

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 shows a web browser at 127.0.0.1:5502/index.html displaying 'The Unconventional Calculator'. The interface includes a large input field with the number '0', four buttons (+, -, *, /), and a 'Result: 0' display. The VS Code editor on the right shows the app.js file with the following code:

```
1 const userInput = document.querySelector('#input-number');
2 const userAdd = document.querySelector('#btn-add');
3 const userSubtract = document.querySelector('#btn-subtract');
4 const userMultiply = document.querySelector('#btn-multiply');
5 const userDivide = document.querySelector('#btn-divide');
6 const userCalculation = document.querySelector('#current-calculation');
7 const userResult = document.querySelector('#current-result');
8
9 console.log('userInput', userInput);
10 console.log('userAdd', userAdd);
11 console.log('userSubtract', userSubtract);
12 console.log('userMultiply', userMultiply);
13 console.log('userDivide', userDivide);
14 console.log('userCalculation', userCalculation);
15 console.log('userResult', userResult);
```

The console shows the initial log messages for each element.

W01-P2: 能做加法計算 operand1 + operand2

The screenshot shows the calculator interface with the input field containing '7' and the buttons '+', '-', '*', and '/'. The 'Result: 20' display shows the result of the calculation. The VS Code editor on the right shows the app.js file with the following code:

```
14 // console.log('userCalculation', userCalculation);
15 // console.log('userResult', userResult);
16
17 // const buttons = document.querySelectorAll('button');
18 // console.log('buttons', buttons);
19
20 const defaultResult = 0;
21 let currentResult = defaultResult;
22
23 function getUserInput() {
24   return parseInt(userInput.value);
25 }
26
27 function outputResult(result, text) {
28   userResult.textContent = result;
29   userCalculation.textContent = text;
30 }
31
32 //operand1 operator operand2
33 function add() {
34   const operand1 = currentResult;
35   const operand2 = getUserInput();
36   currentResult = operand1 + operand2;
37   console.log(`${operand1} + ${operand2} = ${currentResult}`);
38   const calcText = `${operand1} + ${operand2}`;
39   outputResult(currentResult, calcText);
40 }
41
42 function subtract() {
43   const operand1 = currentResult;
44   const operand2 = getUserInput();
45   currentResult = operand1 - operand2;
46   console.log(`${operand1} - ${operand2} = ${currentResult}`);
47   const calcText = `${operand1} - ${operand2}`;
48   outputResult(currentResult, calcText);
49 }
50
51 function multiply() {
```

The console shows the log messages for the addition operation: '0 + 6 = 6', '6 + 7 = 13', and '13 + 7 = 20'.

W01-P3: 能做減法計算 operand1 - operand2

The screenshot displays a web browser window on the left and a VS Code editor on the right. The browser shows 'The Unconventional Calculator' with the input '1' and the operation '-'. The result '4 - 1 = 3' is shown below. The console in the browser shows the calculation '4 - 1 = 3'. The VS Code editor shows the JavaScript code for the subtraction function, which is highlighted with a red box.

```
demo > w01 > js > JS app.js > ...
34 const operand1 = currentResult;
35 const operand2 = getUserInput();
36 currentResult = operand1 + operand2;
37 console.log(`${operand1} + ${operand2} = ${currentResult}`);
38 const calcText = `${operand1} + ${operand2}`;
39 outputResult(currentResult, calcText);
40 }
41
42 function subtract() {
43   const operand1 = currentResult;
44   const operand2 = getUserInput();
45   currentResult = operand1 - operand2;
46   console.log(`${operand1} - ${operand2} = ${currentResult}`);
47   const calcText = `${operand1} - ${operand2}`;
48   outputResult(currentResult, calcText);
49 }
50
51 function multiply() {
52   const operand1 = currentResult;
53   const operand2 = getUserInput();
54   currentResult = operand1 * operand2;
55   console.log(`${operand1} * ${operand2} = ${currentResult}`);
56   const calcText = `${operand1} * ${operand2}`;
57   outputResult(currentResult, calcText);
58 }
59
60 function divide() {
61   const operand1 = currentResult;
62   const operand2 = getUserInput();
63   currentResult = operand1 / operand2;
64   console.log(`${operand1} / ${operand2} = ${currentResult}`);
65   const calcText = `${operand1} / ${operand2}`;
66   outputResult(currentResult, calcText);
67 }
68
69 userAdd.addEventListener('click', add);
70 userSubtract.addEventListener('click', subtract);
71 userMultiply.addEventListener('click', multiply);
```

W01-P4: 能做乘法計算 operand1 * operand2

The screenshot displays a web browser window on the left and a VS Code editor on the right. The browser shows 'The Unconventional Calculator' with the input '7' and the operation '*'. The result '5 * 7 = 35' is shown below. The console in the browser shows the calculation '5 * 7 = 35'. The VS Code editor shows the JavaScript code for the multiplication function, which is highlighted with a red box.

```
demo > w01 > js > JS app.js > ...
38 console.log(`${operand1} + ${operand2} = ${currentResult}`);
39 const calcText = `${operand1} + ${operand2}`;
40 outputResult(currentResult, calcText);
41 }
42
43 function subtract() {
44   const operand1 = currentResult;
45   const operand2 = getUserInput();
46   currentResult = operand1 - operand2;
47   console.log(`${operand1} - ${operand2} = ${currentResult}`);
48   const calcText = `${operand1} - ${operand2}`;
49   outputResult(currentResult, calcText);
50 }
51
52 function multiply() {
53   const operand1 = currentResult;
54   const operand2 = getUserInput();
55   currentResult = operand1 * operand2;
56   console.log(`${operand1} * ${operand2} = ${currentResult}`);
57   const calcText = `${operand1} * ${operand2}`;
58   outputResult(currentResult, calcText);
59 }
60
61 function divide() {
62   const operand1 = currentResult;
63   const operand2 = getUserInput();
64   currentResult = operand1 / operand2;
65   console.log(`${operand1} / ${operand2} = ${currentResult}`);
66   const calcText = `${operand1} / ${operand2}`;
67   outputResult(currentResult, calcText);
68 }
69
70 userAdd.addEventListener('click', add);
71 userSubtract.addEventListener('click', subtract);
72 userMultiply.addEventListener('click', multiply);
73 userDivide.addEventListener('click', divide);
```

W01-P5: 能做除法計算 operand1 / operand2

The screenshot shows a web browser window displaying "The Unconventional Calculator" and a VS Code editor showing the JavaScript code for the application.

Browser View:

- URL: 127.0.0.1:5500/demo/w01/index.html
- Calculator interface shows the number 3 in the input field.
- The operation $12 / 3$ is displayed, and the result is 4.

VS Code View:

- File: w01_90.md U
- Code editor shows the JavaScript code for the calculator.
- The `divide` function is highlighted in a red box.

```
demo > w01 > js > JS app.js > ...
44 const operand2 = getUserInput();
45 currentResult = operand1 - operand2;
46 console.log(`${operand1} - ${operand2} = ${currentResult}`);
47 const calcText = `${operand1} - ${operand2}`;
48 outputResult(currentResult, calcText);
49 }
50
51 function multiply() {
52   const operand1 = currentResult;
53   const operand2 = getUserInput();
54   currentResult = operand1 * operand2;
55   console.log(`${operand1} * ${operand2} = ${currentResult}`);
56   const calcText = `${operand1} * ${operand2}`;
57   outputResult(currentResult, calcText);
58 }
59
60 function divide() {
61   const operand1 = currentResult;
62   const operand2 = getUserInput();
63   currentResult = operand1 / operand2;
64   console.log(`${operand1} / ${operand2} = ${currentResult}`);
65   const calcText = `${operand1} / ${operand2}`;
66   outputResult(currentResult, calcText);
67 }
68
69 userAdd.addEventListener('click', add);
70 userSubtract.addEventListener('click', subtract);
71 userMultiply.addEventListener('click', multiply);
72 userDivide.addEventListener('click', divide);
```

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

The screenshot shows a web browser window displaying "The Unconventional Calculator" and a VS Code editor showing the JavaScript code for the application.

Browser View:

- URL: 127.0.0.1:5500/demo/w01/index.html
- Calculator interface shows the number 2 in the input field.
- The operation $32 / 2$ is displayed, and the result is 16.

VS Code View:

- File: w01_90.md U
- Code editor shows the JavaScript code for the calculator.
- The `subtract` and `divide` functions are highlighted in a red box.

```
demo > w01 > js > JS app.js > ...
38 console.log(`${operand1} + ${operand2} = ${currentResult}`);
39 const calcText = `${operand1} + ${operand2}`;
40 outputResult(currentResult, calcText);
41 }
42
43 function subtract() {
44   const operand1 = currentResult;
45   const operand2 = getUserInput();
46   currentResult = operand1 - operand2;
47   console.log(`${operand1} - ${operand2} = ${currentResult}`);
48   const calcText = `${operand1} - ${operand2}`;
49   outputResult(currentResult, calcText);
50 }
51
52 function multiply() {
53   const operand1 = currentResult;
54   const operand2 = getUserInput();
55   currentResult = operand1 * operand2;
56   console.log(`${operand1} * ${operand2} = ${currentResult}`);
57   const calcText = `${operand1} * ${operand2}`;
58   outputResult(currentResult, calcText);
59 }
60
61 function divide() {
62   const operand1 = currentResult;
63   const operand2 = getUserInput();
64   currentResult = operand1 / operand2;
65   console.log(`${operand1} / ${operand2} = ${currentResult}`);
66   const calcText = `${operand1} / ${operand2}`;
67   outputResult(currentResult, calcText);
68 }
69
70 userAdd.addEventListener('click', add);
71 userSubtract.addEventListener('click', subtract);
72 userMultiply.addEventListener('click', multiply);
73 userDivide.addEventListener('click', divide);
```