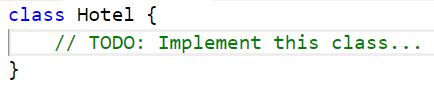
# JS Advanced - Exam: 17.03.2019

Exam problems for the [“JavaScript Advanced” course @ SoftUni](https://softuni.bg/courses/javascript-advanced).   
Submit your solutions in the SoftUni judge system at <https://judge.softuni.bg/Contests/1586/>.

## Problem 3. Hotel



Write a **JavaScript** class Hotelwhich has the following **functionality**:

### Constructor

You should implement at least these properties:

* name - string
* capacity - number
* bookings - array
* currentBookingNumber - number, initialized as ‘**1**’

At **initialization** of the Hotel **class**, the **constructor** receives only **2** **parameters** (**name**, **capacity**).   
The bookings property needs to be **empty** by **default.**

* Thenamepropertyrefers to the **hotel's** **name**.
* Thecapacitypropertyrefers for the **count** of the **hotel's** **rooms**.
  + The **single** rooms are **50 %** of the given capacity
  + The **double** rooms are **30 %** of the given capacity
  + The **maisonette** rooms are **20 %** of the given capacity
  + **NOTE**: All room counts should be integers.

### Accessors

roomsPricing - **Returns** an **object**, containing the following properties:

* **single: 50** (price per night)
* **double: 90** (price per night)
* **maisonette: 135** (price per night)

servicesPricing- **Returns** an **object**, containing the following properties:

* **food: 10** (per order)
* **drink: 15** (per order)
* **housekeeping: 25** (per order)

### Functions

#### **rentARoom({clientName}, {roomType}, {nights})**

Receive **3** parameters:  **clientName** (string), **roomType** (string), **nights** (number)

If the hotel has **available** rooms of the requested roomType, you should create an **object** for the current client’s **booking** which contains properties for (**client name**, **room type**, **nights**, and **room number**) and **store** it into the bookings property.

* You should also **increase** the currentBookingNumber by 1. The first given currentBookingNumber is 1.
* You should also **decrease** the **capacity** of the requested roomType rooms by 1.

Then you should return a **string**, in the following format:

"Enjoy your time here Mr./Mrs. {clientName}. Your booking is {currentBookingNumber}."

##### **Validations**

* If there are **NO** available rooms of the requested roomType, the **function** shouldreturn a **string**, consisting of the message: "No {roomType} rooms available!"

And for **each** of the **other** **available** roomtypes, you should **append** a **string** to the **message** in the following format:

"Available {roomType} rooms: {roomTypeRoomsRemaining}."

Example:

"No single rooms available! Available double rooms: 2. Available maisonette rooms: 1."

#### **roomService({currentBookingNumber}, {serviceType})**

Receive **two** parameters: currentBookingNumber (number) and serviceType(string)

You should **create** an **additional** **property** for the **booking** with the given currentBookingNumber**,** called services(array), and add the given serviceType to it (if it is already created, **just** add the new serviceType to it).

**NOTE**: The services property contains an array of **strings** (serviceTypes). You may add the same serviceType **multiple times**.

Then you should return a **string**, in the following format:

"Mr./Mrs. {clientName}, Your order for {serviceType} service has been successful."

##### Validations

* If the given currentBookingNumber is **invalid** (**non-existent**)return the following string:  
  "The booking {currentBookingNumber} is invalid."
* If the **requested service** is **invalid,** returnthe following string**:  
  "**We do not offer {serviceType} service.**"**

#### **checkOut({currentBookingNumber})**

Receive **one** parameter - currentBookingNumber (number)

You should **calculate** the due amount, as totalMoney, for the **booking** with the given currentBookingNumber, depending on the **nights** spent and the **price** of the roomType.

* You should also **increase** the **capacity** of the given roomType rooms by 1.

Then you should return a **string**, in the following format:

"We hope you enjoyed your time here, Mr./Mrs. {clientName}. The total amount of money you have to pay is {totalMoney} BGN."

If the **booking** contains services, you should calculate the total price for all the services, as totalServiceMoney.

Then you should return a **string**, in the following format:

"We hope you enjoyed your time here, Mr./Mrs. {clientName}. The total amount of money you have to pay is {totalMoney + totalServiceMoney} BGN. You have used additional room services, costing {totalServiceMoney} BGN."

##### Validations

* If the given currentBookingNumber is **invalid** (**non-existent**)return the following string:  
  "The booking {currentBookingNumber} is invalid."

#### **report()**

This function represents the hotel's "database". Prints information about each booking.

The information should be presented in the following format:

"{hotelName.toUpperCase()} DATABASE:  
-------------------- (*separate the header and bookings information* - 20 dashes)  
bookingNumber – {bookingNumber}  
clientName – {clientName}  
roomType – {roomType}  
nights – {nights}  
services: {services} (Optional. Only for those bookings who have used room services. The services should be joined with a comma and a space.)  
---------- (*booking separator* - 10 dashes)

...

##### **Validations**

* If there are no bookings, return the following string:  
  "{hotelName.toUpperCase()} DATABASE:

-------------------- (*separate the header and bookings information* - 20 dashes)

There are currently no bookings."

### Submission

Submit only the **Hotel** **class** as **JavaScript** **code**.

### Constraints

**The given capacity will greater or equal to 10.**

### Examples

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| **Input 1** |
| let hotel = new Hotel('HotUni', 10);  console.log(hotel.rentARoom('Peter', 'single', 4));  console.log(hotel.rentARoom('Robert', 'double', 4));  console.log(hotel.rentARoom('Geroge', 'maisonette', 6)); |

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| **Output 1** |
| Enjoy your time here Mr./Mrs. Peter. Your booking is 1.  Enjoy your time here Mr./Mrs. Robert. Your booking is 2.  Enjoy your time here Mr./Mrs. Geroge. Your booking is 3. |

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| **Input 2** |
| let hotel = new Hotel('HotUni', 10);  hotel.rentARoom('Peter', 'single', 4);  hotel.rentARoom('Robert', 'double', 4);  hotel.rentARoom('Geroge', 'maisonette', 6);  console.log(hotel.roomService(3, 'housekeeping'));  console.log(hotel.roomService(3, 'drink'));  console.log(hotel.roomService(2, 'room')); |
| **Output 2** |
| Mr./Mrs. Geroge, Your order for housekeeping service has been successful.  Mr./Mrs. Geroge, Your order for drink service has been successful.  We do not offer room service. |

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| **Input 3** |
| let hotel = new Hotel('HotUni', 10);  hotel.rentARoom('Peter', 'single', 4);  hotel.rentARoom('Robert', 'double', 4);  hotel.rentARoom('Geroge', 'maisonette', 6);  hotel.roomService(3, 'housekeeping');  hotel.roomService(3, 'drink');  hotel.roomService(2, 'room');  console.log(hotel.report()); |
| **Output 3** |
| HOTUNI DATABASE:  --------------------  bookingNumber - 1  clientName - Peter  roomType - single  nights - 4  ----------  bookingNumber - 2  clientName - Robert  roomType - double  nights - 4  ----------  bookingNumber - 3  clientName - Geroge  roomType - maisonette  nights - 6  services: housekeeping, drink |