

W01-P1: 取得畫面輸入，4 個按鈕，兩個輸出，共 7 個，透過 console.log 印出

The screenshot displays a web development environment with three main components:

- VS Code Editor (Left):** Shows the `app.js` file with JavaScript code for a calculator. A red box highlights the `console.log` statements used for debugging: `console.log('userInput', userInput);`, `console.log('addBtn', addBtn);`, `console.log('subtractBtn', subtractBtn);`, `console.log('multiplyBtn', multiplyBtn);`, `console.log('divideBtn', divideBtn);`, `console.log('currentResultOutput', currentResultOutput);`, and `console.log('currentCalculationOutput', currentCalculationOutput);`.
- Browser (Right):** Displays the web application titled "The Unconventional Calculator". The UI includes an input field, four buttons (+, -, *, /), a display showing "0", and a "Result: 0" label. A red box highlights the HTML elements in the DOM inspector: `<input type="number" id="input-number">`, `<button type="button" id="btn-add">+</button>`, `<button type="button" id="btn-subtract">-</button>`, `<button type="button" id="btn-multiply">*</button>`, `<button type="button" id="btn-divide">/</button>`, `0`, and `<h2 id="current-calculation">0</h2>`.
- Browser Console (Bottom Right):** Shows a red error message: "Unchecked runtime.lastError: The message port closed before a response was received." at `index.html:1`.

The bottom status bar of VS Code indicates the file is `arithmetic-starter....zip`, the editor is on line 13, column 37, and the port is 5502.

W01-P2: 能做加法計算 operand1 + operand2

The screenshot shows the development environment for 'The Unconventional Calculator'. On the left, the VS Code editor displays the JavaScript code for the addition functionality, with the `add()` function highlighted in a red box. The code includes logic to get user input, calculate the sum, and update the UI. On the right, the web browser shows the application running at `127.0.0.1:5502/index.html`. The calculator interface has a display showing '10', a row of buttons including '+', '-', '*', and '/', and a result box showing '5 + 10' and 'Result: 15'. The browser's console shows the log output: `0 + 5 = 5` and `5 + 10 = 15`, with the second log entry highlighted in red.

W01-P3: 能做減法計算 operand1 - operand2

The screenshot shows the development environment for 'The Unconventional Calculator' with subtraction functionality. On the left, the VS Code editor displays the JavaScript code, with the `sub()` function highlighted in a red box. The code includes logic to get user input, calculate the difference, and update the UI. On the right, the web browser shows the application running at `127.0.0.1:5500/demo/w01/index.html`. The calculator interface has a display showing '2', a row of buttons including '+', '-', '*', and '/', and a result box showing '-5 - 2' and 'Result: -7'. The browser's console shows the log output: `0 - 5 = -5` and `-5 - 2 = -7`, with the second log entry highlighted in red.

W01-P4: 能做乘法計算 operand1 * operand2

The screenshot displays the development environment for 'The Unconventional Calculator'. On the left, the VS Code editor shows the JavaScript code for the multiplication function, which is highlighted with a red box. The function `mul()` takes the current result and a new operand, calculates their product, and updates the result and display text. On the right, the web browser shows the calculator's UI. The input field contains '10', and the operation buttons '+', '-', '*', and '/' are visible. The '*' button is highlighted with a red box. Below the input field, the display shows '-35 * 10' and 'Result: -350'. The browser's console on the far right shows the log output: `0 - 5 = -5`, `-5 - 2 = -7`, `-7 * 5 = -35`, and `-35 * 10 = -350`. The last two lines are highlighted with a red box.

```
demo > w01 > js > app.js ...
29 function outputResult(result, text) {
30   currentResultOutput.textContent = result;
31   currentCalculationOutput.textContent = text;
32 }
33 // operand1 op operator operand2 0 + 5
34 function add() {
35   const operand1 = currentResult;
36   const operand2 = getUserInput();
37   currentResult = operand1 + operand2;
38   console.log(`${operand1} + ${operand2} = ${currentResult}`);
39   const calcText = `${operand1} + ${operand2}`;
40   outputResult(currentResult, calcText);
41 }
42
43 function sub() {
44   const operand1 = currentResult;
45   const operand2 = getUserInput();
46   currentResult = operand1 - operand2;
47   console.log(`${operand1} - ${operand2} = ${currentResult}`);
48   const calcText = `${operand1} - ${operand2}`;
49   outputResult(currentResult, calcText);
50 }
51
52 function mul() {
53   const operand1 = currentResult;
54   const operand2 = getUserInput();
55   currentResult = operand1 * operand2;
56   console.log(`${operand1} * ${operand2} = ${currentResult}`);
57   const calcText = `${operand1} * ${operand2}`;
58   outputResult(currentResult, calcText);
59 }
60
61 addBtn.addEventListener('click', add);
62 subBtn.addEventListener('click', sub);
63 mulBtn.addEventListener('click', mul);
64
65
66
```

W01-P5: 能做除法計算 operand1 / operand2

The screenshot displays the development environment for 'The Unconventional Calculator'. On the left, the VS Code editor shows the JavaScript code for the division function, which is highlighted with a red box. The function `div()` takes the current result and a new operand, calculates their quotient, and updates the result and display text. On the right, the web browser shows the calculator's UI. The input field contains '2', and the operation buttons '+', '-', '*', and '/' are visible. The '/' button is highlighted with a red box. Below the input field, the display shows '0 / 2' and 'Result: 0'. The browser's console on the far right shows the log output: `0 / 10 = 0` and `0 / 2 = 0`. The last two lines are highlighted with a red box.

```
demo > w01 > js > app.js ...
44 function sub() {
45   const operand1 = currentResult;
46   const operand2 = getUserInput();
47   currentResult = operand1 - operand2;
48   console.log(`${operand1} - ${operand2} = ${currentResult}`);
49   const calcText = `${operand1} - ${operand2}`;
50   outputResult(currentResult, calcText);
51 }
52
53 function mul() {
54   const operand1 = currentResult;
55   const operand2 = getUserInput();
56   currentResult = operand1 * operand2;
57   console.log(`${operand1} * ${operand2} = ${currentResult}`);
58   const calcText = `${operand1} * ${operand2}`;
59   outputResult(currentResult, calcText);
60 }
61
62 function div() {
63   const operand1 = currentResult;
64   const operand2 = getUserInput();
65   currentResult = operand1 / operand2;
66   console.log(`${operand1} / ${operand2} = ${currentResult}`);
67   const calcText = `${operand1} / ${operand2}`;
68   outputResult(currentResult, calcText);
69 }
70
71 addBtn.addEventListener('click', add);
72 subBtn.addEventListener('click', sub);
73 mulBtn.addEventListener('click', mul);
74 divBtn.addEventListener('click', div);
75
76
77
```

W01-P6: 能做四則計算，加減乘除都要執行一遍，可任意順序，結果要正確

```
32 }
33 // operand1 on operator operand2 0 + 5
34 function add() {
35   const operand1 = currentResult;
36   const operand2 = getUserInput();
37   currentResult = operand1 + operand2;
38   console.log(`${operand1} + ${operand2} = ${currentResult}`);
39   const calcText = `${operand1} + ${operand2}`;
40   outputResult(currentResult, calcText);
41 }
42
43 function sub() {
44   const operand1 = currentResult;
45   const operand2 = getUserInput();
46   currentResult = operand1 - operand2;
47   console.log(`${operand1} - ${operand2} = ${currentResult}`);
48   const calcText = `${operand1} - ${operand2}`;
49   outputResult(currentResult, calcText);
50 }
51
52 function mul() {
53   const operand1 = currentResult;
54   const operand2 = getUserInput();
55   currentResult = operand1 * operand2;
56   console.log(`${operand1} * ${operand2} = ${currentResult}`);
57   const calcText = `${operand1} * ${operand2}`;
58   outputResult(currentResult, calcText);
59 }
60
61 function div() {
62   const operand1 = currentResult;
63   const operand2 = getUserInput();
64   currentResult = operand1 / operand2;
65   console.log(`${operand1} / ${operand2} = ${currentResult}`);
66   const calcText = `${operand1} / ${operand2}`;
67   outputResult(currentResult, calcText);
68 }
69
70
```

The Unconventional Calculator

0

+ - * /

5 * 0

Result: 0

Console

GET http://127.0.0.1:5500/favicon.ico [HTTP/1.1 404 Not Found 0ms]

0 / 10 = 0 app.js:65:13

0 / 2 = 0 app.js:65:13

0 + 5 = 5 app.js:38:13

5 + 10 = 15 app.js:38:13

15 - 10 = 5 app.js:47:13

5 * 0 = 0 app.js:56:13