

Challenge Question: Arrays and Objects

Question #1: What is at least one way to add an object to an existing array? What is at least one way to add an array to an existing object?

- The `push()` method is used to add one or multiple elements to the end of an array. It returns the new length of the array formed. An object can be inserted by passing the object as a parameter to this method. The object is hence added to the end of the array.

Syntax:

```
array.push(objectName)
```

- There're a few ways to add properties to an object in JavaScript. One way is to add a property using the dot notation:

```
obj.foo = [1,2,3,4] //creates property foo in object obj with value of the array [1,2,3,4]
```

Question #2: How can you find the length of an array? How can you find the number of properties in an object?

- The **length** property of an object which is an instance of type `Array` sets or returns the number of elements in that array. The value is an unsigned, 32-bit integer that is always numerically greater than the highest index in the array.

```
const clothing = ['shoes', 'shirts', 'socks', 'sweaters'];  
console.log(clothing.length); // expected output: 4
```

- You can also use JavaScript's `Object.keys()` method to count all the enumerable properties on an object.

```
const dog = {  
  name: "Naya",  
  age: 2,  
  color: "black",  
  Breed: "Rottweiler mix",  
}
```

```
let count = Object.keys(dog).length
```

```
console.log(count) // Result: 4
```

Question #3: Let's say you have a MongoDB collection of documents, and you've used a Mongoose/MongoDB Node Driver method such as *collection.find()* that returns the documents as objects in an array. How would you go about checking to see if a specific object already exists in that array?

- Use the `array.findIndex` method using check of object property matches desired value. The `findIndex()` method returns the index of the first element in the array that satisfies the provided testing function. Otherwise, it returns `-1`, indicating that no element passed the test.

```
var x = objArray.findIndex(function(item) {  
  return item.name === value;  
})
```