

***Front-end Advanced***

**Training Assignment**

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| Version | 1.1 |
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**Hanoi, mm/yyyy**

RECORD OF CHANGES

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

Problem 02

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

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

Problem 03

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

1. function foo() {}
2. function bar() {
3. var a1 = [2, 4];
4. var a2 = [6, 8, 10, 12];
5. return foo();
6. }
7. // DO NOT MODIFY BELOW CODE
8. console.log(bar().join('') === '281012');
9. // 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. function check(data) {
12. console.log(
13. 56 ===
14. data.foo +
15. data.bar +
16. data.baz[0] +
17. data.baz[1] +
18. data.baz[2] +
19. data.bam.qux +
20. data.bam.qam
21. );
22. }
23. var defaults = {
24. foo: 0,
25. bar: 4,
26. bam: {
27. qux: 0,
28. qam: 14
29. }
30. };
31. // YOUR CODE HERE
32. function response(...) {
33. check(...); // true
34. }
35. // DO NOT MODIFY
36. 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. var name = 'Nguyen Van A',
3. account = 'ANV',
4. classname = 'Fresher FrontEnd';
5. console.log(
6. `Hello \_\_\_\_ (@\_\_\_\_), welcome to the \_\_\_\_!!!` ===
7. 'Hello NGUYEN VAN A (@ANV), welcome to the FRESHER FRONTEND!!!'
8. );