Automated Testing with Cypress.io

Manoj Pansare (SDET Manager, Applied Systems)

&

Arjun Kumar (Sr SDET, Applied Systems)

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What is Cypress ?

JavaScript end-to-end testing framework for web applications
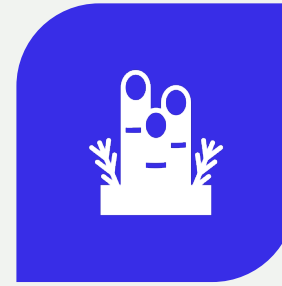
Can be used for UI and API testing

Real-time reloading, automatic waiting, and debugging tools
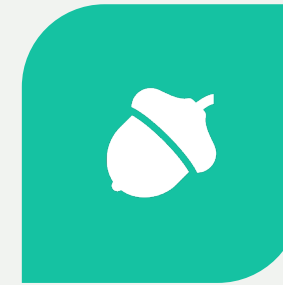
UI Testing With Cypress

EASY TO USE

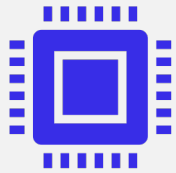SPEED

A PLUGIN PLATFORM

EASY DEBUGGING

REAL-TIME TESTING

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API testing using cypress

Make HTTP requests, interact with responses, and run assertions to verify the expected behavior of your APIs
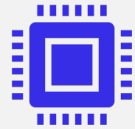
Setup mocks and fake objects easily

A lot of existing functionality to reduce reinventing the wheel

Component Testing

Isolated testing

Real DOM testing

Interactive testing

Support for libraries

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Benefits of Cypress

Fast test execution, automatic waiting and retrying

Real-time reloading, and robust debugging capabilities

A user-friendly interface

Integrates well with other testing tools

A great end to end testing tool replacement

Written in JavaScript or TypeScript

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Drawbacks of Cypress

- Limited browser support

- Requires some knowledge of JavaScript/Typescript to use effectively

- No support for multiple tabs/windows

- API testing can be slower than dedicated API testing tools

- Paid features are required for some advanced functionality

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Cypress Cloud

A web-based service that allows you to record and analyze test results

A dashboard that shows detailed information about your tests, including pass/fail rates, test durations, and error messages

It also allows you to view video recordings of your test runs and track changes over time

It allows you to execute your tests in parallel and do load balancing as required

Easily integrates with most common CI/CD tools

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Gotchas with cypress

Cypress runs in the browser, so it has access to the same JavaScript environment as your application

Cypress commands are asynchronous

Cross domain navigation is limited (But is being improved on)

Cypress can be slow when running tests that involve network requests or complex interactions