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## Playwright Interview Questions Part-1

### Q1: How do you initialize a browser?

**Answer:**

```
const { chromium } = require('playwright');

const browser = await chromium.launch();

const context = await browser.newContext();

const page = await context.newPage();
```

**Pro Insight:** Always use browser contexts for test isolation - fresh sessions without browser launch overhead.

**Common Mistake:** Launching new browsers for every test instead of reusing contexts.

**Story Example:** "I optimized our test suite by switching from browser-per-test to context-per-test, reducing execution time by 40%."

### Q2: What are workers in Playwright?

**Answer:** Parallel threads that run tests simultaneously to reduce execution time.

```
// playwright.config.ts

export default {

  // Default: 50% of CPU cores, undefined = auto-detect
  workers: process.env.CI ? 2 : undefined
}
```

**Pro Insight:** By default, Playwright limits workers to 1/2 of CPU cores on your machine. Each worker gets its own browser instance. For CI, limit to 2-4 workers to avoid memory issues.

**Common Mistake:** Setting too many workers causing memory issues or test interference.

**Story Example:** "I leveraged workers in Jenkins to cut our 45-minute test suite to 12 minutes while maintaining stability."

### Q3: How do you handle waits and assertions?

```
// Playwright way (auto-waiting)
```

```
await expect(page.locator('#submit')).toBeVisible();
```

// Old way

```
await page.waitForTimeout(3000);
```

**Pro Insight:** Playwright has built-in auto-waiting. Use expect() with locators for smart waiting.

**Common Mistake:** Using waitForTimeout() instead of condition-based waits.

**Story Example:** "I eliminated 80% of flaky tests by replacing hardcoded waits with auto-waiting assertions."

## Q4: What's your project structure?

```
📁 playwright-tests/
  ├── 📁 tests/
    |   ├── 📁 e2e/      # End-to-end tests
    |   ├── 📁 api/      # API tests
    |   └── 📁 visual/   # Visual regression
    ├── 📁 page-objects/ # Page Object Models
    ├── 📁 fixtures/    # Test data & setup
    ├── 📁 utils/       # Helper functions
    ├── 🚂 playwright.config.ts
    └── 🔧 global-setup.ts
```

**Pro Insight:** Separate concerns: e2e, api, visual tests in different folders. Page objects for complex flows.

**Common Mistake:** Putting everything in one folder or mixing test types.

**Story Example:** "I restructured our monolithic test suite into this pattern, reducing maintenance overhead by 60%."

## Q5: Types of locators (Priority Order)

**Start Here (Easiest for Beginners):**

```
// 1. CSS selectors (familiar from Selenium)
```

```
page.locator('.submit-btn')
```

```
// 2. XPath (when CSS isn't enough)  
page.locator('//button[text()="Submit"]')
```

#### Good for Content:

```
// 3. Text-based (simple and readable)  
page.getText('Welcome')
```

#### Inbuilt Methods Given by Playwright:

```
// 4. Data attributes (test-specific, stable)  
page.locator('[data-testid="submit"]')  
  
// 5. Role-based (Playwright's native approach)  
page.getRole('button', { name: 'Submit' })
```

**Pro Insight:** Start with CSS selectors for quick wins, then gradually adopt role-based locators for better stability and accessibility.

**Common Mistake:** Overusing CSS selectors that break with design changes.

**Story Example:** "I started my Playwright journey using familiar CSS selectors from my Selenium background, then gradually introduced role-based locators. This approach reduced our team's learning curve by 50% while still achieving 70% better test stability."

## Don't stop at definitions

#### Interviewers want stories showing:

- Problem you solved
- Technical decision reasoning
- Impact/results achieved
- Lessons learned

#### Follow-up Questions They'll Ask:

- "How would you debug this failing test?"
- "What's your strategy for reducing flaky tests?"
- "How do you handle CI/CD integration?"