OOP

**DEADLINE:** 02/10/2018

## FOLDER STRUCTURE

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| --- | --- |
| FL\_9\_3\_homework\_oop/\*     homework/\*         js/\*             app.js\*          index.html\*         .eslintrc.js\* | \*  – required |

## TASK

1. You should create two classes **Product** and **ShoppingCart**.
2. Constructor of **ShoppingCart** class should expect three arguments:
   1. **name** - name of the cart.
   2. **owner** - owner of the cart.
   3. **maxCount** - max count of products instide the cart.
3. Constructor of **Product** class should expect three arguments:
   1. **name** - name of the product.
   2. **decription** - description of the product (ex: color, size).
   3. **price** - price of the product.
4. **ShoppingCart** class should have at least following methods:
   1. **addNewProduct** - add new product to the list of the cart (If there no free place for new product, you should remove product which has the lowest price and add new product).
   2. **removeProduct** - remove product by id (it can be index in array).
   3. **getAvaragePrice** - return average price of the products in the cart.
   4. **getProducts** - return all products in the cart. (products field should be private).
   5. **getFormattedListOfProducts** - return list of products in next format `${name} - is on ${shoppingCartName} from ${dateOdAddingToCart}. Detailed product description: ${productDescription}`
   6. **getTotalPrice** - return total price of the products in the cart.
   7. **getHistory** - return history log(you should have private field **\_logs** where save all information about actions).
5. **Product** class should have at least following methods:
   1. **getPrice** - return price of the product.
   2. **setPrice** - sets price of the product (cannot set smaller price than product has now).
   3. **add** - sets current name of the cart product placed in.
   4. **removeProduct** - remove name of the shopping cart the product placed in.
   5. **getHistory** - return history log (All actions add/removeProduct should be save information message in private field).
6. You should be able to chain the next functions from **Product** class:
   * 1. **add**
     2. **removeProduct**
     3. **setPrice**

And from **ShoppingCart** class:

* + 1. **addNewProduct**
    2. **removeProduct**

**example:**

stevesShopCart.addNewProduct(banana).addNewProduct(banana);

1. All functions should contain assertions that prevent non-logical behaviour(example: set to price only finite number)
2. There should be some script that demonstrates work of all functions.

## RESTRICTIONS

* Do not use ES6 classes
* Don’t use any of build systems (e.g. Grunt, Gulp or Webpack).

## BEFORE SUBMIT

* Check files structure;
* Check code structure (code style);
* Make sure your code doesn’t have mistakes. Use ESLint file included into the homework;
* Clean up your code;

## SUBMIT

* The folder should be uploaded to github repository 'fl-9' into master branch

## USEFUL LINKS

* <http://eloquentjavascript.net/1st_edition/chapter8.html>
* <https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Objects/Object-oriented_JS>