**Playwright Notes for JavaScript**

**1. File Extensions**

* **JavaScript Playwright files** should end with the **.js** extension because these are JavaScript files.

**2. Spec Files**

* In JavaScript terminology, **test files** are called **spec files**.

**3. Playwright Configuration**

* Playwright uses a configuration file, usually named **playwright.config.js**, which acts as the **test runner** for the Playwright framework.

**4. Node Modules**

* All Playwright modules and dependencies are stored in the **node\_modules** folder.

**5. Importing Test Annotation**

* In spec.js files, you need to **import the test annotation** from Playwright using the following line:

|  |
| --- |
| const { test } = require('@playwright/test'); |

**6. Writing a Test Using Test Annotation**

* The **test annotation** takes **two arguments**:
  1. The **test case name** (a string describing the test).
  2. The **test function** (contains the test steps).

**Example**:

|  |
| --- |
| **test**('First Playwright Test', **function**() {  // Write Playwright code here  // Step 1  // Step 2  // Step 3  }); |

**7. Asynchronous JavaScript**

* **JavaScript** is **asynchronous**, meaning that code does not always execute in sequence. There is **no guarantee** that **step 1, step 2, and step 3** will execute in the exact order written.
* In contrast, languages like **Java** are **synchronous**, ensuring that **step 1, step 2, and step 3** execute in the specified order.
* In JavaScript, all steps will try to execute simultaneously, which is why it's considered **asynchronous**.

**8. Using async and await for Synchronous Execution**

* To ensure that each step in a JavaScript file **executes in sequence**, you need to use the **await** keyword before each line.
* If using **await**, the function must also be marked as **async**.
* **async and await** work together:
  + Without **async**, the **await** keyword has no effect.
  + **await** only works when the function is marked as **async**.

**Example**:

|  |
| --- |
| **test**('First Playwright Test', **async** **function**() {  // Write Playwright code here  // await step 1  // await step 2  // await step 3  }); |

**9. Anonymous Functions**

* In the above example, the function has **no name**—this is called an **anonymous function**.
* In **JavaScript ES6**, you can replace the function keyword with the **arrow function (=>)** for better readability.

**Example**:

|  |
| --- |
| **test**('First Playwright Test', **async** **() =>** {  // Write Playwright code here  // await step 1  // await step 2  // await step 3  }); |

Here are the topics we covered in the notes:

1. **File Extensions for JavaScript Playwright Files**:
   * Playwright files should use the .js extension.
2. **Spec Files**:
   * Test files in JavaScript are called **spec files**.
3. **Playwright Configuration File**:
   * The **playwright.config.js** file acts as the **test runner**.
4. **Node Modules**:
   * Playwright dependencies are stored in the **node\_modules** folder.
5. **Importing Test Annotation**:
   * How to import the **test annotation** from Playwright.
6. **Writing Tests Using test Annotation**:
   * Structure of the **test function**, including test name and test function arguments.
7. **Asynchronous Nature of JavaScript**:
   * JavaScript is **asynchronous**: steps are not executed in sequence by default.
8. **Using async and await**:
   * **async** and **await** are used to ensure steps execute in sequence.
9. **Anonymous Functions**:
   * Usage of **anonymous functions** in JavaScript tests.
10. **Arrow Functions (ES6 Syntax)**:
    * Using **arrow functions (=>)** for cleaner syntax in JavaScript tests.