

# Assignment

## 1. Credit Card Validation

You're starting your own credit card business. You need to come up with a new way to validate credit cards with a simple function called `validateCreditCard` that returns `true` or `false`.

Here are the rules for a valid number:

- The number must be 16 digits, all of them must be numbers
- You must have at least two different digits represented (all of the digits cannot be the same)
- The final digit must be even
- The sum of all the digits must be greater than 16

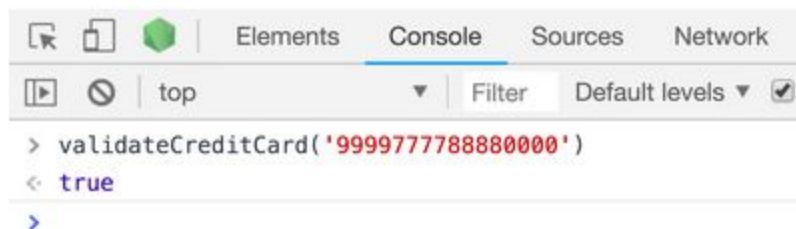
The following credit card numbers are valid:

- 9999777788880000
- 6666666666661666

The following credit card numbers are invalid:

- a92332119c011112 *invalid characters*
- 4444444444444444 *only one type of number*
- 1111111111111110 *sum less than 16*
- 6666666666666661 *odd final number*

In order to run the function, you'll need to know how to load javascript on an HTML page. From there, you will open your developer console to call the function.



2. Write a JavaScript function to get the difference between two dates in days

*Test Data :*

```
console.log(date_diff_in_days('04/02/2014', '11/04/2014'));  
console.log(date_diff_in_days('12/02/2014', '11/04/2014'));
```

*Output :*

216 days

-28 days

3. Write a JavaScript program to get the width and height of the window (any time the window is resized).



**250 \* 200**

4. Write a JavaScript program to find the Armstrong numbers of 3 digits.

Go to the editor

Note: An Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since  $3^3 + 7^3 + 1^3 = 371$ .

5. Write a JavaScript function to get the least common multiple (LCM) of two numbers

*Note :*

According to Wikipedia - A common multiple is a number that is a multiple of two or more integers. The common multiples of 3 and 4 are 0, 12, 24, .... The least common multiple (LCM) of two numbers is the smallest number (not zero) that is a multiple of both.

*Test Data :*

```
console.log(lcm_two_numbers(3,15));  
console.log(lcm_two_numbers(10,15));
```

*Output :*

15

30