04.02 Lab Solution

Making an Object with Properties

Adding a Method (function) to an Object

Updating / Setting Object Properties

1. Make an object variable called product.

- In the object variable declaration, include the following properties of indicated key and datatype.

- For the values, refer to the method's return value

- product object's properties: key (datatype)

    - prodName (string)
    - patentNum (number)
    - assemblyRequired (boolean)
    - buzzwords (array with 3 items)
    - company (object with 2 properties: name, country
    - promote (method) the returns a string concatenated from ALL the other properties and array items: promote method returns: "Announcing Doo-Dad Incorporated's newest high-tech, labor-saving, water-resistant Wonder Widget! Made in U.S.A. Patent number: 7654321. Some assembly required." HINT: Use if-else logic in the method to concatnate or not based on the boolean

```
const product = {
    prodName: 'Wonder Widget',
    patentNum: 7654321,
    assemblyRequired: true,
    buzzwords: ['high-tech', 'labor-saving', 'water-resistant'],
    company: {name: "Doo-Dad, Inc.", country: "U.S.A."},
    promote: function() {
        let assembly = "";
        if(this.assemblyRequired) assembly = "Some assembly
required.";
        return `\Get ${this.company.name}'s new ${this.buzzwords[0]},
${this.buzzwords[1]}, ${this.buzzwords[this.buzzwords.length-1]}
${this.prodName}!
        \nMade in ${this.company.country}. Patent number:
${this.patentNum}. ${assembly}`
    }
}
```

2. Log the following properties of the object:

- the whole object
- the boolean, including with it the label "Assembly Required:"
- the first item in the buzzwords array
- the last item in buzzwords, accessed via the array length
- the company name and country as: "All Doo-Dad, Inc. products are made in U.S.A."
- the promote method: Get Doo-Dad Inc.'s new high-tech, labor-saving, water-resistant Wonder Widget! Made in U.S.A. Patent number: 7654321. Some assembly required.

```javascript
    console.log(product); // {} (click arrow to open and see all
properties)
    console.log("Assembly Required:", product.assemblyRequired); //
Assembly Required: true
    console.log(product.buzzwords[0]); // high-tech
    console.log(product.buzzwords[product.buzzwords.length-1]); // water-
resistant
    console.log(`All ${product.company.name} products are made in
${product.company.country}`);
    // All Doo-Dad, Inc. products are made in U.S.A.
    console.log(product.promote());
    // Get Doo-Dad Inc.'s new high-tech, labor-saving, water-resistant
Wonder Widget!
    // Made in U.S.A. Patent number: 7654321. Some assembly required.
```

3. Add four new properties outside of the object. In other words, do not add these new properites directly into the object declaration:
   - msrp (number) -- MSRP (Manufacturer's Suggested Retail Price)
   - discount (number) -- as decimal: .2 means 20%
   - salePrice (result of math done with mspr and discount)
   - caution (string)

```javascript
    product.msrp = 40;
    product.discount = .2;
    product.salePrice = product.msrp * (1 - product.discount);
    product.caution = "Water-resistant does NOT mean waterproof. Do not
submerge.";
```

4. Update the promote method to include the new properties.
   - do not edit the original object method HINT: product.promote = function()
   - The promote method's updated return value should be: "Get Doo-Dad Inc.'s new high-tech, labor-saving, water-resistant Wonder Widget! Made in U.S.A. Made in U.S.A. Patent number: 7654321. Some assembly required. MSRP: $40 * * * ON SALE! 20% OFF * * * NOW ONLY: $32 *** (CAUTION: Water-resistant does NOT mean waterproof. Do not submerge.)
   - log the promote method to see the changes.

```javascript
    product.promote = function() {
       let assembly = "";
```

```javascript
        if(this.assemblyRequired) assembly = "Some assembly required";
        return `Get ${this.company.name}'s new ${this.buzzwords[0]},
        ${this.buzzwords[1]}, ${this.buzzwords[this.buzzwords.length-1]}
${this.prodName}!
        Made in ${this.company.country}. Patent number: ${this.patentNum}.
${assembly}
        *** MSRP: $$${this.msrp} *** ON SALE! ${this.discount * 100}% OFF
*** NOW ONLY: $$${this.salePrice}`;
    }

    console.log(product.promote());
    // Get Doo-Dad Inc.'s new high-tech, labor-saving, water-resistant
Wonder Widget!
    // Made in U.S.A. Patent number: 7654321. Some assembly required.
    // *** MSRP: $40 *** ON SALE! $20% OFF *** NOW ONLY: $32;
```

5. Update / change properties and log the whole object and the method again:
   - flip the boolean to false
   - increase the MSRP to $75
   - increase the discount to 50%
   - push another buzzword into the array: "shock-resistant"
   - update the promote method to include the new array item
   - log the promote method to see the changes.

```javascript
    product.assemblyRequired = false;
    product.msrp = 75;
    product.discount = .5;
    product.buzzwords.push('shock-resistant');

    product.promote = function() {
        let assembly = "";
        if(this.assemblyRequired) assembly = "Some assembly required";
        return `Get ${this.company.name}'s new ${this.buzzwords[0]},
${this.buzzwords[1]},
        ${this.buzzwords[2]}, ${this.buzzwords[this.buzzwords.length-1]}
${this.prodName}!
        Made in ${this.company.country}. Patent number: ${this.patentNum}.
${assembly}
        *** MSRP: $$${this.msrp} *** ON SALE! ${this.discount * 100}% OFF
*** NOW ONLY: $$${this.salePrice}`;
    }

    console.log(product.promote());
    // Get Doo-Dad Inc.'s new high-tech, labor-saving, water-resistant,
shock-resistant Wonder Widget!
    // Made in U.S.A. Patent number: 7654321. Some assembly required.
    // *** MSRP: $75 *** ON SALE! $50% OFF *** NOW ONLY: $37.50;
```

NEXT: Lesson 04.03