



*Front-end Advanced*

# Training Assignment

Document Code	25e-BM/HR/HDCV/FSOFT
Version	1.1
Effective Date	7/1/2019


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.A302 (Quiz App)
	TYPE:	Medium
	LOC:	300
	DURATION:	180 minutes

## Day 5-6. Unit 3: OOP and Prototype

### Objectives

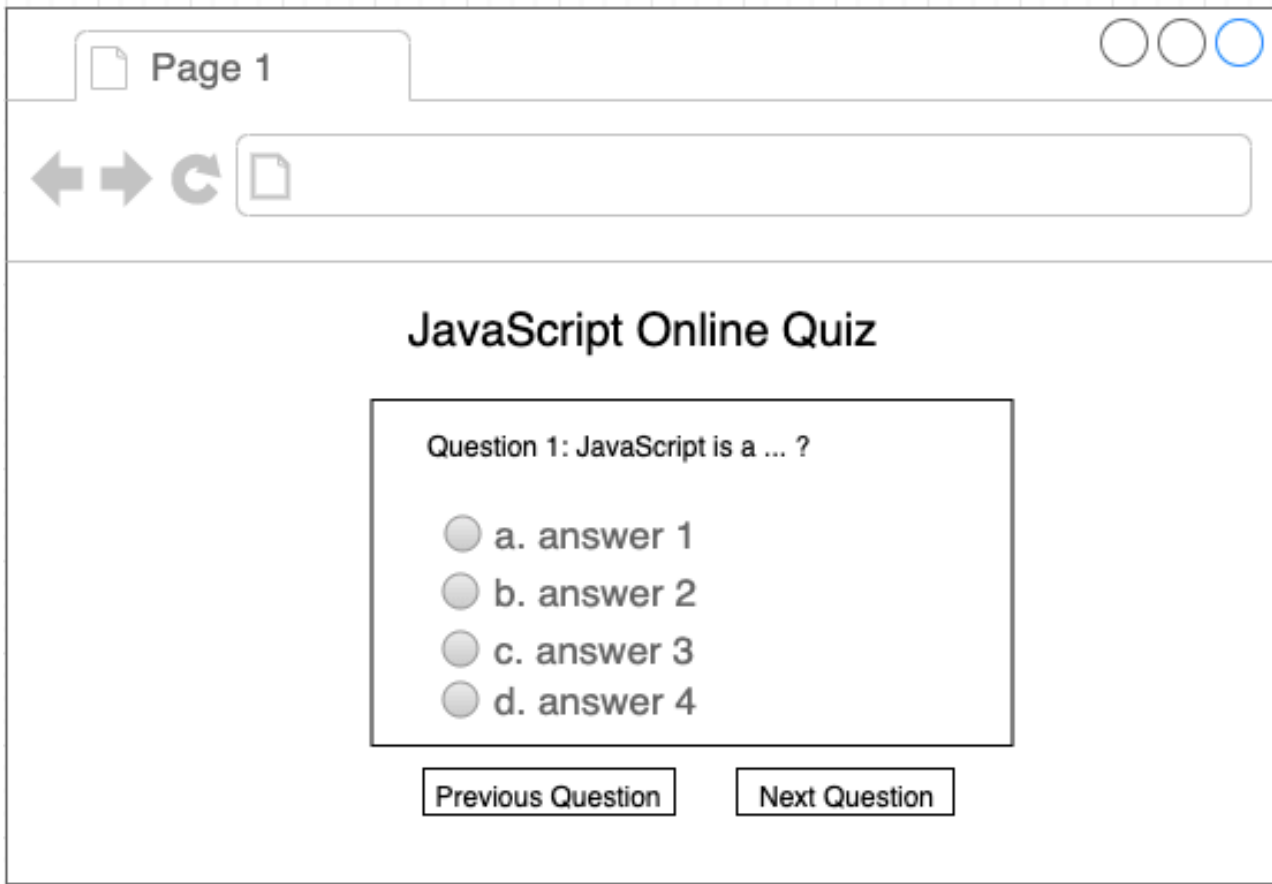
- Understand the core concepts, step to analysis, design and program to OOP
- Able to recognize class, field, method, interactions between classes
- Understand the 4 attributes of OOP: Abstraction, Inheritance, Encapsulation and Polymorphism
- Understand OOP Principles to create Abstract class, Interface
- Able to modeling real world object into OOP style to solve problem such as Employee Management, Book Management

### Specification

You are given an Quiz app using OOP style (file **JS-A.M.A502 (Quiz App).zip**).

The app consists of 3 mains parts (see below figure)

1. The title: JavaScript Online Quiz
2. The Question Container which contains the Question and a list of choice. User can only choose 1 answer from the list.
3. Button Group: Previous Question, Next Question, Submit



Suppose we have 20 Questions in total.

If the current question is 1 (count from 1 to 20), only **Next Question** button is shown. Click on this button will show next question (in this case question number 2).

If current question is from 2 to 20, then **Previous Question** must be show. Click on that button will show previous question.

If you are at last question (Question number 20), you must show **Submit Quiz** button, and hide Next Question (there is no more next question). If user click on this button, you must show his/her total score below the Button Group

Page 1

JavaScript Online Quiz

Question 1: JavaScript is a ... ?

☐ a. answer 1

☐ b. answer 2

☐ c. answer 3

☐ d. answer 4

Previous Question Submit Quiz

10 out of 20

Find below the list of questions represented in JavaScript:

```

1. const myQuestions = [
2.   {
3.     question: 'Javascript is _____ language.',
4.     answers: {
5.       a: 'Programming',
6.       b: 'Application',
7.       c: 'None of These',
8.       d: 'Scripting'
9.     },
10.    multi: false,
11.    correctAnswer: 'd'
12.  },
13.  {
14.    question:
15.      'Which of the following is a valid type of function javascript supports?',
16.    answers: {
17.      a: 'named function',
18.      b: 'anonymous function',
19.      c: 'both of the above',
20.      d: 'none of the above'
21.    },
22.    multi: false,
23.    correctAnswer: 'c'
24.  },
25.  {
26.    question:
27.      'Which built-in method returns the index within the calling String object of the
    first occurrence of the specified value?',

```

```
28.     answers: {
29.       a: 'getIndex()',
30.       b: 'location()',
31.       c: 'indexOf()',
32.       d: 'getLocation()'
33.     },
34.     multi: false,
35.     correctAnswer: 'c'
36.   },
37.   {
38.     question: 'Which one of the following is valid data type of JavaScript',
39.     answers: {
40.       a: 'number',
41.       b: 'void',
42.       c: 'boolean',
43.       d: 'nothing'
44.     },
45.     multi: false,
46.     correctAnswer: 'c'
47.   }
48. ];
```

**Problem 01:**

Using your understand of OOP (and `this` keyword) fix the problem when user click on **Previous** button, **Next** button, **Submit** button

**Problem 02:**

Now you have to extends the apps to support Multiple Choice Question (in HTML it's a checkbox instead of radion). Implement the **MultiChoiceQuestion** class to fulfil the requirement.