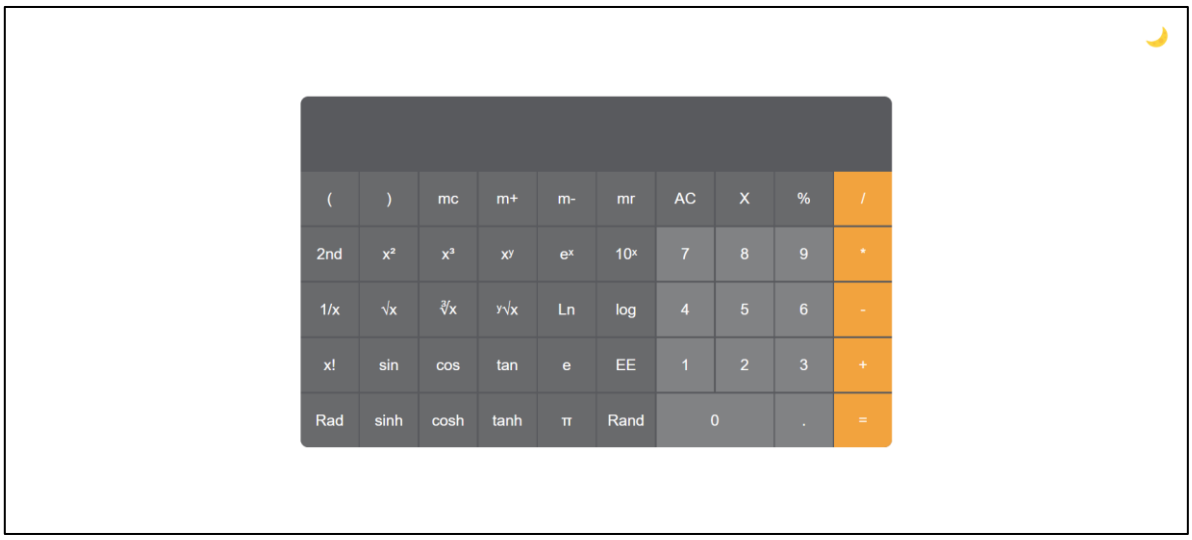
Scientific Calculator

SNIPPET:



Source Code:

HTML:

```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Calculator</title>
   <link rel="stylesheet" href="style.css">
</head>

<body>

   <button id="dark-mode-toggle" class="dark-mode" aria-label="Toggle Dark Mode">🌙</button>

   <div class="main-body">

      <div class="calc-output">
         <input type="text" class="output" readonly>
      </div>

      <div class="calc">

         <!-- Row 1 -->
```

```
        <div class="cell"><input type="button" value="("></div>
        <div class="cell"><input type="button" value=")"></div>
        <div class="cell"><input type="button" value="mc"></div>
        <div class="cell"><input type="button" value="m+"></div>
        <div class="cell"><input type="button" value="m-"></div>
        <div class="cell"><input type="button" value="mr"></div>
        <div class="cell"><input type="button" value="AC"></div>
        <div class="cell"><input type="button" value="X"></div>
        <div class="cell"><input type="button" value="%"></div>
        <div class="cell"><input type="button" value="/" style="background-color: rgb(242, 163, 62);"></div>

        <!-- Row 2 -->
        <div class="cell"><input type="button" value="2nd"></div>
        <div class="cell"><input type="button" value="x²"></div>
        <div class="cell"><input type="button" value="x³"></div>
        <div class="cell"><input type="button" value="xʸ"></div>
        <div class="cell"><input type="button" value="eˣ"></div>
        <div class="cell"><input type="button" value="10ˣ"></div>
        <div class="cell"><input type="button" value="7" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="8" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="9" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="*" style="background-color: rgb(242, 163, 62);"></div>

        <!-- Row 3 -->
        <div class="cell"><input type="button" value="1/x"></div>
        <div class="cell"><input type="button" value="&amp;#8730;x"></div>
        <div class="cell"><input type="button" value="&amp;#8731;x"></div>
        <div class="cell"><input type="button" value="ʸ&amp;#8730x"></div>
        <div class="cell"><input type="button" value="Ln"></div>
        <div class="cell"><input type="button" value="log"></div>
        <div class="cell"><input type="button" value="4" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="5" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="6" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="-" style="background-color: rgb(242, 163, 62);"></div>

        <!-- Row 4 -->
        <div class="cell"><input type="button" value="x!"></div>
        <div class="cell"><input type="button" value="sin"></div>
        <div class="cell"><input type="button" value="cos"></div>
        <div class="cell"><input type="button" value="tan"></div>
        <div class="cell"><input type="button" value="e"></div>
        <div class="cell"><input type="button" value="EE"></div>
        <div class="cell"><input type="button" value="1" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="2" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="3" style="background-color: rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="+" style="background-color: rgb(242, 163, 62);"></div>

        <!-- Row 5 -->
        <div class="cell"><input type="button" value="Rad" style="border-radius: 0 0 0 10px;"></div>
        <div class="cell"><input type="button" value="sinh"></div>
        <div class="cell"><input type="button" value="cosh"></div>
        <div class="cell"><input type="button" value="tanh"></div>
        <div class="cell"><input type="button" value="&amp;#960"></div>
        <div class="cell"><input type="button" value="Rand"></div>
        <div class="cell" style="grid-column: span 2;"><input type="button" value="0" style="background-color:
rgb(129, 130, 132);"></div>
        <div class="cell"><input type="button" value="." style="background-color: rgb(129, 130, 132);"></div>
```

```
        <div class="cell"><input type="button" value="=" style="background-color: rgb(242, 163, 62); border-radius: 0 0 10px 0;"></div>

      </div>

   </div>

   <script src="script.js"></script>
</body>

</html>
```

CSS:

```
*{
   margin: 0;
   padding: 0;
}

body {
   background-color: #ffffff;
   font-family: Arial, sans-serif;
   height: 100vh;
   display: flex;
   justify-content: center;
   align-items: center;
}

.main-body {
   display: flex;
   flex-direction: column;
   width: 50%;
   border: none;
   border-radius: 10px;
   background-color: rgb(89, 90, 94);
}

.calc {
   display: grid;
   grid-template-columns: repeat(10, 1fr);
   width: 100%;
   max-width: 800px;
   gap: 2px;
}
.cell {
   height: 70px;
   border: none;
   display: flex;
   justify-content: center;
   align-items: center;
}

.cell input {
```

```
    font-size: 20px;
    width: 100%;
    height: 100%;
    background-color: rgb(105, 106, 108);
    color: white;
    border: none;
}

.calc-output{
    margin: 10px;
    margin-top: 30px;
}

.calc-output input {
    color: #ffffff;
    font-size: 50px;
    width: 100%;
    border: none;
    background-color: rgb(89, 90, 94)
}

.calc-output input:focus {
    outline: none;
}

.dark-mode {
    position: absolute;
    top: 20px;
    right: 20px;
    background-color: transparent;
    border: none;
    font-size: 30px;
}
```

JavaScript:

```
var btnpress = document.querySelectorAll(".cell input");
var output = document.querySelector(".output");

var memoryValue = 0;
var isSecondFunction = false;
var storedRoot = null;

btnpress.forEach(function(button) {
    button.addEventListener('click', function() {
        var value = button.value;
        var currentDisplay = output.value;

        if (currentDisplay === "Error" || currentDisplay === "Infinity" || currentDisplay === "NaN") {
            output.value = "";
        }

        if (value === "AC") {
            output.value = "";
            storedRoot = null;
```

```
}

else if (value === "X") {
   output.value = currentDisplay.slice(0, -1);
}
else if (value === "mc") {
   memoryValue = 0;
}
else if (value === "m+") {
   memoryValue += parseFloat(currentDisplay);
}
else if (value === "m-") {
   memoryValue -= parseFloat(currentDisplay);
}
else if (value === "mr") {
   output.value = memoryValue;
}
else if (value === "√x") {
   output.value = Math.sqrt(parseFloat(currentDisplay));
}
else if (value === "∛x") {
   output.value = Math.cbrt(parseFloat(currentDisplay));
}
else if (value === "ʸ√x") {
   storedRoot = parseFloat(currentDisplay);
   output.value += "√";
}
else if (value === "1/x") {
   output.value = 1 / parseFloat(currentDisplay);
}
else if (value === "x²") {
   output.value = Math.pow(parseFloat(currentDisplay), 2);
}
else if (value === "x³") {
   output.value = Math.pow(parseFloat(currentDisplay), 3);
}
else if (value === "xʸ") {
   output.value += "^";
}
else if (value === "eˣ") {
   output.value = Math.exp(parseFloat(currentDisplay));
}
else if (value === "10ˣ") {
   output.value = Math.pow(10, parseFloat(currentDisplay));
}
else if (value === "x!") {
   output.value = factorial(parseInt(currentDisplay));
}
else if (value === "log") {
   output.value = Math.log10(parseFloat(currentDisplay));
}
else if (value === "Ln") {
   output.value = Math.log(parseFloat(currentDisplay));
}
else if (value === "sin") {
   output.value = Math.sin(parseFloat(currentDisplay));
}
```

```
    else if (value === "cos") {
      output.value = Math.cos(parseFloat(currentDisplay));
    }
    else if (value === "tan") {
      output.value = Math.tan(parseFloat(currentDisplay));
    }
    else if (value === "sinh") {
      output.value = Math.sinh(parseFloat(currentDisplay));
    }
    else if (value === "cosh") {
      output.value = Math.cosh(parseFloat(currentDisplay));
    }
    else if (value === "tanh") {
      output.value = Math.tanh(parseFloat(currentDisplay));
    }
    else if (value === "e") {
      output.value += Math.E;
    }
    else if (value === "π") {
      output.value += Math.PI;
    }
    else if (value === "Rand") {
      output.value = Math.random();
    }
    else if (value === "Rad") {
      output.value = toDegrees(parseFloat(currentDisplay));
    }
    else if (value === "EE") {
      output.value += "e";
    }
    else if (value === "2nd") {
      isSecondFunction = !isSecondFunction;
    }
    else if (value === "%") {
      output.value = parseFloat(eval(currentDisplay)) / 100;
    }
    else if (value === "=") {
      try {
        if (storedRoot !== null) {
          output.value = ytRoot(currentDisplay, storedRoot);
          storedRoot = null;
        } else {
          output.value = eval(currentDisplay.replace('^', '**'))
        }
      } catch (e) {
        output.value = "Error";
      }
    }
    else {
      output.value += value;
    }
  });
});

function factorial(n) {
  if (n <= 1) return 1;
  return n * factorial(n - 1);
```

```
}

function toDegrees(radians) {
    return radians * (180 / Math.PI);
}

function ytRoot(display, root) {
    var index = display.indexOf('√');
    var number = parseFloat(display.slice(index + 1));
    if (isNaN(number) || isNaN(root) || root === 0) {
        return "Error";
    }
    return Math.pow(number, 1 / root).toFixed(10);
}

const darkModeToggle = document.getElementById('dark-mode-toggle');

if (localStorage.getItem('darkMode') === 'enabled') {
    enableDarkMode();
} else {
    disableDarkMode();
}

darkModeToggle.addEventListener('click', () => {
    if (localStorage.getItem('darkMode') !== 'enabled') {
        enableDarkMode();
    } else {
        disableDarkMode();
    }
});

function enableDarkMode() {
    darkModeToggle.innerHTML = '🌞';
    document.querySelector('body').style.backgroundColor = '#000000';
    document.querySelector('.cell').style.backgroundColor = '#000000';
    localStorage.setItem('darkMode', 'enabled');
}

function disableDarkMode() {
    darkModeToggle.innerHTML = '🌙';
    document.querySelector('body').style.backgroundColor = '#ffffff';
    document.querySelector('.cell').style.backgroundColor = '#ffffff';
    localStorage.setItem('darkMode', 'disabled');
}
```

GitHub: https://github.com/DMegatron/Scientific-Calculator