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JavaScript Cheat Sheet

Basics

Actions	Description	Example Snippet
On page script	Embed JavaScript directly within an HTML file.	`<script>alert('Welcome to the Bookshop!');</script>`
Include external JS file	Link an external JavaScript file to an HTML document.	`<script src="scripts.js"></script>`
Delay	Execute a function after a specified delay.	`setTimeout(() => { alert('Book special offers!'); }, 2000);`
Functions	Define reusable blocks of code.	`function showGreeting() { alert('Welcome to Book Haven!'); }`
Edit DOM element	Modify HTML elements.	`document.getElementById('title').innerHTML = 'Book Haven Sale';`
Output	Display output via console, alert, or document.	`console.log('Books loaded successfully');`
Comments	Add single-line or multi-line comments.	`// Single-line comment / /* Multi-line comment */`

Loops

Actions	Description	Example Snippet
For Loop	Loop through a block of code a number of times.	`for (let i = 0; i < 5; i++) { console.log(i); }`
While Loop	Loop while a specified condition is true.	`let i = 0; while (i < 5) { console.log(i); i++; }`
Do While Loop	Execute a block of code at least once, then loop.	`let i = 0; do { console.log(i); i++; } while (i < 5);`
Break	Exit a loop or switch statement prematurely.	`for (let i = 0; i < 5; i++) { if (i === 3) break; console.log(i); }`
Continue	Skip the current iteration of a loop.	`for (let i = 0; i < 5; i++) { if (i === 3) continue; console.log(i); }`

Variables

Actions	Description	Example Snippet
Strict mode	Enforce stricter parsing and error handling.	`'use strict';`
Values	Store data in variables.	`let bookPrice = 19.99;`
Operators	Perform operations on variables and values.	`let totalPrice = bookPrice + 5;`
Bitwise operators	Perform bitwise operations.	`let result = 5 & 1;`
Arithmetic	Perform arithmetic operations.	`let discount = bookPrice * 0.1;`

If-Else

Actions	Description	Example Snippet
If-Else Statement	Perform conditional execution of code blocks.	`if (bookPrice > 20) { console.log('Eligible for free shipping'); } else { console.log('Shipping fee applies'); }`
Switch statement	Perform different actions based on different conditions.	`switch (day) { case 1: console.log('Monday Deals'); break; case 2: console.log('Tuesday Discounts'); break; default: console.log('Regular Prices'); }`

Data Types

Actions	Description	Example Snippet
Strict mode	Enforce stricter parsing and error handling.	`'use strict';`
Values	Store data in variables.	`let bookPrice = 19.99;`
Operators	Perform operations on variables and values.	`let totalPrice = bookPrice + 5;`

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Strings

Actions	Description	Example Snippet
Declare String	Declare string variables.	`let bookTitle = 'JavaScript Guide';`
Escape Characters	Use escape characters within strings.	`let quote = 'It\'s a great book!';`
Length	Get the length of a string.	`let len = bookTitle.length;`
Split	Split a string into an array of substrings.	`let words = bookTitle.split(' ');`
Concat	Concatenate strings.	`let fullTitle = bookTitle.concat(' for Beginners');`
CharAt	Get a character at a specified index.	`let firstChar = bookTitle.charAt(0);`

Math

Actions	Description	Example Snippet
Pi	Get the value of Pi using Math.	`let pi = Math.PI;`
Round	Round a number to the nearest integer.	`Math.round(4.6);`
Power	Calculate the power of a number.	`Math.pow(2, 3);`
Square Root	Calculate the square root of a number.	`Math.sqrt(16);`
Ceiling	Round a number up to the nearest integer.	`Math.ceil(4.2);`
Floor	Round a number down to the nearest integer.	`Math.floor(4.7);`
Sine	Calculate the sine of a number.	`Math.sin(Math.PI / 2);`
Cosine	Calculate the cosine of a number.	`Math.cos(Math.PI);`
Minimum	Find the smallest number in a set.	`Math.min(1, 2, 3);`
Maximum	Find the largest number in a set.	`Math.max(1, 2, 3);`

Events

Actions	Description	Example Snippet
Mouse	Handle mouse events.	`document.getElementById('buyBtn').addEventListener('click', function() { alert('Book added to cart!'); });`
Keyboard	Handle keyboard events.	`document.addEventListener('keydown', function(event) { console.log(event.key); });`
Frame	Handle frame events.	`window.addEventListener('load', function() { alert('Page loaded!'); });`
Form	Handle form events.	`document.getElementById('orderForm').addEventListener('submit', function(event) { event.preventDefault(); alert('Order submitted!'); });`
Drag	Handle drag events.	`document.getElementById('dragItem').addEventListener('dragstart', function() { alert('Dragging!'); });`
Clipboard	Handle clipboard events.	`document.addEventListener('copy', function() { alert('Text copied!'); });`
Media	Handle media events.	`document.getElementById('bookTrailer').addEventListener('play', function() { alert('Trailer playing!'); });`
Animation	Handle animation events.	`document.getElementById('animate').addEventListener('animationstart', function() { alert('Animation started!'); });`
Miscellaneous	Handle various other events.	`window.addEventListener('resize', function() { alert('Window resized!'); });`

Dates

Actions	Description	Example Snippet
Get Time	Get the current date and time.	`let now = new Date();`
Set Part of a Date	Set specific parts of a date object.	`now.setFullYear(2023); now.setMonth(10); now.setDate(15);`

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Arrays

Actions	Description	Example Snippet
To String	Convert array to string.	`let books = ['HTML', 'CSS', 'JavaScript']; books.toString();`
Join	Join array elements into a string.	`let bookList = books.join(', ');`
Pop	Remove the last element from an array.	`books.pop();`
Push	Add a new element to the end of an array.	`books.push('React');`
Shift	Remove the first element from an array.	`books.shift();`
Unshift	Add new elements to the beginning of an array.	`books.unshift('Node.js');`
Splice	Remove or replace existing elements and/or add new elements in an array.	`books.splice(1, 1, 'TypeScript');`
Slice	Extract a portion of an array.	`let newBooks = books.slice(1, 2);`
Sort	Sort the elements of an array.	`books.sort();`
Reverse	Reverse the order of the elements in an array.	`books.reverse();`

Numbers

Actions	Description	Example Snippet
Pi Constant	Define the value of Pi.	`let pi = 3.141;`
To Fixed	Format a number to a specified number of decimal places.	`pi.toFixed(0);`
To Precision	Format a number to a specified length.	`pi.toPrecision(2);`
Value Of	Get the primitive value of a number.	`pi.valueOf();`
Convert to Number	Convert various values to numbers.	`Number(true); Number(new Date());`
Parse Int	Parse a string to an integer.	`parseInt("6 months");`
Parse Float	Parse a string to a floating-point number.	`parseFloat("7.5 days");`
Max Value	Return the maximum representable number.	`Number.MAX_VALUE;`
Min Value	Return the minimum representable number.	`Number.MIN_VALUE;`
Negative Infinity	Represent negative infinity.	`Number.NEGATIVE_INFINITY;`
Positive Infinity	Represent positive infinity.	`Number.POSITIVE_INFINITY;`

Errors

Actions	Description	Example Snippet
Throw Error	Manually throw an error.	`throw new Error('Book not found!');`
Input Validation	Check and validate user inputs.	`if (input.value === '') { alert('Input is required'); }`
Error Name Values	Access the name properties of error objects.	`try { throw new TypeError('Error occurred!'); } catch (e) { console.log(e.name); }`

JSON

Actions	Description	Example Snippet
Send JSON	Send JSON data to a server.	`fetch('https://api.bookhaven.com/data', { method: 'POST', body: JSON.stringify(book) });`
Store and Retrieve JSON	Store and retrieve JSON data.	`localStorage.setItem('bookData', JSON.stringify(book)); let retrievedData = JSON.parse(localStorage.getItem('bookData'));`