const keys = document.querySelectorAll('.key');

const display\_input = document.querySelector('.display .input');

const display\_output = document.querySelector('.display .output');

let input = "";

for (let key of keys) {

const value = key.dataset.key;

key.addEventListener('click', () => {

if (value == "clear") {

input = "";

display\_input.innerHTML = "";

display\_output.innerHTML = "";

} else if (value == "backspace") {

input = input.slice(0, -1);

display\_input.innerHTML = CleanInput(input);

} else if (value == "=") {

let result = eval(PerpareInput(input));

display\_output.innerHTML = CleanOutput(result);

} else if (value == "brackets") {

if (

input.indexOf("(") == -1 ||

input.indexOf("(") != -1 &&

input.indexOf(")") != -1 &&

input.lastIndexOf("(") < input.lastIndexOf(")")

) {

input += "(";

} else if (

input.indexOf("(") != -1 &&

input.indexOf(")") == -1 ||

input.indexOf("(") != -1 &&

input.indexOf(")") != -1 &&

input.lastIndexOf("(") > input.lastIndexOf(")")

) {

input += ")";

}

display\_input.innerHTML = CleanInput(input);

} else {

if (ValidateInput(value)) {

input += value;

display\_input.innerHTML = CleanInput(input);

}

}

})

}

function CleanInput(input) {

let input\_array = input.split("");

let input\_array\_length = input\_array.length;

for (let i = 0; i < input\_array\_length; i++) {

if (input\_array[i] == "\*") {

input\_array[i] = ` <span class="operator">x</span> `;

} else if (input\_array[i] == "/") {

input\_array[i] = ` <span class="operator">÷</span> `;

} else if (input\_array[i] == "+") {

input\_array[i] = ` <span class="operator">+</span> `;

} else if (input\_array[i] == "-") {

input\_array[i] = ` <span class="operator">-</span> `;

} else if (input\_array[i] == "(") {

input\_array[i] = `<span class="brackets">(</span>`;

} else if (input\_array[i] == ")") {

input\_array[i] = `<span class="brackets">)</span>`;

} else if (input\_array[i] == "%") {

input\_array[i] = `<span class="percent">%</span>`;

}

}

return input\_array.join("");

}

function CleanOutput (output) {

let output\_string = output.toString();

let decimal = output\_string.split(".")[1];

output\_string = output\_string.split(".")[0];

let output\_array = output\_string.split("");

if (output\_array.length > 3) {

for (let i = output\_array.length - 3; i > 0; i -= 3) {

output\_array.splice(i, 0, ",");

}

}

if (decimal) {

output\_array.push(".");

output\_array.push(decimal);

}

return output\_array.join("");

}

function ValidateInput (value) {

let last\_input = input.slice(-1);

let operators = ["+", "-", "\*", "/"];

if (value == "." && last\_input == ".") {

return false;

}

if (operators.includes(value)) {

if (operators.includes(last\_input)) {

return false;

} else {

return true;

}

}

return true;

}

function PerpareInput (input) {

let input\_array = input.split("");

for (let i = 0; i < input\_array.length; i++) {

if (input\_array[i] == "%") {

input\_array[i] = "/100";

}

}

return input\_array.join("");

}