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Cypress Automation Testing with Javascript

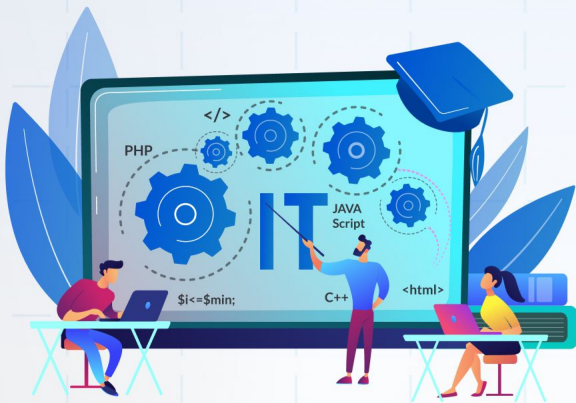


Course Curriculum





About AiiTE



Welcome to AiiTE Academy, where we help you master the latest IT skills for a successful career in technology. Established in April 2019, we are Chennai's top IT training academy, offering high-quality courses in machine learning, artificial intelligence, full-stack development, and quality assurance testing. Our expert instructors provide hands-on training to ensure you gain the practical knowledge needed to excel. With flexible learning options, AiiTE Academy is committed to preparing you for success in the fast-paced IT industry.



Why Choose AiiTE



Hands-on Learning



Career Focused Training



Flexible Learning Options



Expert Trainers



Our Vision

To be recognized as the best IT training institute in Chennai, known for our innovative teaching methods and commitment to producing industry-ready professionals.



Our Mission

To equip students with cutting-edge IT skills and provide them with the knowledge needed to excel in their careers.

SINCE

55+

Certified
Courses

2

250+

Placement
Tieups

0

9000+

Students

1

45+

Expert
Trainers

100%

Placements
Assistance

9

6500+

Successful
Placements

Introduction to Cypress Test Automation Tool

- Cypress is a modern JavaScript-based end-to-end testing framework.
- It provides a fast, reliable, and efficient way to test web applications.
- Cypress comes with a simple and intuitive API, making it easy for both developers and QA engineers to write tests.

Javascript Roadmap

- **JavaScript Introduction**
 - [Why learn JavaScript](#)
 - [JavaScript vs Java](#)
- **How to Set Up Your Computer**
 - [How to Install VS Code](#)
 - [How to Install Node.js](#)
- **Quick Console Introduction**
- **Time to Say Hello World!**

- **JavaScript Code Structure**

- Statements
- Comments
- Execution Flow

- **JavaScript Variables**

- Variable naming
- Constant variable
- The var keyword

- **JavaScript Basic Data Types**

- Strings in JavaScript
- Numbers (integers and floats) in JavaScript
- Booleans in JavaScript
- Undefined in JavaScript
- Null in JavaScript

- **Type conversion and coercion**

- Type coercion
- Type coercion rules
- Why you should avoid type coercion

- **Operators in JavaScript**

- Arithmetic operators
- The assignment operator
- The comparison operators
- Logical operators
- The type of operator

- **JavaScript Arrays**

- Array index position
- Special methods for array manipulation

- **Control Flows (Conditionals) in JavaScript**

- The if...else statement
- The switch...case statement
- The switch statement body
- Switch statement use cases

- **Control Flows (Loops) in JavaScript**

- The for statement
- When to use the for loop?
- The while statement
- When to use the while loop?

- **Functions in JavaScript**

- How to create your own function
- Function parameters and arguments
- Default parameters
- Default parameters and null
- The return statement
- Variable scope
- The rest parameter
- Arrow function
- Single and multiline arrow functions
- Arrow function without round brackets
- Arrow function doesn't have arguments binding
- How to convert a normal function to an arrow function easily

- **Objects in JavaScript**

- How to access object values
- How to add a new property to the object
- How to modify object properties
- How to delete object properties
- How to check if a property exists in an object

Cypress Architecture and Environment Setup

- **JavaScript-based Testing Framework:** Cypress is built entirely on JavaScript. It's a modern testing framework designed for both front-end and back-end testing.
- **Architecture Overview:** Cypress follows a client-server architecture where the test code runs in the browser alongside the application being tested.
- **Dual Processes:** Cypress operates in two separate processes: the Node server process and the Electron browser process.

Installation and Setup

- Installing Cypress using npm.
- Initializing Cypress in your project.
- Opening the Cypress Test Runner.

Writing Tests

- Understanding the structure of Cypress tests.
- Creating basic test files.
- Writing test cases using the describe and it blocks

Selectors And Commands

- Using `cy.get()` to select elements.
- Interacting with elements using commands like `click()`, `type()`, `clear()`, etc.
- Working with different types of selectors.

Assertions

- Making assertions using `should()`.
- Validating element attributes, content, visibility, etc.
- Using `expect()` for custom assertions.

Working with the Test Runner

- Running tests from the command line.
- Running specific tests or groups of tests.
- Debugging and inspecting test runs.

Hooks and Fixtures

- Using hooks (`before`, `beforeEach`, `after`, `afterEach`) for setup and teardown.
- Loading and using fixtures for test data

Handling Asynchronous Code

- Understanding Cypress's automatic waiting.
- Handling AJAX requests and delays.

Interacting with I Frames

- Selecting and interacting with elements within iframes.

Advanced Commands

- Using advanced commands like `invoke()`, `scrollTo()`, `wait()`, etc.

Custom Commands

- Creating and using custom commands to reuse code.
- Organizing commands in the project.

Configuration

- **Customizing configuration in cypress.json.**
- **Setting up environment variables.**

Page Objects

- **Implementing the Page Object Model (POM) for better code organization.**
- **Creating and using page objects.**

Test Data Management

- **Managing test data using Cypress fixtures.**
- **Generating dynamic test data.**

Working with Cypress Plugins

- **Exploring and using third-party plugins to extend Cypress functionality.**

Integration with Continuous Integration (CI)

- **Running Cypress tests in CI environments like Jenkins, Travis CI, GitHub Actions, etc.**

Best Practices

- **Writing clean and maintainable tests.**
- **Handling test flakiness.**
- **Using Cypress effectively for different types of applications.**

Documentation And Community

- **Exploring the official Cypress documentation.**
- **Engaging with the Cypress community for support and learning from others.**

Updates And New Features

- **Keeping up to date with the latest Cypress releases.**
- **Exploring new features and improvements.**

Thank You!

We're excited at the opportunity to work together and make this training program a success. Let's put our heads together and create an engaging and rewarding learning experience that Will benefit everyone involved.

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 95514 11693 | 90928 18068

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