Calculator App JavaScript Source Code

let firstOperand = ''

let secondOperand = ''

let currentOperation = null

let shouldResetScreen = false

const numberButtons = document.querySelectorAll('[data-number]')

const operatorButtons = document.querySelectorAll('[data-operator]')

const equalsButton = document.getElementById('equalsBtn')

const clearButton = document.getElementById('clearBtn')

const deleteButton = document.getElementById('deleteBtn')

const pointButton = document.getElementById('pointBtn')

const lastOperationScreen = document.getElementById('lastOperationScreen')

const currentOperationScreen = document.getElementById('currentOperationScreen')

window.addEventListener('keydown', handleKeyboardInput)

equalsButton.addEventListener('click', evaluate)

clearButton.addEventListener('click', clear)

deleteButton.addEventListener('click', deleteNumber)

pointButton.addEventListener('click', appendPoint)

numberButtons.forEach((button) =>

button.addEventListener('click', () => appendNumber(button.textContent))

)

operatorButtons.forEach((button) =>

button.addEventListener('click', () => setOperation(button.textContent))

)

function appendNumber(number) {

if (currentOperationScreen.textContent === '0' || shouldResetScreen)

resetScreen()

currentOperationScreen.textContent += number

}

function resetScreen() {

currentOperationScreen.textContent = ''

shouldResetScreen = false

}

function clear() {

currentOperationScreen.textContent = '0'

lastOperationScreen.textContent = ''

firstOperand = ''

secondOperand = ''

currentOperation = null

}

function appendPoint() {

if (shouldResetScreen) resetScreen()

if (currentOperationScreen.textContent === '')

currentOperationScreen.textContent = '0'

if (currentOperationScreen.textContent.includes('.')) return

currentOperationScreen.textContent += '.'

}

function deleteNumber() {

currentOperationScreen.textContent = currentOperationScreen.textContent

.toString()

.slice(0, -1)

}

function setOperation(operator) {

if (currentOperation !== null) evaluate()

firstOperand = currentOperationScreen.textContent

currentOperation = operator

lastOperationScreen.textContent = `${firstOperand} ${currentOperation}`

shouldResetScreen = true

}

function evaluate() {

if (currentOperation === null || shouldResetScreen) return

if (currentOperation === '÷' && currentOperationScreen.textContent === '0') {

alert("You can't divide by 0!")

return

}

secondOperand = currentOperationScreen.textContent

currentOperationScreen.textContent = roundResult(

operate(currentOperation, firstOperand, secondOperand)

)

lastOperationScreen.textContent = `${firstOperand} ${currentOperation} ${secondOperand} =`

currentOperation = null

}

function roundResult(number) {

return Math.round(number \* 1000) / 1000

}

function handleKeyboardInput(e) {

if (e.key >= 0 && e.key <= 9) appendNumber(e.key)

if (e.key === '.') appendPoint()

if (e.key === '=' || e.key === 'Enter') evaluate()

if (e.key === 'Backspace') deleteNumber()

if (e.key === 'Escape') clear()

if (e.key === '+' || e.key === '-' || e.key === '\*' || e.key === '/')

setOperation(convertOperator(e.key))

}

function convertOperator(keyboardOperator) {

if (keyboardOperator === '/') return '÷'

if (keyboardOperator === '\*') return '×'

if (keyboardOperator === '-') return '−'

if (keyboardOperator === '+') return '+'

}

function add(a, b) {

return a + b

}

function substract(a, b) {

return a - b

}

function multiply(a, b) {

return a \* b

}

function divide(a, b) {

return a / b

}

function operate(operator, a, b) {

a = Number(a)

b = Number(b)

switch (operator) {

case '+':

return add(a, b)

case '−':

return substract(a, b)

case '×':

return multiply(a, b)

case '÷':

if (b === 0) return null

else return divide(a, b)

default:

return null

}

}