

## 04.02 Lab Solution

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### Making an Object with Properties

### Adding a Method (function) to an Object

### Updating / Setting Object Properties

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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.

```
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 properties 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 msrp and discount)
- caution (string)

```
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.

```
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[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.

```

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 \*\*\*