# JS Advanced Exam – 13 March 2022

# 3. Rent Car

### Your Task

Using **Mocha** and **Chai** write **JS Unit Tests** to test a variable named **rentCar**, which represents an object. You may use the following code as a template:

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| --- |
| describe(**"*Tests* …"**, **function**() {  describe(**"*TODO* …"**, **function**() {  ***it***(**"*TODO …*"**, **function**() {  *//* ***TODO:*** …  });  });  *//* ***TODO:*** …  }); |

The object should have the following functionality:

* searchCar(shop, model) - A function that accepts two parameters (one array and one string):
  + The function checks whether the submitted string **model** is present in the **shop (**example: **["Volkswagen", "BMW", "Audi"])**, and returns the number of matching elements and the model of the car in the message: **`There is ${findModel.length} car of model ${model} in the catalog!`**;
  + There is a need for validation of the input, a shop and a model may not always be valid. In case of submitted invalid parameters, **throw** an error **"Invalid input!";**
  + If there are no matching elements, the function **throws** an error: **'There are no such models in the catalog!'**
* **calculatePriceOfCar**(model, days) - A function that accepts two parameters (string and number):
  + There is a need for validation of the input, a **model,** and **days** may not always be valid. In case of submitted invalid parameters, **throw** an error **"Invalid input!";**
  + The function returns the model and the price it will cost for renting a car for the given days: **`You choose ${model} and it will cost $${cost}!`**;
  + Otherwise, if there is no such model, the function **throws** an error: **'No such model in the catalog!'.**
* **checkBudget**(**costPerDay, days, budget**) - A function that accepts three parameters (numbers):
  + There is a need for validation of the input, a **costPerDay**, **days, and a budget** may not always be valid. In case of submitted invalid parameters, **throw** an error **"Invalid input!";**
  + If the budget is bigger or equal to the cost, the function returns: **`You rent a car!`;**
  + If the budget is less than the cost, the function returns the message: **'You need a bigger budget!'.**

### JS Code

To ease you in the process, you are provided with an implementation that meets all of the specification requirements for the **rentCar** object:

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| --- |
| rentCar.js |
| const rentCar = {  searchCar(shop, model) {  let findModel = [];  if (Array.isArray(shop) && typeof model == 'string') {  for (let i = 0; i < shop.length; i++) {  if (model == shop[i]) {  findModel.push(shop[i]);  }  }  if (findModel.length !== 0) {  return `There is ${findModel.length} car of model ${model} in the catalog!`;  } else {  throw new Error('There are no such models in the catalog!')  }  } else {  throw new Error('Invalid input!')  }  },  calculatePriceOfCar (model, days) {  let catalogue = {  Volkswagen: 20,  Audi: 36,  Toyota: 40,  BMW: 45,  Mercedes: 50  };  if (typeof model == 'string' && Number.isInteger(days)) {  if (catalogue.hasOwnProperty(model)) {  let cost = catalogue[model] \* days;  return `You choose ${model} and it will cost $${cost}!`  } else {  throw new Error('No such model in the catalog!')  }  } else {  throw new Error('Invalid input!')  }  },  checkBudget(costPerDay, days, budget) {  if (!Number.isInteger(costPerDay) || !Number.isInteger(days) || !Number.isInteger(budget)) {  throw new Error('Invalid input!');  } else {  let cost = costPerDay \* days;  if (cost <= budget) {  return `You rent a car!`  } else {  return 'You need a bigger budget!'  }  }  }  } |

### Submission

Submit your tests inside a describe() statement, as shown above.