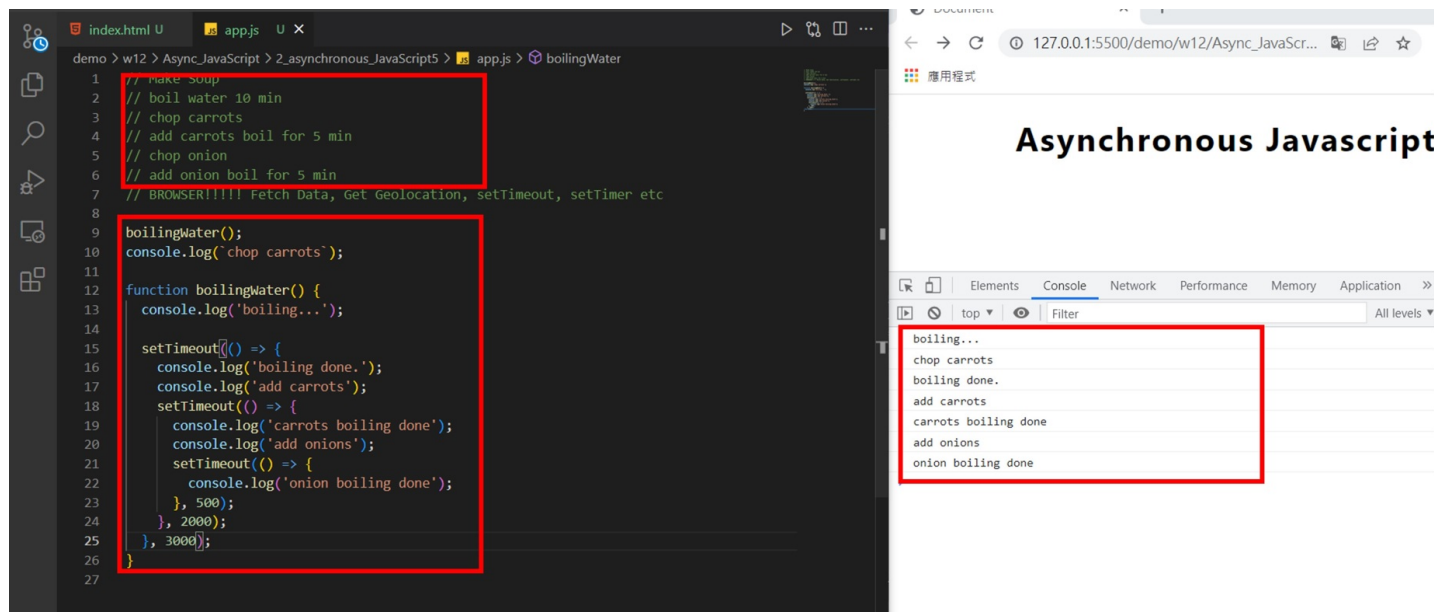
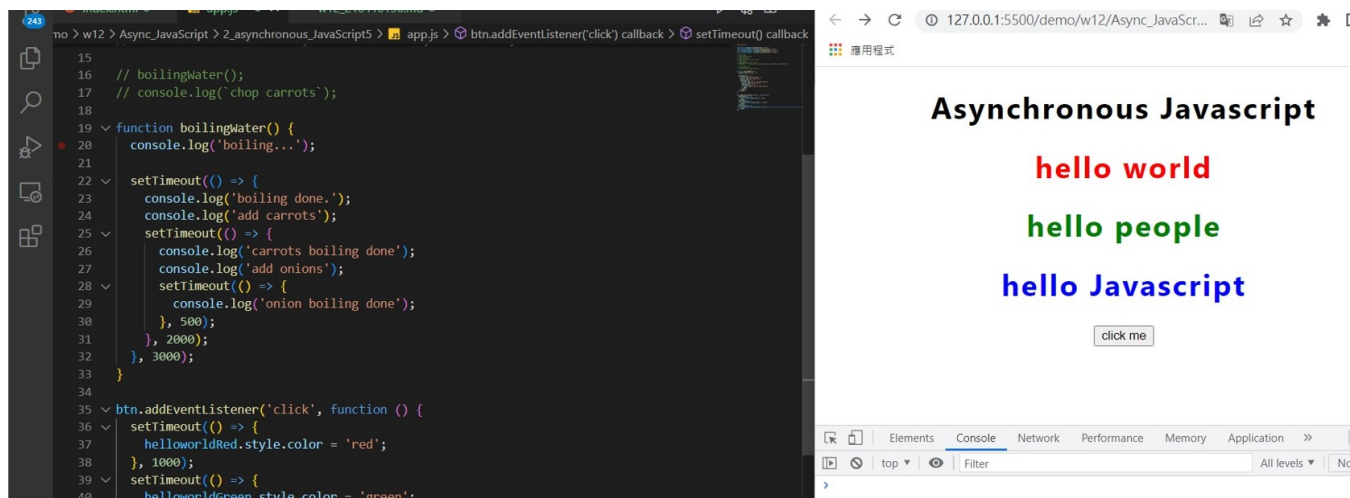


## w12-p1: Making soup demo for Async JavaScript with log info



## w12-p2 DOM call-back function demo -- colors change from red(1s), green (2s), blue(1s)



## w12-p3 use promise addColor(attribute, color, time) to solve-call back hell in w12-p2

```

13 // helloworldGreen.style.color = 'green';
14 // }, 2000);
15 // setTimeout(() => {
16 //   helloworldBlue.style.color = 'blue';
17 // }, 1000);
18 // });
19
20 const changeColor = function (attribute, color, time) {
21   return new Promise(function (resolve, reject) {
22     if (attribute) {
23       setTimeout(() => {
24         const helloworldBtn = attribute;
25         helloworldBtn.style.color = `${color}`;
26
27         resolve(helloworldBtn);
28       }, time * 1000);
29     } else {
30       reject(new Error(`There is no such attribut ${attribute}`));
31     }
32   });
33 };
34
35 btn.addEventListener('click', function () {
36   changeColor(helloworldRed, 'red', 1)
37   .then(() => {
38     changeColor(helloworldGreen, 'green', 2);
39   })
40   .then(() => {
41     changeColor(helloworldBlue, 'blue', 1);
42   })
43   .catch(err => console.error(err));
44 });
45

```

應用程式

## Asynchronous Javascript

hello world  
hello people  
hello Javascript

click me

Elements Console Network Performance Memory Application

```

<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <h1>Asynchronous Javascript</h1>
    <h1 class="one" style="color: red;">hello world</h1>
    <h1 class="two" style="color: green;">hello people</h1>
    <h1 class="three" style="color: blue;">hello Javascript</h1>
    <button class="btn">click me</button>
    <script src="/app.js"></script>
    <!-- Code injected by live-server -->
    <script type="text/javascript"></script>
  </body>
</html>

```

```

1 use strict;
2
3 const btn = document.querySelector('.btn');
4 const helloworldRed = document.querySelector('.one');
5 const helloworldGreen = document.querySelector('.two');
6 const helloworldBlue = document.querySelector('.three');
7
8 const changeColor = function (attribute, color, time) {
9   return new Promise(function (resolve, reject) {
10     if (attribute) {
11       setTimeout(() => {
12         attribute.style.color = `${color}`;
13         resolve();
14       }, time * 1000);
15     } else {
16       reject(new Error(`There is no such attribut ${attribute}`));
17     }
18   });
19 };
20
21 btn.addEventListener('click', function () {
22   changeColor(helloworldRed, 'red', 1)
23   .then(() => {
24     changeColor(helloworldGreen, 'green', 2);
25   })
26   .then(() => {
27     changeColor(helloworldBlue, 'blue', 1);
28   })
29   .catch(err => console.log(err));
30 });
31

```

應用程式

## Asynchronous Javascript

hello world  
hello people  
hello Javascript

click me

Elements Console Network Performance Memory

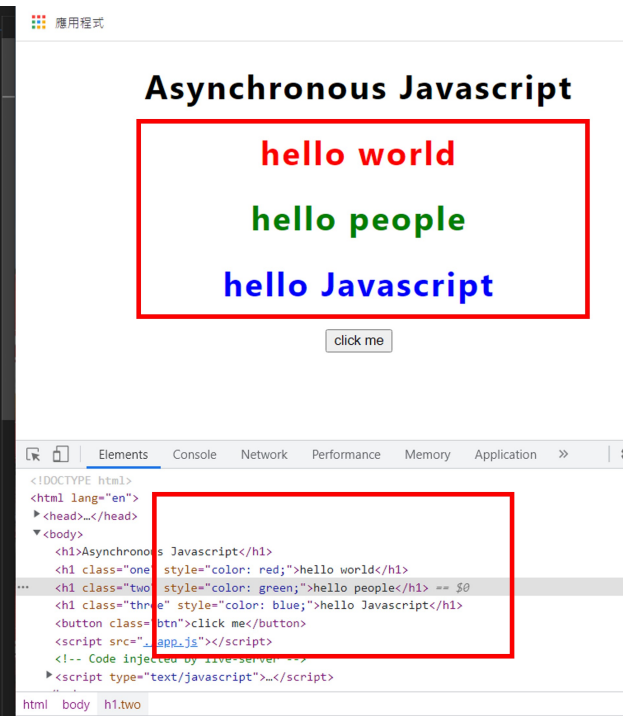
```

Uncaught (in promise) Error: There is no such attribut null
    at app.js:16:14
    at new Promise (<anonymous>)
    at changeColor (app.js:9:10)
    at app.js:22:7

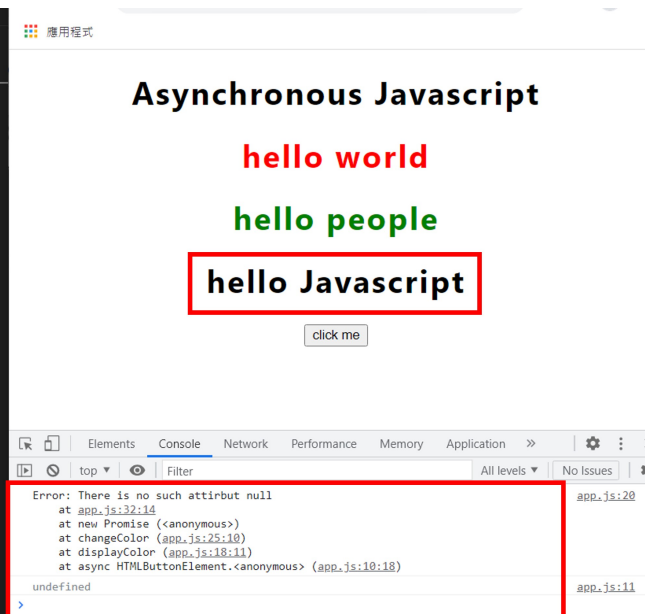
```

w12-p4 use async / await for w12-p3

```
3 const btn = document.querySelector('.btn');
4
5 const helloworldRed = document.querySelector('.one');
6 const helloworldGreen = document.querySelector('.two');
7 const helloworldBlue = document.querySelector('.three');
8
9 btn.addEventListener('click', async () => {
10   const result = await displayColor();
11   console.log(result);
12 });
13
14 const displayColor = async () => {
15   try {
16     await changeColor(helloworldRed, 'red', 1);
17     await changeColor(helloworldGreen, 'green', 2);
18     await changeColor(helloworldBlue, 'blue', 1);
19   } catch (err) {
20     console.log(err);
21   }
22 };
23
24 const changeColor = (attribute, color, time) => {
25   return new Promise(function (resolve, reject) {
26     if (attribute) {
27       setTimeout(() => {
28         attribute.style.color = color;
29         resolve();
30       }, time * 1000);
31     } else {
32       reject(new Error('There is no such attribut ${attribute}'));
33     }
34   });
35 };
36
```



```
demo > w12 > Async_JavaScript > 6_dom-cb-promise-async-await > app.js > helloworldBlue
3 const btn = document.querySelector('.btn');
4
5 const helloworldRed = document.querySelector('.one');
6 const helloworldGreen = document.querySelector('.two');
7 const helloworldBlue = document.querySelector('.three');
8
9 btn.addEventListener('click', async () => {
10   const result = await displayColor();
11   console.log(result);
12 });
13
14 const displayColor = async () => {
15   try {
16     await changeColor(helloworldRed, 'red', 1);
17     await changeColor(helloworldGreen, 'green', 2);
18     await changeColor(helloworldBlue, 'blue', 1);
19   } catch (err) {
20     console.log(err);
21   }
22 };
23
24 const changeColor = (attribute, color, time) => {
25   return new Promise(function (resolve, reject) {
26     if (attribute) {
27       setTimeout(() => {
28         attribute.style.color = color;
29         resolve();
30       }, time * 1000);
31     } else {
32       reject(new Error('There is no such attribut ${attribute}'));
33     }
34   });
35 };
36
```



w12-p5 fetch people.json with 4 data shown on console  
change name to poople.json will result in error

demo > w12 > Async\_Javascript > 7\_fetch\_api > app.js > then() callback

```
1 'use strict';
2
3 const url = 'api/people.json';
4
5 fetch(url)
6   .then(res => res.json())
7   .then(data => console.log(data));
8
```

127.0.0.1:5500/demo/w12/Async\_JavaScr...

應用程式

Asynchronous Javascript

hello world

hello people

hello Javascript

click me

Elements Console Network Performance Memory Application >>

top Filter All levels No

(4) [{...}, {...}, {...}, {...}]

0: {name: 'john', id: 1}

1: {name: 'peter', id: 2}

2: {name: 'anna', id: 3}

3: {name: 'susan', id: 4}

length: 4

[[Prototype]]: Array(0)

demo > w12 > Async\_Javascript > 7\_fetch\_api > app.js > then() callback

```
1 'use strict';
2
3 const url = 'api/people.json';
4
5 fetch(url)
6   .then(res => res.json())
7   .then(data => console.log(data))
8   .catch(() => console.log(new Error('url error')));
9
```

127.0.0.1:5500/demo/w12/Async\_JavaScr...

應用程式

Asynchronous Javascript

hello world

hello people

hello Javascript

click me

Elements Console Network Performance Memory Application >>

top Filter All levels No Issues

(4) [{...}, {...}, {...}, {...}]

0: {name: 'john', id: 1}

1: {name: 'peter', id: 2}

2: {name: 'anna', id: 3}

3: {name: 'susan', id: 4}

length: 4

[[Prototype]]: Array(0)