■ JavaScript Date Object – Notes

JavaScript provides the **Date** object to work with dates and times. You can create, read, update, and format dates using its methods.

1. Creating Dates

```
let d1 = new Date(); // Current date and time

let d2 = new Date(2025, 8, 3); // Sep 3, 2025 (months start from 0 → Jan=0)

let d3 = new Date(2025, 8, 3, 10, 30, 15, 500); // Sep 3, 2025, 10:30:15.500 AM

let d4 = new Date("2025-09-03T10:30:15"); // ISO format

let d5 = new Date(0); // Jan 1, 1970, 00:00:00 UTC

let d6 = new Date(24*60*60*1000); // 1 day after epoch (Jan 2, 1970)
```

2. Get Methods (Read values)

• getFullYear() → Returns year

• getMonth() → Returns month (0–11)

• getDate() → Returns day of month (1–31)

• getDay() → Returns day of week (0–6, Sun=0)

• getHours() → Returns hours (0–23)

• getMinutes() → Returns minutes (0–59)

• getSeconds() → Returns seconds (0–59)

• getMilliseconds() → Returns ms (0–999)

• getTime() → ms since Jan 1, 1970

3. Set Methods (Change values)

• setFullYear(year, month?, day?) → Set year

• setMonth(month) → Set month (0–11)

• setDate(day) → Set day of month

• setHours(h, m?, s?, ms?) → Set hours, minutes, seconds, ms

• setMinutes(minutes) → Set minutes

• setSeconds(seconds) → Set seconds

• setMilliseconds(ms) → Set ms

• setTime(ms) → Set by epoch milliseconds

4. Conversion & Formatting Methods

• toString() → Full date + time

• toDateString() → Only date

• toTimeString() → Only time

• toISOString() → ISO format with ms (UTC)

• toLocaleDateString(locale, options) → Localized date

• toLocaleTimeString(locale, options) → Localized time

• toLocaleString(locale, options) → Localized date + time

5. Useful Calculations

```
Add days → d.setDate(d.getDate() + 7);

Subtract days → d.setDate(d.getDate() - 1);

Difference → (d2 - d1) / (1000*60*60*24) // days
```