# JS Advanced: Retake Exam - 10.12.19

Exam problems for the ["JavaScript Advanced" course @ SoftUni](https://softuni.bg/courses/js-advanced). Submit your solutions in the SoftUni Judge system at [https://judge.softuni.bg/Contests/Compete/Index/](https://judge.softuni.bg/Contests/Compete/Index/1933#2).

# Problem 3. Christmas Dinner

**class** ChristmasDinner {  
 *//* ***TODO: implement this class...***  
}

### Your Task

### Write a ChristmasDinner class, which supports the described functionality below.

### Functionality

#### constructor()

Should have these **4** properties:

* **budget** - number - comes from the constructor
* **dishes -**  empty array
* **products -**  empty array
* **guests -** empty object

**Important!** Use accessors to validate that the budget (the budget cannot be negative number). If the class is initialized with negative budget throw an error with the following message:

"**The budget cannot be a negative number**"

#### shopping([product])

In this method you should go shopping for the needed products to prepare for the dinner. The **product** will come as an array that has the type of the product and the price for it

* If you don’t have enough money to buy the product, you should throw an error

"**Not enough money to buy this product"**

* Otherwise you should push the type of the product in the products array, decrease the budget with the price of the product and return a message:

"**You have successfully bought {type}!"**

#### recipes({recipe})

In this method you will receive a recipe in the following format: **{ recipeName: string, productsList: array of strings }.**

* The products require to prepare the meal are in contained the **productList**. If all the products from the **productList** are present in the products array you should push an object in the following format: **{ recipeName, productList }** to the dishes array and return a message:

"**{recipeName} has been successfully cooked!**"

* If one or more products needed to make the meal are absent from the products, throw an error

**"We do not have this product"**

#### inviteGuests(name, dish)

In this **method** you would invite guests to the dinner. The **name** is string and so is the **dish**

* If the dish is not present in the dishes array, throw a new error

**"We do not have this dish"**

* And if the guest is already present in the guest object, throw a new error:

#### "This guest has already been invited"

* Otherwise create a **new key and value pair** to the guest object with key the **name** of the guest and **value - the dish** in the format: **{ {guestName}: {dish} }** and return a message:

#### "You have successfully invited {name}!"

#### showAttendance()

This function should return a sting with all the guest, the dish they are having and the products the dish is made of, separated by a comma and space (product, product) in the following format:

#### "{name} will eat {dish}, which consists of {products}

#### "{name} will eat {dish}, which consists of {products}

#### . . . "

### Submission

Submit only your **ChristmasDinner class.**

### Examples

This is an example how the code is **intended to be used**:

|  |
| --- |
| Sample code usage |
| let dinner = new ChristmasDinner(300);  dinner.shopping(['Salt', 1]);  dinner.shopping(['Beans', 3]);  dinner.shopping(['Cabbage', 4]);  dinner.shopping(['Rice', 2]);  dinner.shopping(['Savory', 1]);  dinner.shopping(['Peppers', 1]);  dinner.shopping(['Fruits', 40]);  dinner.shopping(['Honey', 10]);  dinner.recipes({  recipeName: 'Oshav',  productsList: ['Fruits', 'Honey']  });  dinner.recipes({  recipeName: 'Folded cabbage leaves filled with rice',  productsList: ['Cabbage', 'Rice', 'Salt', 'Savory']  });  dinner.recipes({  recipeName: 'Peppers filled with beans',  productsList: ['Beans', 'Peppers', 'Salt']  });  dinner.inviteGuests('Ivan', 'Oshav');  dinner.inviteGuests('Petar', 'Folded cabbage leaves filled with rice');  dinner.inviteGuests('Georgi', 'Peppers filled with beans');  console.log(dinner.showAttendance()); |
| Corresponding output |
| Ivan will eat Oshav, which consists of Fruits, Honey  Petar will eat Folded cabbage leaves filled with rice, which consists of Cabbage, Rice, Salt, Savory  Georgi will eat Peppers filled with beans, which consists of Beans, Peppers, Salt |

class ChristmasDinner {

    constructor(budget) {

        this.budget = budget;

        this.dishes = [];

        this.products = [];

        this.guests = {};

    }

    set budget(budget) {

        if (budget < 0) {

            throw new Error('The budget cannot be a negative number');

        }

        this.\_budget = budget;

    }

    get budget() {

        return this.\_budget;

    }

    //деконструираме по елементи type и price

    shopping([type, price]) {

        if (this.budget < price) {

            throw new Error('Not enough money to buy this product');

        }

        this.products.push(type);

        this.budget -= price;

        return `You have successfully bought ${type}!`

    }

    //деконструриаме обект по ключове recipeName и productsList

    /\*\*

     \*

     \* @param {{ recipeName: string, productsList: array of strings }} recipe

     \*/

     //some() - сравнение между два масива

    recipes({ recipeName, productsList }) {

        if (productsList.some(p => this.products.includes(p) == false)) {

            throw new Error('We do not have this product');

        }

        //масив от обекти с ключ рецепта и value - масив от продукти

        this.dishes.push({ recipeName, productsList });

        return `${recipeName} has been successfully cooked!`

    }

    inviteGuests(name, dish) {

        if (this.dishes.some(d => d.recipeName !== dish)) {

            throw new Error("We do not have this dish");

        } else if (this.guests.hasOwnProperty(name)) {

            throw new Error("This guest has already been invited");

        }

        this.guests[name] = dish;

        return `You have successfully invited ${name}!`;

    }

    showAttendance() {

        let result = [];

        Object.entries(this.guests).forEach(([guestName, dish]) => {

            result.push(`${guestName} will eat ${dish}, which consists of ${this.dishes.find(d => d.recipeName == dish).productsList.join(', ')}`);

        });

        return result.join('\n');

    }

}

let dinner = new ChristmasDinner(300);

dinner.shopping(['Salt', 1]);

dinner.shopping(['Beans', 3]);

dinner.shopping(['Cabbage', 4]);

dinner.shopping(['Rice', 2]);

dinner.shopping(['Savory', 1]);

dinner.shopping(['Peppers', 1]);

dinner.shopping(['Fruits', 40]);

dinner.shopping(['Honey', 10]);

dinner.recipes({

    recipeName: 'Oshav',

    productsList: ['Fruits', 'Honey']

});

dinner.recipes({

    recipeName: 'Folded cabbage leaves filled with rice',

    productsList: ['Cabbage', 'Rice', 'Salt', 'Savory']

});

dinner.recipes({

    recipeName: 'Peppers filled with beans',

    productsList: ['Beans', 'Peppers', 'Salt']

});

dinner.inviteGuests('Ivan', 'Oshav');

dinner.inviteGuests('Petar', 'Folded cabbage leaves filled with rice');

dinner.inviteGuests('Georgi', 'Peppers filled with beans');

console.log(dinner.showAttendance());