

JAVASCRIPT

- JavaScript (JS) is a programming language used to make web pages interactive and dynamic.
- It works along with HTML (structure) and CSS (style).

Think of it like this:

- HTML → Skeleton (content)
- CSS → Skin/Clothes (design)
- JavaScript → Brain (behavior & logic)

Uses of Javascript

JavaScript is one of the most powerful languages because it runs directly in the browser.

1. Make Web Pages Interactive

- Show alerts, hide or show elements, form validations.
- Example: Displaying a popup when a button is clicked.

2. Form Validation

- Check user inputs before sending them to the server.
- Example: Making sure an email field contains @.

3. Change HTML and CSS Dynamically

- Add/remove elements, change styles, update text instantly.

4. Create Animations and Effects

- Image sliders, dropdown menus, hover effects.

5. Handle Events

- Respond to user actions like clicks, typing, or scrolling.

6. Work with Data (AJAX, APIs, JSON)

- Load new content without refreshing the page.
- Example: Live cricket scores or weather updates.

7. Make Web Apps & Games

- JavaScript is the base of modern frameworks like React, Angular, Vue.
- Used in games, e-commerce, dashboards, chat apps.

8. Server-Side Programming

- With Node.js, JavaScript can also run on the server (not just in the browser).

Types of Javascript

Inline JavaScript

```
<button onclick="alert('Hello!')">Click Me</button>
```

Internal JavaScript

```
<script>
function greet() {
  alert("Welcome to JavaScript!");
}
</script>
<button onclick="greet()">Click</button>
```

External JavaScript

```
<script src="script.js"></script>
```

script.js

```
console.log("JavaScript is working!");
```

Javascript Property

<u>Keyword</u>	<u>Usage</u>
var	Declare variable (function-scoped, older).
let	Declare block-scoped variable.
const	Declare constant variable (cannot be reassigned).
typeof	Returns the type of a variable.
null	Represents no value.
undefined	Variable declared but not assigned.
NaN	Not a Number value.
+, -, *, /, %	Addition, subtraction, multiplication, division, modulus.
++, --	Increment / decrement.
==	Equality (ignores type).
===	Strict equality (checks type and value).
!=, !==	Not equal / strict not equal.
>, <, >=, <=	Comparison operators.
&&	Logical AND.
`	Template Literals
!	Logical NOT.
if / else if / else	Conditional statements.
switch	Multi-branch condition checking.

WIPRO TRAINING NOTES

case	Each case inside switch.
default	Default case in switch.
for	Loop with initialization, condition, increment.
while	Loop while condition is true.
do...while	Loop runs at least once, then checks condition.
break	Exit loop early.
continue	Skip current iteration.
function	Define a function.
return	Return value from function.
()=>	Arrow function (short syntax).
arguments	Access all passed parameters.
Callback functions	Function passed as argument.
{}	Object literal.
[]	Array literal.
.length	Get length of array/string.
.push()	Add item to end of array.
.pop()	Remove item from end of array.
.shift()	Remove item from start of array.
.unshift()	Add item to start of array.
.forEach()	Loop through array.
Object.keys()	Get object keys.
Object.values()	Get object values.
Object.entries()	Get key-value pairs.
document.getElementById()	Select element by ID.

document.getElementsByClassName()	Select elements by class name.
document.getElementsByTagName()	Select elements by tag.
document.querySelector()	Select first element matching CSS selector.
document.querySelectorAll()	Select all elements matching CSS selector.
.innerHTML	Get/set HTML content.
.textContent	Get/set text content.
.value	Get/set input value.
.setAttribute()	Set attribute value.
.getAttribute()	Get attribute value.
.removeAttribute()	Remove attribute.
.classList.add()	Add class.
.classList.remove()	Remove class.
.classList.toggle()	Toggle class.
.addEventListener()	Attach event to element.
onclick	Mouse click event.
ondblclick	Double click event.
onmouseover / onmouseout	Mouse hover events.
onkeydown / onkeyup / onkeypress	Keyboard events.
onsubmit	Form submit event.
onchange	Input value changes.
onfocus / onblur	Input focus / blur.
setTimeout()	Execute function after delay.

WIPRO TRAINING NOTES

setInterval()	Execute function repeatedly.
clearTimeout()	Cancel timeout.
clearInterval()	Stop interval.
JSON.stringify()	Convert object → JSON string.
JSON.parse()	Convert JSON string → object.
localStorage	Store data in browser (no expiry).
sessionStorage	Store data for one session.
try { } catch(e) { }	Handle exceptions.
throw	Throw custom error.
finally	Code runs after try/catch regardless of error.
Template literals ``	Strings with \${variable}.
Spread ...	Expand arrays/objects.
Rest parameters ...	Collect multiple arguments.
Destructuring	Extract values from arrays/objects.
import / export	Modules.
async / await	Handle asynchronous tasks.
fetch()	API requests.