# JavaScript - detecting invalid date

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In this article, we're going to have a look at how to check if data is invalid in JavaScript.

Date correctness can be checked basing on internal state of `Date` object.

Incorrect date object returns:

* `false` for call `isFinite(myDate)` ,
* `true` for call `isNaN(myDate)` ,

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* `Invalid Date` string for `toString()` method call.

**8**

points

Quick solution:

```
1   var correctDate   = new Date(2020, 10, 15);
2   var incorrectDate = new Date(NaN);
3
4   console.log( isFinite( correctDate   ) ); // true
5   console.log(   !isNaN( correctDate   ) ); // true
6   console.log( isFinite( incorrectDate ) ); // false
7   console.log(   !isNaN( incorrectDate ) ); // false
```

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Look below to see different practical examples:

## 1. `Date` object test example  [Edit]

This approach bases on fact: `isFinite` method returns `false` for incorrect dates.

```
1   function isCorrectDate(date) {
2       return date instanceof Date && isFinite(date);
3
4       // return date instanceof Date && !isNaN(date);
5   }
6
7   // Usage example:
8
9   var correctDate   = new Date(2020, 10, 15);
10  var incorrectDate = new Date(NaN);
11
12  console.log( isCorrectDate( correctDate   ) ); // true
13  console.log( isCorrectDate( incorrectDate ) ); // false
```

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## 2. `getTime()` or other getter test example  [Edit]

This approach bases on fact: incorrect date returns `NaN` values from getters. So we can make simple test for example with `getTime()` method.

```
1   function isCorrectDate(date) {
2       return date instanceof Date && isFinite(date.getTime());
3
4       // return date instanceof Date && !isNaN(date.g
5   }
6
7   // Usage example:
8
```

```
 9    var correctDate   = new Date(2020, 10, 15);
10    var incorrectDate = new Date(NaN);
11
12    console.log( isCorrectDate( correctDate   ) ); // true
13    console.log( isCorrectDate( incorrectDate ) ); // false
```

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### 3. `toString()` method test example  Edit

This approach is based on fact: incorrect date object returns "`Invalid Date`" string for `toString()` method call.
It is good to call to string method with `protoype` API that prevents for methods overriding.

```
 1    function isCorrectDate(date) {
 2        if (date instanceof Date) {
 3            var text = Date.prototype.toString.call(date);
 4            return text !== 'Invalid Date';
 5        }
 6        return false;
 7    }
 8
 9    // Usage example:
10
11    var correctDate   = new Date(2020, 10, 15);
12    var incorrectDate = new Date(NaN);
13
14    console.log( isCorrectDate( correctDate   ) ); // true
15    console.log( isCorrectDate( incorrectDate ) ); // false
```

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### 4. Detecting correct date string or date object example  Edit

Example presented in this section allows to check correctness of date provided as string or object. String date
should be formatetd according to one of the standards:

- IETF-compliant RFC 2822 timestamps,
- ISO 8601.

Run following code to see effect:

```
 1    function isCorrectDate(date) {
 2        return isFinite(date instanceof Date ? date : new Date(date));
 3
 4        // return isFinite(date instanceof Date ? date : Date.parse(date));
 5        // return !isNaN(date instanceof Date ? date : new Date(date));
 6        // return !isNaN(date instanceof Date ? date : Date.parse(date));
 7    }
 8
 9    // Usage example:
10
11    var date1 = '2020-10-15';
12    var date2 = '2020-10-x5'; // <-------- incorrect date
13    var date3 = 'This is not date'; // <-- incorrect date
14    var date4 = new Date(2020, 10, 15);
15    var date5 = new Date(NaN); // <------- incorrect date
16
17    console.log( isCorrectDate( date1 ) ); // true
18    console.log( isCorrectDate( date2 ) ); // false
19    console.log( isCorrectDate( date3 ) ); // false
20    console.log( isCorrectDate( date4 ) ); // true
21    console.log( isCorrectDate( date5 ) ); // false
```

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