



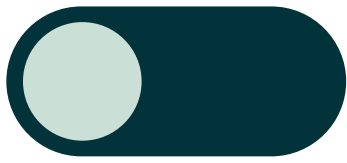
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Discover the exciting new features in
ECMAScript 2024 that will enhance your
JavaScript coding experience.

EXPLORING THE LATEST FEATURES IN

ECMASCRIPT 2024





1.

TOP-LEVEL AWAIT

No more wrapping functions to use **await**!
Now, you can use **await** directly at the top level of your modules, simplifying asynchronous code.

```
// Before
(async () => {
  const module = await import('./someModule.js');
  console.log(module.someFunction());
})();

// No
const module = await import('./someModule.js');
console.log(module.someFunction());
```



It reduces boilerplate code and enhances readability, especially for module initialization





2.

ARRAY GROUPING

The new **groupBy** and **groupByToMap** methods make it easy to group array elements based on a criterion.

```
const animals = [
  { name: 'Lion', type: 'Mammal' },
  { name: 'Shark', type: 'Fish' },
  { name: 'Eagle', type: 'Bird' },
  { name: 'Whale', type: 'Mammal' },
];

const groupedByType = animals.groupBy(animal =>
  animal.type);
console.log(groupedByType);
```



Simplifies data categorization and organization within arrays





3.

TEMPORAL API

A modern solution for date and time handling, replacing the old **Date** object with more accurate and easier-to-use methods.



```
const now = Temporal.Now.plainDateTimeISO();
console.log(now.toString());
// 2024-06-13T12:34:56

const birthday =
Temporal.PlainDate.from('2000-01-01');
const age = now.since(birthday);
console.log(`You are ${age.years} years old.`);
```



Provides precise and flexible date/time manipulations, improving internationalization and time zone handling





4.

PROMISE.WITHRESOLVERS

Easily create and manage promises with immediate access to resolve and reject functions.

```
const { promise, resolve, reject } =  
  Promise.withResolvers();  
  
// Example usage  
resolve('Success!');  
promise.then(value => console.log(value));  
// Outputs: Success!
```



Streamlines promise management and reduces boilerplate code





5.

REGEXP MATCH INDICES

The **d** flag in regular expressions now provides start and end positions of matched substrings.

```
const regex = /(foo)/d;  
const str = 'foo bar foo';  
const match = regex.exec(str);  
  
console.log(match.indices); // [[0, 3], [0, 3]]
```



Enhances the capability of regex by providing more detailed match information





6.

ENHANCED ERROR CAUSE

Now you can specify a cause when throwing an error, linking related errors together for better context and debugging.



```
try {  
  throw new Error('Original error');  
} catch (err) {  
  throw new Error('Enhanced error', {  
    cause: err });  
}
```



Improves error handling and makes debugging easier by maintaining an error chain





1.

ARRAYBUFFERS AND SHAREDARRAYBUFFERS

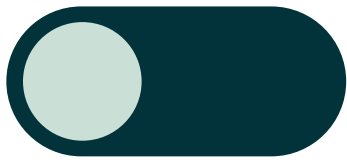
ArrayBuffers and **SharedArrayBuffers** can now be resized in place without the need for reallocation.

```
let buffer = new ArrayBuffer(10, {  
  maxByteLength: 20 });  
buffer.resize(15);  
console.log(buffer.byteLength); // 15
```



Improves performance and flexibility in managing buffer memory





8.

WELL-FORMED UNICODE STRINGS

Ensure your strings are well-formed with new methods **`String.prototype.isWellFormed`** and **`String.prototype.toWellFormed`**.



```
const str = '\uD800'; // Lone surrogate
console.log(str.isWellFormed()); // false

const wellFormedStr = str.toWellFormed();
console.log(wellFormedStr); // '🔍'
```



Enhances string handling by preventing common issues with malformed Unicode data





9.

EMBRACE THE FUTURE OF JAVASCRIPT

The ECMAScript 2024 updates bring powerful new features to JavaScript, enhancing performance, readability, and ease of use.

Start experimenting with these features today and take your JavaScript skills to the next level!

[Learn More](#)





10.

Kevine Nzapdi is a versatile professional with **front-end development**, **technical writing**, and **SEO** expertise. With over five years of experience in WordPress, mobile and web development, Kevine has worked on various projects including portfolio websites, custom websites, reservation systems, and decision support systems and authors many articles, guides and blogs.



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