| **Feature** | **Synchronous** | **Asynchronous** |
| --- | --- | --- |

| API Module | playwright.sync\_api | playwright.async\_api |
| --- | --- | --- |

| Execution | Blocking | Non-blocking |
| --- | --- | --- |

| Keywords Used | No async/await | Requires async/await |
| --- | --- | --- |

| Suitable for | Simple scripts | Complex workflows, concurrency |
| --- | --- | --- |

| Ease of Use | Easier for beginners | Requires knowledge of asyncio |
| --- | --- | --- |

| **Use Case** | **Recommended Mode** |
| --- | --- |

| Simple automation scripts | Synchronous |
| --- | --- |

| Test automation (pytest integration) | Synchronous |
| --- | --- |

| High concurrency (e.g. scraping) | Asynchronous |
| --- | --- |

| Integrating with async frameworks | Asynchronous |
| --- | --- |

| **Feature** | **Selector** | **Locator** |
| --- | --- | --- |
| **Definition** | A string that identifies an element on the page. | An object that encapsulates a selector and adds behavior like auto-waiting. |
| **Syntax Example** | "a[href='/login']" | page.locator("a[href='/login']") |
| **When Evaluated** | Immediately evaluated when used. | Lazily evaluated – only when an action like .click() or .fill() happens. |
| **Auto-waiting** | No auto-waiting; you must use wait\_for\_selector. | Has built-in auto-waiting for actions and visibility. |
| **Reusability** | Not reusable or chainable. | Reusable and chainable (locator.locator("span")) |
| **Best Practice** | Good for quick scripts or single-use. | Preferred for scalable, readable, and maintainable code. |