

Cypress Automation

- Aravind

Introduction

Name : Aravind

Experience:

I am Aravind. I have 11+ years of experience as Automation Engineer. Have worked with a variety of frameworks like Selenium web driver, Cucumber-JVM, TestNG, JUnit and Cypress.io. Have worked with high-profile clients like Verizon, Standard Chartered, EmiratesNBD and Binance. I have been part of corporate training for around 6 years.



What is Cypress

Cypress is a Frontend/UI(User Interface) Automation tool for **Web Applications**

Cypress can **automate web** and validate **API** as well

Cypress is a **open source automation tool**

Latest Release/Version : 13.x.x

Coding language supported → **Javascript** and Typescript



Competitor

	Cypress	Playwright	Selenium
License	Open Source	Open Source	Open Source
Languages Supported	Javascript,Type Script	TypeScript, JavaScript, Python, .NET, and Java	Java,C#,Javascript,Python
Editor	VSCode	VSCode,IntelliJ	Eclipse,IntelliJ
Installation/Configuration	node/npm(node package manager)	node/npm	Standalone server(jar)
Framework /Runner	Cypress Native runner Mocha and chai	Playwright Test Jest/Jasmine Mocha ViTest	Selenium Webdriver Selenium standalone server TestNG JUnit Nunit
Browser Support	Firefox,Chrome, Electron (Native) ,Safari,Edge	Google Chrome and Microsoft Edge (with Chromium), Safari (with WebKit), and Firefox	Google Chrome, Mozilla Firefox, Internet Explorer, Microsoft Edge, and Safari

Installation Configuration

Node.js is a prerequisite should be installed (compatible in both mac and windows)

Commands:

npm init

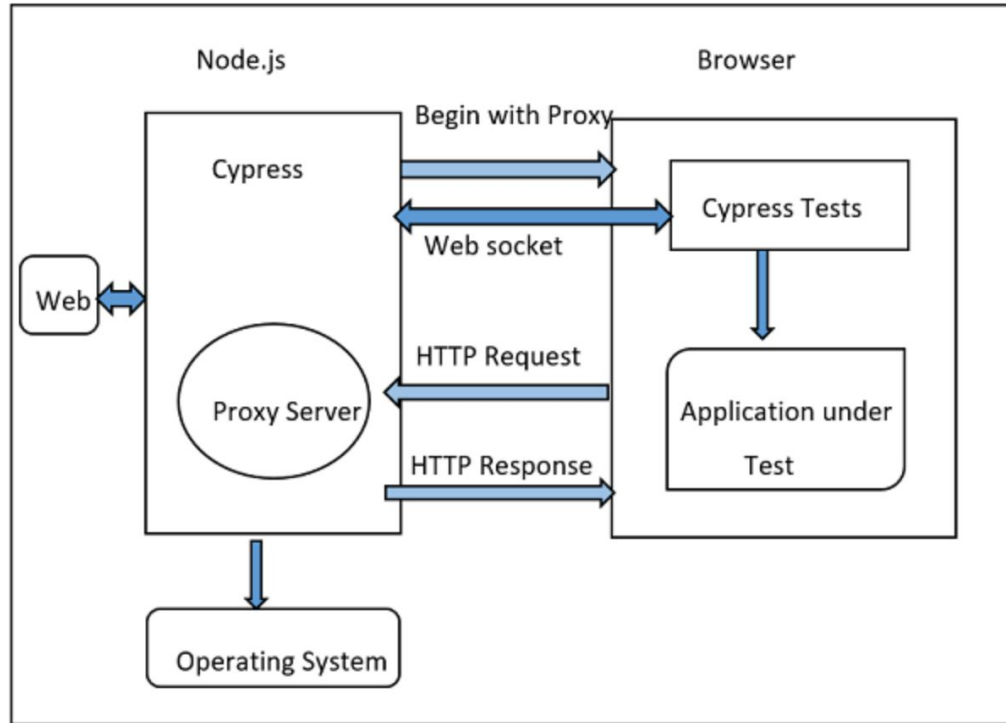
npm install cypress - -save-dev

After the above commands navigate to the project path in terminal or cmd execute the below command,

npm install -g yarn



Architecture of Cypress



What Cypress Can Do

Interacting with Elements,

- Textbox, Checkboxes, Radio button
- Tables validation
- Drop down
- Window Tab handling
- Alerts and pop ups
- Scrolling within page
- iframe/frame
- File upload/download



Assertions and validations

- Should
- And
- except

Example:

```
cy.get('.err').should('be.empty').and('be.hidden')
```



Logs

- `cy.log('message')`

This command is mostly used to check the logs with in the cypress runner

We can use this for debug as well

You can also use javascript logs “`console.log(“”)`”



Cypress Terminologies

- Package.json
 - Command used to give the package.json → npm init
- Package.json comprises all the npm packages in a file, usually located in the project root. It is commonly located in the root directory of the Node.js project. This file holds all the applicable metadata necessary for the project.
- It gives all the information to npm and helps in identifying the project and handle dependencies.



Thank you

- Q & A
- Queries Related to Class and Schedule
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Cypress Installation

- What is node/**npm**?
 - NPM - Node Package Manager
 - NPM – Node Package Manager is the default package manager for NodeJs.
 - NodeJS is an open-source, cross-platform JavaScript library and runtime environment.
 - Installation of node on Window/Mac - <https://nodejs.org/en/download>
 - Two ways of installation - using pkg on mac or installer on windows
- Installation on mac in homebrew
 - `brew install node`
 - To verify the installation -
 - `node -v`
 - `npm -v`
 - To update node - `brew upgrade node`

Cypress Installation

- Install cypress globally in mac/windows -
 - `npm install cypress -g --save-dev` → install cypress globally
 - `npm install -g yarn` → install the yarn package globally
- Install Cypress within the project path
 - Navigate to the path of the project and use the commands as below
 - `npm install cypress --save-dev` → installed with in the path or project
 - `npm install yarn` → installed with in the path or project



Setup and writing first script in Cypress

- Practical explanation



Locators in Cypress

- What is locators
 - Locators is the way to identify the elements inside the webpage
 - Elements can be anything - checkbox,radio button, dropdown, etc
- Types of locator
 - Id
 - Name
 - Class name
 - Linktext → we dont use it in cypress
 - Partial linktext → we dont use it in cypress
 - tagname→ we dont use it in cypress
 - Xpath→ absolute and relative
 - Css → natively supports css



Use of Xpath in Cypress

- Xpath another type of locator which is widely used
- Xpath is used to identify the elements in the webpages
- It is widely categorised as
 - Absolute xpath
 - Relative xpath
- Cypress by native supports css but there is separate plugin/package available in npm which helps us to use xpath in cypress
- Package to be installed →
<https://github.com/cypress-io/cypress/tree/develop/npm/xpath>
 - `npm install -D @cypress/xpath`
 - `yarn add @cypress/xpath --dev`



Contd

- Visit your project path

- `npm install -D @cypress/xpath`

- `yarn add @cypress/xpath --dev`

- We need to add the require in the e2e.js file →
`require('@cypress/xpath');`

