



# Developer in Test Curriculum

**A X O N E**

# Module 1 – JavaScript Basics

## Chapter 1

- On-board all participants
- Quick round of introduction
- Course structure
- Introduction to JavaScript
- Environment Setup
- Develop & run Hello World! program

## Chapter 2

- Variables
- Constants
- Primitive types
- Code comments
- Naming conventions

## Chapter 3

- Operators
- Operator precedence
- Decision making (*if, if else, else if, switch*)
- Ternary Operator
- Loops (*for, while, do while*)
- Branching (*break & continue*)

## Chapter 4

- Functions
- Scope (*Local vs. Global*)
- Objects
- Let & Var
- String manipulations
- Math calculations
- Date object

## Chapter 5

- Template literals
- Arrays
- Array manipulations
- Spread operator
- Arrow functions
- Array filters
- Array maps

## Chapter 6

- Named functions
- Default parameters
- Rest operator
- Try and catch
- Keyword this

## Module 2 – JavaScript core & Tools

### Chapter 1

- Synchronous
- Asynchronous
- Callbacks
- Promises
- Async and await

### Chapter 2

- Classes
- Npm
- Package.json
- Babel
- File operations (*Read/Write files*)
- Reading JSON

### Chapter 3

- Mocha
- Chai
- Reports
- Source code management with git
- Git plugins for VS code
- Git with source tree

## Chapter 5

- Continuous integration
- Jenkins setup
- Jenkins jobs
- Jenkins pipeline
- Automated builds with Jenkins

## Module 3 –Cypress IO

### Chapter 1

- Cypress overview
- Cypress setup
- Cypress project structure
- Running first script
- UI & Console test runner

### Chapter 2

- Writing simple test
- Execute tests in supported browsers
- Supported locators
- Browser addons for inspecting elements
- Cypress UI for inspecting elements
- Constructing locators

## Chapter 3

- Basic assertions
- Waits and pause
- Debugging
- Cookies & local storage
- Browser refresh
- Cypress logs

## Chapter 4

- Variables
- Keyboard commands
- Aliases
- Find and filter commands
- Text command
- Promise handling

## Chapter 5

- Handling check boxes and radio buttons
- Handling dropdowns
- Custom commands
- Fixtures (*Data driven*)
- Understanding Cypress JSON config
- Screenshots and videos
- Environment variables

## Chapter 6

- Hooks
- Introduction to Cypress plugins
- Using XPATH
- Headless mode
- Running multiple specs
- Retries
- Reporters

## Chapter 7

- Handling alerts
- Handling popups
- Switching windows
- Switching frames
- Browser controls
- Mouse events
- Handling tables

## Chapter 8

- BDD with cucumber
- Cypress cucumber configuration
- Features and step definitions
- Data parameterization
- Tags

## Chapter 9

- Page object model
- Pom project structure
- File uploads
- Device simulations
- Visual testing
- Visual testing Cypress plugin configuration

## Chapter 10

- XHR Testing
- XHR assertions
- API Testing
- GET/POST/PUT/DELETE
- Asserting status code
- Validating content, headers
- Mocking services

## Chapter 11

- Running scripts in Jenkins CI
- Introduction to Docker
- Docker setup
- Docker Hello World!
- Create Docker container
- Run Cypress tests in Docker container