

# Calculator JS

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// When they click a button, put that in the display
// - make a variable to store the buttons
// - Array.from(querySelectorAll("button"))
// - add event listeners for each button ("click", functionName)

const buttons = Array.from(document.querySelectorAll("button"));
const display = document.getElementById("display");
let equation = "";

buttons.forEach((button) => { // button represents the current button in the loop
  // Add an event listener to the current button
  button.addEventListener("click", handleClick);
});

/*

If you're using a for loop

for (let i = 0; i < buttons.length; i++) {
  buttons[i].addEventListener("click", handleClick);
}

*/

// Store our original font size so we can set it back later
const originalFontSize = display.style.fontSize;
// Make a function that runs when they click a button
// This function will put the text/value of the button in the display
function handleClick(e) {
  switch (e.target.innerHTML) {
    case 'C':
    case 'CE':
      display.innerHTML = '0';
      display.style.fontSize = originalFontSize;
      equation = '';
      buttons.forEach((button) => {
        if (!isNaN(button.innerHTML)) {
          button.disabled = false;
          button.style.cursor = 'auto';
        }
      });
      break;
    case '⌫':
      // for example when display.innnerHTML = '856', we want to remove the
      display.innerHTML = display.innerHTML.substring(0,
display.innerHTML.length - 1);
      if (display.innerHTML.length == 0) {
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        display.innerHTML = '0';
    }
    equation = equation.toString().substring(0, equation.toString().length
- 1);
    console.log(equation);
    break;
case '%':
    // display.innerHTML = display.innerHTML / 100;
    display.innerHTML /= 100; // shorthand
    equation /= 100;
    break;
case 'x²':
    display.innerHTML = Math.pow(display.innerHTML, 2);
    equation = Math.pow(equation, 2);
    break;
case '1/x':
    display.innerHTML = 1 / display.innerHTML;
    equation = 1 / equation;
    break;
case '√':
    display.innerHTML = Math.sqrt(display.innerHTML);
    equation = Math.sqrt(equation);
    break;
case '=':
    console.log(equation);
    display.innerHTML = eval(equation);
    equation = eval(equation);
    break;
case '-':
    display.innerHTML += e.target.innerHTML;
    equation += '-';
    break;
case 'x':
    display.innerHTML += e.target.innerHTML;
    equation += '*';
    break;
case '÷':
    display.innerHTML += e.target.innerHTML;
    equation += '/';
    break;
case '±':
    let output = display.innerHTML;
    if (output.charAt(0) == '-') {
        output = output.substring(1);
    } else {
        output = '-' + output;
    }
    display.innerHTML = output;

    if (equation.toString().charAt(0) == '-') {
        equation = equation.toString().substring(1);
    } else {
        equation = '-' + equation;
    }
}
```

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        break;
    default:
        if (display.innerHTML == 0) {
            display.innerHTML = e.target.innerHTML;
        } else {
            display.innerHTML += e.target.innerHTML;
        }
        equation += e.target.innerHTML;
        console.log(e.target.innerHTML);
    }

    // Switch-case (another way to write if-statements)
    let length = display.innerHTML.length;
    switch (true) {
        case length >= 6 && length <= 11:
            display.style.fontSize = 'large';
            break; // Breaks out of the code and stops running the switch
        case length >= 12 && length <= 17:
            display.style.fontSize = 'small';
            break;
        case length >= 18 && length <= 23:
            display.style.fontSize = 'smallest';
            break;
        case length >= 24:
            buttons.forEach((button) => {
                // If the text is not not a number (if it is a number)
                if (!isNaN(button.innerHTML)) {
                    button.disabled = true;
                    // button.childNodes.forEach((child) => {
                    //     console.log(child);
                    //     child.removeAttribute('style');
                    // });
                    button.style.cursor = 'not-allowed';
                }
            });
            break;
        // If none of the above are true, do default
        default:
            console.log(display.innerHTML.length);
    }

    // This is sort of the equivalent of the switch-case above
    // if (display.innerHTML.length == 6) {
    //     display.style.fontSize = 'large';
    // } else if (display.innerHTML.length == 12) {
    //     display.style.fontSize = 'small';
    // } else if (display.innerHTML.length == 18) {
    //     display.style.fontSize = 'smallest';
    // }
}
```