



*Front-end Advanced*

# Training Assignment

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Hanoi, mm/yyyy

**RECORD OF CHANGES**

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	30/May/2019	Create a new assignment	Create new	DieuNT1	VinhNV
2	07/Jun/2019	Update Fsoft Template	Update	DieuNT1	VinhNV

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CODE:	FEA.M.A501 (ES6 01)
TYPE:	Medium
LOC:	300
DURATION:	180

## Day 9-10. Unit 5: ES6 New Syntax

### Objectives:

- Understand the History of JavaScript and ES6 (the most popular JavaScript version)
- Understand ES6 features: Arrow function, Classes, Block scope, Rest/Spread, Destructuring, Template string, Map/Set
- Able to use ES6 features to create more readable and cleaner code

### Problem 01

Given the following code, your task is to change function declaration/function expression of ES5 to Arrow Function syntax, however you have to make sure the output is still `true`

```
1. (function IIFE() {
2.   function foo(x) {
3.     var y = x * 2;
4.
5.     return function bar(z) {
6.       if (z.length > 3) {
7.         return z.map(function baz(v) {
8.           if (v > 3) return v + y;
9.           else return baz(v * 4);
10.        });
11.      } else {
12.        var obj = [];
13.
14.        setTimeout(
15.          function bam() {
16.            obj.length = 1;
17.            obj[0] = this.w;
18.          }.bind(this),
19.          100
20.        );
21.
22.        return obj;
23.      }
24.    };
25.  }
26.
27.  var p = foo(2);
28.  var list1 = [1, 3, 4];
29.  var list2 = list1.concat(6);
30.
31.  list1 = p.call({ w: 42 }, list1);
32.  list2 = p(list2);
33.
34.  setTimeout(function() {
35.    console.log(
36.      list1[0] ===
37.      list2.reduce(function(s, v) {
38.        return s + v;
39.      }, 0)
40.    );
41.  }, 200);
42. })();
```

## **Problem 02**

Fix the following code, so the output is ``true``.

```
1. var x = 2,
2. fns = [];
3.
4. (function() {
5.   var x = 5;
6.
7.   for (var i = 0; i < x; i++) {
8.     // ..
9.   }
10. })();
11.
12. // DO NOT MODIFY BELOW CODE
13. console.log(x * 2 === fns[x * 2]());
14. // true
```

## **Problem 03**

Use rest/spread operator so the code below display ``true``

```
1. function foo() {}
2.
3. function bar() {
4.   var a1 = [2, 4];
5.   var a2 = [6, 8, 10, 12];
6.
7.   return foo();
8. }
9.
10. // DO NOT MODIFY BELOW CODE
11. console.log(bar().join('') === '281012');
12. // true
```

## **Problem 04**

Given the following code, you must use ES6 Destructuring feature to construct a data for function check so the output is ``true``.

```
1. function ajax(url, cb) {
2.   // fake ajax response:
3.   cb({
4.     foo: 2,
5.     baz: [6, 8, 10],
6.     bam: {
7.       qux: 12
8.     }
9.   });
10. }
11.
12. function check(data) {
13.   console.log(
14.     56 ===
15.     data.foo +
16.     data.baz +
17.     data.baz[0] +
18.     data.baz[1] +
19.     data.baz[2] +
20.     data.bam.qux +
```

```
21.         data.bam.qam
22.     );
23. }
24.
25. var defaults = {
26.     foo: 0,
27.     bar: 4,
28.     bam: {
29.         qux: 0,
30.         qam: 14
31.     }
32. };
33.
34. // YOUR CODE HERE
35. function response(...) {
36.     check(...); // true
37. }
38.
39. // DO NOT MODIFY
40. ajax('http://fun.tld', response);
```

## **Problem 05**

Given the following code, you must complete the **upper** function and use it as a tag function for the template string ``Hello ____ (@____), welcome to the ____!!!`` so the output is ``true``

```
1. function upper(strings, ...values) {}
2.
3. var name = 'Nguyen Van A',
4.     account = 'ANV',
5.     classname = 'Fresher FrontEnd';
6.
7. console.log(
8.     `Hello ____ (@____), welcome to the ____!!!` ===
9.     'Hello NGUYEN VAN A (@ANV), welcome to the FRESHER FRONTEND!!!'
10. );
```