

Feature	Selenium	Cypress
Overview	Suite of tools for automating web browsers	End-to-end testing framework for modern web applications
Supported Languages	Java, C#, Python, Ruby, JavaScript	JavaScript (and TypeScript)
Supported Browsers	Chrome, Firefox, Safari, IE, Edge	Chrome, Firefox, Safari, IE, Edge
Architecture	Client-server architecture, uses WebDriver	Runs directly in the browser alongside the application
Speed	Slower due to client-server communication	Fast, tests run in the same run-loop as the application
Setup Complexity	More setup and configuration required	Simple setup, less configuration
Parallel Execution	Supported	Not natively supported (requires third-party tools)
Automatic Waiting	Requires explicit waits or conditions	Automatic waiting for commands and assertions
Debugging	More challenging, requires external tools	Built-in debugging with real-time reloading and snapshots
Stubbing/Mocking	Requires additional libraries	Built-in support
Error Messages	Standard error messages	Detailed error messages with snapshots
Integration	Supports various testing frameworks (JUnit, TestNG, etc.)	Built-in integration with modern CI tools
Use Cases	Large projects, extensive browser compatibility testing	Modern JavaScript applications, quick setup and debugging
Learning Curve	Steeper, more complex	Easier, comprehensive documentation