

Chapter 9: Date Comparison

Section 9.1: Comparing Date values

To check the equality of Date values:

```
var date1 = new Date();  
var date2 = new Date(date1.valueOf() + 10);  
console.log(date1.valueOf() === date2.valueOf());
```

Sample output: **false**

Note that you must use `valueOf()` or `getTime()` to compare the values of Date objects because the equality operator will compare if two object references are the same. For example:

```
var date1 = new Date();  
var date2 = new Date();  
console.log(date1 === date2);
```

Sample output: **false**

Whereas if the variables point to the same object:

```
var date1 = new Date();  
var date2 = date1;  
console.log(date1 === date2);
```

Sample output: **true**

However, the other comparison operators will work as usual and you can use `<` and `>` to compare that one date is earlier or later than the other. For example:

```
var date1 = new Date();  
var date2 = new Date(date1.valueOf() + 10);  
console.log(date1 < date2);
```

Sample output: **true**

It works even if the operator includes equality:

```
var date1 = new Date();  
var date2 = new Date(date1.valueOf());  
console.log(date1 <= date2);
```

Sample output: **true**

Section 9.2: Date Difference Calculation

To compare the difference of two dates, we can do the comparison based on the timestamp.

```
var date1 = new Date();
var date2 = new Date(date1.valueOf() + 5000);

var dateDiff = date1.valueOf() - date2.valueOf();
var dateDiffInYears = dateDiff/1000/60/60/24/365; //convert milliseconds into years

console.log("Date difference in years : " + dateDiffInYears);
```