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Math Object In JavaScript | JavaScript Tutorial In Hindi #23

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Math Object In JavaScript | JavaScript Tutorial In Hindi #23

Date and time are the prominent features in computer programming. In JavaScript, suppose our task is to create a website with a calendar, a train schedule, or an interface to set up appointments. These applications need to show relevant times or perform calculations around arrivals and departures or start and end times. To perform all of these tasks, JavaScript comes with the Date object and related methods. In this tutorial, we will go over how to format and use date and time in JavaScript.

Date Object:-

The Date object is a built-in datatype into the JavaScript language. The Date object is used to deal with dates and times in JavaScript. Once a Date object is created, many methods allow us to operate on it. Most methods allow us to get and set the month, day, year, hour, minute, and second using either local time or universal time. There are four ways of instantiating a date:

```
let d = new Date();
let d = new Date(milliseconds);
let d = new Date(dateString);
let d = new Date(year, month, day, hours, minutes, seconds, milliseconds);
```

Here is an example:-

```
let mydate = new Date();
mydate.setHours(0);
alert(mydate);
mydate.setHours(0, 0, 0, 0);
```

```
    alert(mydate);
```

There are many methods available to obtain a date in various formats and perform time zone conversions. There are methods to read and alter individual components of the local date and time, such as **getDay()** and **setHours()**. Versions of the same methods also exist to read and manipulate UTC's date and time, such as **getUTCDay()** and **setUTCHours()**. Here is the list of some of the data object methods:

Date Object Methods

Method	Description
getDate()	It will return the day of the month (from 1-31)
getDay()	It will return the day of the week (from 0-6)
getFullYear()	It will return the year
getHours()	It will return the hour (from 0-23)
getMilliseconds()	It will return the milliseconds (from 0-999)
getMinutes()	It will return the minutes (from 0-59)
getMonth()	It will return the month (from 0-11)
getSeconds()	It will return the seconds (from 0-59)
getTime()	It will return the number of milliseconds since midnight Jan 1 1970, and a specified date
getTimezoneOffset()	It will return the time difference between UTC time and local time, in minutes
getUTCDate()	It will return the day of the month, according to universal time (from 1-31)
getUTCHours()	It will return the hour, according to universal time (from 0-23)
getUTCMilliseconds()	It will return the milliseconds, according to universal time (from 0-999)
getUTCMinutes()	It will return the minutes, according to universal time (from 0-59)
getUTCMonth()	It will return the month, according to universal time (from 0-11)
getUTCSeconds()	It will return the seconds, according to universal time (from 0-59)
setDate()	It will set the day of the month of a date object
setFullYear()	It will set the year of a date object
setHours()	It will set the hour of a date object
setMilliseconds()	It will set the milliseconds of a date object
setMinutes()	It will set the minutes of a date object

setMonth()	It will set the month of a date object
setUTCHours()	It will set the hour of a date object, according to universal time
toDateString()	It will convert the date portion of a Date object into a readable string
toLocaleString()	It will convert a Date object to a string, using locale conventions
toString()	It will convert a Date object to a string
toTimeString()	It will convert the time portion of a Date object to a string
toUTCString()	It will convert a Date object to a string, according to universal time
UTC()	It will return the number of milliseconds in a date since midnight of January 1, 1970, according to UTC time
valueOf()	It will return the primitive value of a Date object

Conclusion

In this tutorial, we learned how to create an instance of the Date object and use its built-in methods. It is very important to know how to work with dates is essential for many common tasks in JavaScript, as this can enable us to do many things from setting up a repeating report to displaying dates and schedules in the correct time zone.

Website.html code as described/written in the video

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
</head>
<body>
    <div class="container">
        <h1 id="heading" class='yourhead rhia is'> Welcome to Code With Harry</h1>
        <div id="myfirst" class="child red good" id="first">child 1

            <ul class="this" id='myul'>
                <li class="childul" id='fui'>this</li>
```

```html
                    <li class="childul">is</li>
                    <li class="childul">a</li>
                    <li class="childul">list </li>
                    <li class="childul" id='lui'>of my dreams</li>
            </div>
            <div class="child">child 2</div>
            <div class="child red">child 3</div>
            <div class="child">child 4</div>
            <form action="none.html" method="post">
                <a href="//codewithharry.com">Go to Code With Harry</a>
                <br>
                <br>
                Search this website: <input type="text" name="Hello" id="">
                <button id="btn">Submit form</button>
                <!-- <input type="button" id='btn' value="submit"> -->
            </form>
        </div>
        <br>
        <div class="no">this is a dummy div1</div>
        <div class="no">this is a dummy div2</div>
        <div class="no">this is a dummy div3</div>
    </body>
    <!-- <script src="js/tut12.js"></script> -->
    <!-- <script src="js/tut14.js"></script> -->
    <!-- <script src="js/tut15.js"></script> -->
    <!-- <script src="js/tut16.js"></script> -->
    <!-- <script src="js/tut17.js"></script> -->
    <!-- <script src="js/tut18.js"></script> -->
    <!-- <script src="js/tut20.js"></script> -->
    <!-- <script src="js/tut21.js"></script> -->
    <script src="js/tut23.js"></script>
    </html>
```

JavaScript code as described/written in the video

```javascript
 console.log("Welcome to tutorial number 23");
let x = 3;
let y = 6;
```

```javascript
let z;
z = x+y;
z = x-y;
z = x*y;
z = x/y;

// Exploring the Math object
z = Math;
z = Math.PI;
z = Math.E;
z = Math.round(5.4);
z = Math.ceil(5.3);
z = Math.floor(-5.3);
z = Math.abs(5);
z = Math.sqrt(64);
z = Math.pow(2, 3);
z = Math.min(2, 3, 34,234, 2342,34);
z = Math.max(2, 3, 34,234,34);
z = Math.random();
z = 100*Math.random()
z = Math.ceil(50 + (100-50)*Math.random())
// a = (0, 1)
// a100 = a*100 = (0, 100)
// a10_100 = 10+a*(100 - 10)

console.log(z);

// 3
// 2.8
// 2
// 1
// 0
// -1
// -2
// -2.7
// -3
```

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