

# Javascript Error Handling



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Error handling in JavaScript is the process of anticipating, catching, and responding to errors that may occur during code execution. JavaScript provides several tools and techniques to handle errors gracefully without crashing the program.

## Types of Errors in JavaScript

**Syntax Error** : Initial state, neither fulfilled nor rejected.

**Run Time Error** : Errors that occur during execution.

**Logical Error** : The code runs but gives incorrect output.

```
// Syntax Error
console.log("Hello World" // missing closing parenthesis

//Run Time Error
let x = y + 1; // 'y' is not defined

//Logical Error
let total = 10 * 2; // intended to do addition, not multiplication
```

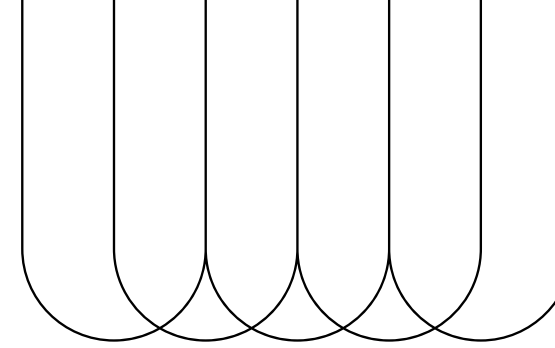
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**try catch block:** The try...catch block is used to handle exceptions.

```
try {
  let result = someUndefinedFunction();
} catch (err) {
  console.error("An error occurred:", err.message);
}
```

**finally block:** The finally block runs regardless of whether there was an error or not.

```
try {
  console.log("Trying something");
  throw new Error("Oops!");
} catch (e) {
  console.log("Caught an error:", e.message);
} finally {
  console.log("Finally block runs always");
}
```



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## Throwing Custom Errors

```
function checkAge(age) {  
  if (age < 18) { throw new Error("You must be at least 18 years old.");}  
  return "Access granted";  
}  
try {  
  console.log(checkAge(16));  
} catch (e) {  
  console.log(e.message);  
}
```

## Error Object Properties

- **name:** type of error (e.g., "ReferenceError")
- **message:** description of the error
- **stack:** stack trace

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**catch method:** Used to catch asynchronous errors

```
fetch('https://jsonplaceholder.typicode.com/posts/')
  .then(res => res.json())
  .then(data=> console.log(data))
  .catch(err => console.error("Fetch error:", err));
```

**Using async & await:** Used to catch asynchronous errors

```
async function getData() {
  try {
    const res = await fetch('https://api.example.com/data');
    const data = await res.json();
    console.log(data);
  } catch (err) {
    console.error("Async error:", err.message);
  }
}
getData();
```

# THANK YOU

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