

# Playwright + JavaScript Detailed Interview Guide

## 1. JavaScript Fundamentals

### Data Types:

Primitive: Number, String, Boolean, Undefined, Null, BigInt, Symbol

Reference: Object, Array, Function

### Variables:

var – function scoped (avoid in modern JS)

let – block scoped

const – block scoped & cannot be reassigned

### Operators:

Arithmetic: + - \* / % ++ --

Comparison: ==, ===, !=, !==, >, <, >=, <=

Logical: &&, ||, !

### Conditional Statements:

if-else, else-if, ternary operator

### Loops:

for, while, do-while, for...of, forEach

### Functions:

Normal Function, Arrow Function, Callback Function

Example:

```
const add = (a,b) => a + b;
```

## 2. ES6 & Asynchronous Programming

### ES6 Features:

Template Literals: `Hello \${name}`

Destructuring: `const {name} = user;`

Spread Operator: `[...arr]`

Default Parameters

Modules: `import / export`

### Promises:

`.then(), .catch(), .finally()`

### Async / Await (Core for Playwright):

```
async function login(){  
  await page.fill('#user','admin');  
  await page.click('#login');  
}
```

### Error Handling:

try-catch-finally block

### 3. Playwright Core Concepts

#### Installation:

```
npm init playwright@latest
```

#### Basic Test Structure:

```
import { test, expect } from '@playwright/test';  
test('Login Test', async ({ page }) => {  
  await page.goto('https://example.com');  
  await page.fill('#user', 'admin');  
  await page.click('#login');  
  await expect(page).toHaveTitle(/Dashboard/);  
});
```

#### Common Methods:

```
page.goto()  
page.click()  
page.fill()  
page.locator()  
page.waitForSelector()  
page.screenshot()  
expect(locator).toBeVisible()
```

## 4. Framework Design & Interview Focus

### Framework Concepts:

Page Object Model (POM)

Fixtures

Hooks: beforeEach, afterEach

Parallel Execution

playwright.config.js

### Important Interview Questions:

1. Difference between locator() and page.\$()
2. Why async/await is mandatory in Playwright?
3. How does auto-waiting work?
4. How to handle multiple tabs/windows?
5. How to implement POM in Playwright?
6. How to run tests in parallel?
7. How to capture screenshots on failure?

### Advanced Topics:

API Testing with Playwright

Network Interception

Retry Mechanism

CI/CD Integration

Cross-browser Testing