**Reviewing Assignment**

Assignment 4

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| Started: | Oct 14, 2014 10:33 PM |
| Finished: | Oct 20, 2014 11:39 PM |

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**Assignment 4     Total Grade: 70   (of possible 70 points)**

**Score: 70   (of possible 70 points)**

Your task is to develop a simplified front-end for a business review site such as Yelp or Zagat.

You will manipulate an array of objects where each object corresponds to a business.

Each business will have the following properties:

name:  the business name, this is just a string.

distance: the distance in miles from the current location.

price:  the price will range from 1 for cheap to 5 for expensive.

rating:  this will represent the average ‘star’ rating of the business by reviewers.  A rating of 1 corresponds to ‘poor’ and a rating of 5 corresponds to ‘excellent’.

The array of objects is called business.  It is defined and populated for you in the template JavaScript file breview.js.

**Your task is to define the following methods on the business array:**

business.alphaSort:  returns a sorted array with the businesses in **ascending alphabetical order based on their name.**

business.priceSort: returns a sorted array with the businesses in **ascending numerical order** based on their price (**cheapest to most expensive**).

business.ratingSort: returns a sorted array with the businesses in **descending numerical order** based on their rating (**highest rating to lowest rating**).

business.select  =  function(maxDistance,  maxPrice, minRating)

The select method takes 3 parameters as input (in the order specified) and returns a subset of the array with only the businesses within the distance maxDistance, that have a rating of at least minRating and a price of at most maxPrice.

**Inside the 4 method definitions, make sure you use ‘this’**(not business) **to access the business object.**

Feel free to create additional helper comparison functions to perform the required sorting and filtering tasks as shown in modules 7.3 and 7.7.

It is OK for the sorting methods to mutate the array they are invoked on but they also have to **return the sorted array.**

**Testing:**

Once you have created the methods described above, you’ll be able to run the test scenario described in the attached file, TestBReview.pdf.  The expected console output is documented there.  Feel free to add your own test cases.

The template breview.js also includes the JavaScript code to run the scenario described.

We’ll use console.table to check the results:  it is a useful tool available in the **Firebug console** that lets us print out a formatted array of objects to the console.  Make sure you have the Firebug console open when you run your program in Scratchpad so that you can see the result.

**How do I get started?**

Download or copy and paste the template file breview.js from Resources -> Assignment 4 Files.  Then go to Komodo Edit or Scratchpad and open it from there.  You can then complete the assignment by modifying breview.js and running it in Scratchpad.

**How do I submit my work?**

Upload  your solution in the modified  file review.js.  Just **make sure you test it first.**

**Grading Rubric:**

alphaSort: 15 points

priceSort: 15 points

ratingSort: 15 points

select: 25 points

**Answer**

* application/x-javascript[breview.js](https://myetudes.org/access/mneme/content/private/mneme/09ae2205-2717-4bfc-00cf-33f5bdcd7b48/submissions/14814915/3146580b-3e5a-41dd-004c-89c1c099a76d/breview.js)

[[https://myetudes.org/ambrosia_library/icons/collapse.gif](https://myetudes.org/portal/tool/acd42055-9bd4-4630-8071-c0425c2388c3/review/14814915/list) Model Answer](https://myetudes.org/portal/tool/acd42055-9bd4-4630-8071-c0425c2388c3/review/14814915/list)

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 \* Business Review  - Solution

 \* This implementation defines the helper comparison

 \* functions inside the corresponding methods.

  \* It also mutates the existing array.

 \*/

'use strict';

// This is the business array.

var business = [

    {

        name: 'Red Apple',

        distance: 2,

        price: 3,

        rating: 1

    },

    {

        name: 'Everything Pizza',

        distance: 6,

        price: 1,

        rating: 2

    },

    {

        name: 'Zoe',

        distance: 1,

        price: 1,

        rating: 5

    },

    {

        name: 'Salad Place',

        distance: 2,

        price: 2,

        rating: 4

    },

    {

        name: 'Yumm',

        distance: 5,

        price: 2,

        rating: 3

    },

    {

        name: 'California Foods',

        distance: 8,

        price: 5,

        rating: 4

    }

];

// return an array in ascending alphabetical order based on the name

business.alphaSort = function () {

    function compareName(first, second) {

        if (first.name < second.name) {

            return - 1;      // first comes before second

        } else if (first.name > second.name) {

            return 1;        // second comes before first

        } else {

            return 0;        // the two are equivalent

        }

    }

    return this.sort(compareName);

};

// return an array in ascending numerical order based on the price.

business.priceSort = function () {

    function comparePrice(first, second) {

        return first.price - second.price;

    }

    return this.sort(comparePrice);

};

// return an array in descending numerical order based on the rating

business.ratingSort = function () {

    function compareRating(first, second) {

        return second.rating - first.rating;

    }

    return this.sort(compareRating);

};

// return a subset of the array with the items that satisfy the

// selection criteria

business.select = function (maxDistance, maxPrice, minRating) {

    function test(item) {

        if (item.rating >= minRating &&

        item.price <= maxPrice &&

        item.distance <= maxDistance) {

            return true;

        } else {

            return false;

        }

    }

    return this.filter(test);

};

// Testing

// Make sure you open the Firebug console so that you can see and compare the output.

// get the businesses that satisfy the selection criteria and output the result.

console.table(business.select(2, 2, 3));

console.table(business.select(5, 4, 3));

console.table(business.select(7, 4, 2));

console.table(business.select(8, 5, 4));

console.table(business.alphaSort());

// get the restaurants sorted by price (low to high)and output the result.

console.table(business.priceSort());

// get the restaurants sorted by rating (high to low) and output the result.

console.table(business.ratingSort());

**Comments**

Excellent!

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