JS Dates

Understanding JavaScript Dates

Introduction to Errors in JavaScript

JavaScript Provides The Date Object For Working With Dates And Times. You Can Create, Modify, And Format Dates Easily Using This Object.

Creating Date Objects

You Can Create A Date Object Using The new Date() Constructor. It Can Take Different Arguments To Represent Specific Dates.
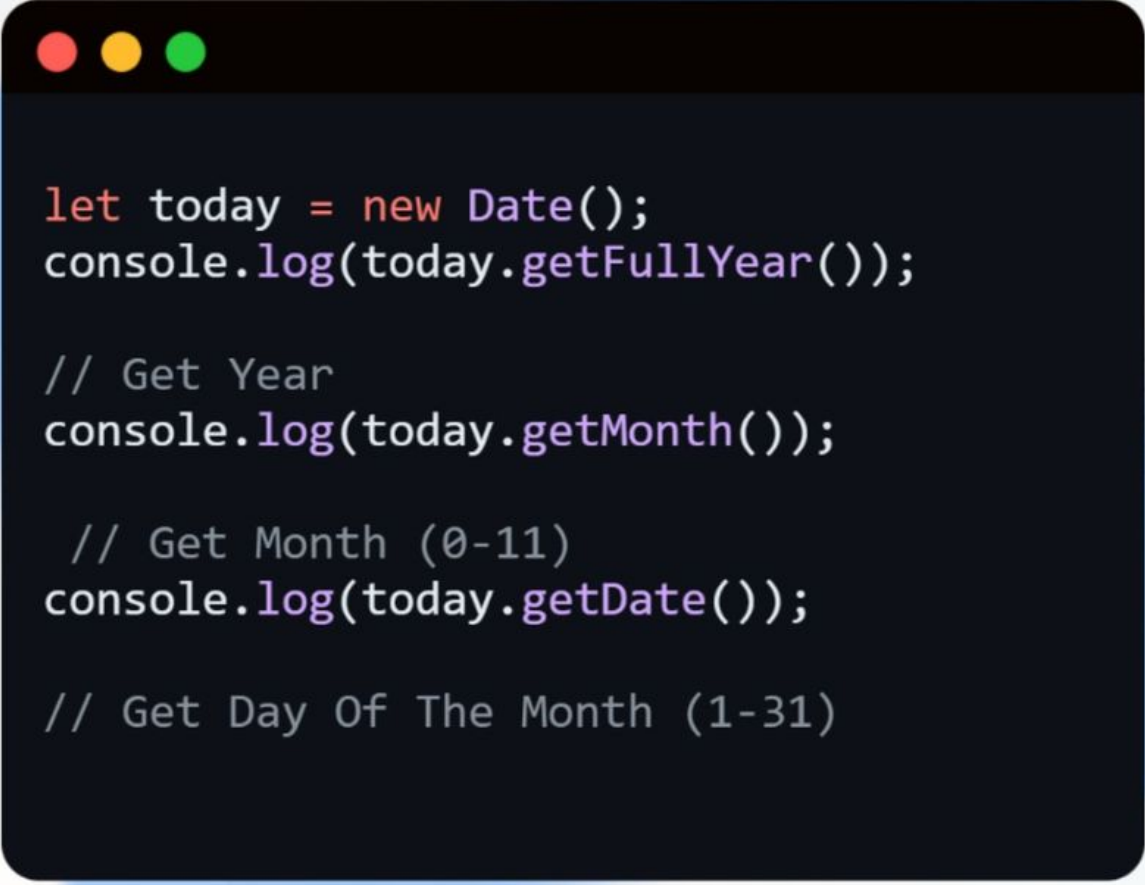
```javascript
let date1 = new Date();

// Current Date
let date2 = new Date(2023, 11, 25);

// December 25, 2023
let date3 = new Date("2024-06-26");

// June 26, 2024
```

Getting Date Components

The Date Object Provides Methods To Get Various Components Like The Year, Month, And Day.

```javascript
let today = new Date();
console.log(today.getFullYear());

// Get Year
console.log(today.getMonth());

 // Get Month (0-11)
console.log(today.getDate());

// Get Day Of The Month (1-31)
```

Setting Date Components

You Can Also Modify The Components Of A Date Using Methods Like setFullYear, setMonth, And setDate.

```javascript
let newYear = new Date();

newYear.setFullYear(2025);

newYear.setMonth(0);

 // January
newYear.setDate(1);

// 1st Day
console.log(newYear);

// January 1, 2025
```

Formatting Dates

Use Methods Like toDateString, toLocaleDateString, And toISOString To Format Dates As Strings For Display.

```javascript
let someDate = new Date(2024, 5, 26);

console.log(someDate.toDateString());

// e.g., 'Wed Jun 26 2024'

console.log(someDate.toLocaleDateString());

// e.g., '6/26/2024'


console.log(someDate.toISOString());

 // e.g., '2024-06-26T00:00:00.000Z'
```

Calculating Time Differences

You Can Calculate The Difference Between Two Dates In Milliseconds And Convert It To Days, Hours, Or Minutes.

```javascript
let startDate = new Date("2024-01-01");
let endDate = new Date("2024-12-31");
let timeDiff = endDate - startDate;

// In Milliseconds

let daysDiff = timeDiff / (1000 * 60 * 60 * 24);


console.log(daysDiff);

// Number Of Days Between Dates
```

Working With Time Zones

JavaScript Date Objects Handle Time Zones. Use Methods Like getTimezoneOffset To Work With Different Time Zones.
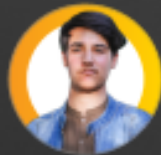
```javascript
let localDate = new Date();

let timeZoneOffset = localDate.getTimezoneOffset();

// In Minutes

console.log(`Time Zone Offset:

${timeZoneOffset} Minutes`);
```

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