Subject : 2304CS431 – Client Side Scripting using Javascript
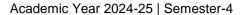
Faculty: Prof. Chirag K. Sakhrani

Practical - 14: Working with Date Objects, Math Objects, and User-Defined Objects	
1)	**WAP to demonstrate all the methods (get) of date object. (A)**
	Program:-
| | ```js
const current = new Date()
console.log("current date : " + current)
console.log("getFullYear() : " + current.getFullYear())
console.log("getMonth() : " + current.getMonth())
console.log("getDate() : " + current.getDate())
console.log("getDay() : " + current.getDay())
console.log("getHours() : " + current.getHours())
console.log("getMinutes() : " + current.getMinutes())
console.log("getSeconds() : " + current.getSeconds())
console.log("getMilliseconds() : " + current.getMilliseconds())
console.log("getUTCFullYear() : " + current.getUTCFullYear())
console.log("getUTCMonth() : " + current.getUTCMonth())
console.log("getUTCDate() : " + current.getUTCDate())
console.log("getUTCDay() : " + current.getUTCDay())
console.log("getUTCHours() : " + current.getUTCHours())
console.log("getUTCMinutes() : " + current.getUTCMinutes())
console.log("getUTCSeconds() : " + current.getUTCSeconds())
console.log("getUTCMilliseconds() : " + current.getUTCMilliseconds())
``` |
	Output:-
	current date : Sat Dec 28 2024 19:39:17 GMT+0530 (India Standard Time) getFullYear() : 2024 getMonth() : 11 getDate() : 28 getDay() : 6 getHours() : 19 getMinutes() : 39 getSeconds() : 17 getMilliseconds() : 480 getUTCFullYear() : 2024 getUTCMonth() : 11 getUTCDate() : 28 getUTCDay() : 6 getUTCHours() : 14 getUTCMinutes() : 9 getUTCSeconds() : 17 getUTCMilliseconds() : 480
2)	**WAP to demonstrate all the methods (set) of date object. (A)**
| | **Program:-**<br><br>```js
const currentDate = new Date()

console.log("current : ", currentDate)

currentDate.setFullYear(2005)

console.log("setFullYear(2005) : ", currentDate)
``` |

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```
currentDate.setMonth(0)

console.log("setMonth(0) : ", currentDate)

currentDate.setDate(10)

console.log("setDate(10) : ", currentDate)

currentDate.setHours(12)

console.log("setHours(10) : ", currentDate)

currentDate.setMinutes(30)

console.log("setMinutes(30) : ", currentDate)

currentDate.setSeconds(7)

console.log("setSeconds(7) : ", currentDate)

currentDate.setMilliseconds(500)

console.log("setMilliseconds(500) : ", currentDate)

currentDate.setTime(1737060645123)

console.log("setTime(1737060645123) : ", currentDate)

currentDate.setUTCFullYear(2005)

console.log("setUTCFullYear(2005) : ", currentDate)

currentDate.setUTCMonth(0)

console.log("setUTCMonth(0) : ", currentDate)

currentDate.setUTCDate(10)

console.log("setUTCDate(10) : ", currentDate)

currentDate.setUTCHours(12)

console.log("setUTCHours(12) : ", currentDate)

currentDate.setUTCMinutes(30)

console.log("setUTCMinutes(30) : ", currentDate)

currentDate.setUTCSeconds(7)

console.log("setUTCSeconds(7) : ", currentDate)

currentDate.setUTCMilliseconds(800)

console.log("setUTCMilliseconds(800): ", currentDate)
```

Output:-
current :   Sat Dec 28 2024 19:52:43 GMT+0530 (India Standard Time)
setFullYear(2005) :   Wed Dec 28 2005 19:52:43 GMT+0530 (India Standard Time)
setMonth(0) :   Fri Jan 28 2005 19:52:43 GMT+0530 (India Standard Time)

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	setDate(10) : Mon Jan 10 2005 19:52:43 GMT+0530 (India Standard Time) setHours(10) : Mon Jan 10 2005 12:52:43 GMT+0530 (India Standard Time) setMinutes(30) : Mon Jan 10 2005 12:30:43 GMT+0530 (India Standard Time) setSeconds(7) : Mon Jan 10 2005 12:30:07 GMT+0530 (India Standard Time) setMilliseconds(500) : Mon Jan 10 2005 12:30:07 GMT+0530 (India Standard Time) setTime(1737060645123) : Fri Jan 17 2025 02:20:45 GMT+0530 (India Standard Time) setUTCFullYear(2005) : Mon Jan 17 2005 02:20:45 GMT+0530 (India Standard Time) setUTCMonth(0) : Mon Jan 17 2005 02:20:45 GMT+0530 (India Standard Time) setUTCDate(10) : Tue Jan 11 2005 02:20:45 GMT+0530 (India Standard Time) setUTCHours(12) : Mon Jan 10 2005 18:20:45 GMT+0530 (India Standard Time) setUTCMinutes(30) : Mon Jan 10 2005 18:00:45 GMT+0530 (India Standard Time) setUTCSeconds(7) : Mon Jan 10 2005 18:00:07 GMT+0530 (India Standard Time) setUTCMilliseconds(800): Mon Jan 10 2005 18:00:07 GMT+0530 (India Standard Time)
3)	**WAP to demonstrate various methods of math object. (A)**

	Program:-
	```console.log("Math.abs(-5) : " + Math.abs(-5))```
	```console.log("Math.abs(5) : " + Math.abs(5))```
	```console.log("Math.round(4.5) : " + Math.round(4.5))```
	```console.log("Math.round(4.4) : " + Math.round(4.4))```
	```console.log("Math.ceil(4.2) : " + Math.ceil(4.2))```
	```console.log("Math.ceil(4.7) : " + Math.ceil(4.7))```
	```console.log("Math.floor(4.7) : " + Math.floor(4.7))```
	```console.log("Math.floor(4.2) : " + Math.floor(4.2))```
	```console.log("Math.max(1, 2, 3) : " + Math.max(1, 2, 3))```
	```console.log("Math.max(-1, -2, -3) : " + Math.max(-1, -2, -3))```
	```console.log("Math.min(1, 2, 3) : " + Math.min(1, 2, 3))```
	```console.log("Math.min(-1, -2, -3) : " + Math.min(-1, -2, -3))```
	```console.log("Math.random() : " + Math.random())```
	```console.log("Math.pow(2, 10) : " + Math.pow(4, 5))```
	```console.log("Math.sqrt(16) : " + Math.sqrt(16))```
	```console.log("Math.log(10) : " + Math.log(10))```

	Output:- Math.abs(-5) : 5 Math.abs(5) : 5 Math.round(4.5) : 5 Math.round(4.4) : 4 Math.ceil(4.2) : 5 Math.ceil(4.7) : 5 Math.floor(4.7) : 4 Math.floor(4.2) : 4 Math.max(1, 2, 3) : 3 Math.max(-1, -2, -3) : -1 Math.min(1, 2, 3) : 1 Math.min(-1, -2, -3) : -3 Math.random() : 0.1625338464444508 Math.pow(2, 10) : 1024 Math.sqrt(16) : 4 Math.log(10) : 2.302585092994046

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4)	**WAP to demonstrate the use of user defined object. (B)**

Program:-

```javascript
let person = {
    firstName: "darshan",
    lastName: "university",
    age: 19,
    fullName: function () {
        return this.firstName + " " + this.lastName
    }
}

console.log("first name : ", person.firstName)
console.log("last name : ", person["lastName"])
console.log("age : ", person.age)
person.age = 20
console.log("age : ", person.age)
console.log("full name : ", person.fullName())

// using function
function Person(firstName, lastName, age) {
    this.firstName = firstName
    this.lastName = lastName
    this.age = age
    this.fullName = function() {
        return this.firstName + " " + this.lastName
    }
}
let person1 = new Person("darshan", "university", 18)
console.log("first name : ", person1.firstName)
console.log("last name : ", person1["lastName"])
console.log("age : ", person1.age)
person1.age = 20
console.log("age : ", person1.age)
console.log("full name : ", person1.fullName())
```

Ouput:-

```
first name :   darshan
last name :   university
age :   19
age :   20
full name :   darshan university
first name :   darshan
last name :   university
age :   18
age :   20
full name :   darshan university
```

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