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PLAYWRIGHT
with Type Script

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Playwright with TypeScript

Module 1:

Introduction to Playwright and TypeScript

• Introduction to Playwright
- What is Playwright?
- Key Features and Benefits
- Playwright VS Selenium VS Cypress

• Introduction to TypeScript
- Why TypeScript for Test Automation?
- Diff between TypeScript and JavaScript
- Setting up a TypeScript Project

• Setting up the Development Environment
- Installing Node.js, npm & Playwright
- Configuring VS Code for TypeScript and Playwright
- Writing & executing the 1st Playwright script

Module 2:

TypeScript Fundamentals

• Basic TypeScript Syntax
- Variables,
- Constants and
- Data Types
- Type Inference & Type Annotations

• Functions in TypeScript
- Declaring and Using Functions
- Arrow Functions &
- Default Parameters

• OOPS in TypeScript
- Interfaces,
- Type Aliases
- Classes
- Object Instantiation
- Inheritance,
- Access Modifiers and
- Static Methods

• Asynchronous Programming
- Understanding Promises &
- Async/Await
- Handling Errors in Async Functions

Module 3:

Playwright Basics

• Understanding Playwright Architecture
- Installing Node.js, npm & Playwright
- Configuring VS Code for TypeScript and Playwright
- Writing and executing the first Playwright script

• Locators and Web Elements Interaction
- Types of Locators
- CSS,
- XPath,
- Text,
- Role-based,
- Test ID
- Interacting with Web Elements

(Click, Type, Select, Check, Uncheck)
- Handling Dynamic Elements

• **Assertions in Playwright**
- Using Playwright's Built-in Assertions
- Soft Assertions vs Hard Assertions

• **Working with Playwright Test Runner**
- Test Setup and Configuration
- Running Tests in Headless &
- Running Tests in Headed Mode

Module 4:
Advanced Playwright Features

• **Handling Different UI Components**
-Handling Alerts,
- Frames &
- Popups
-Working with Multiple Tabs and Windows

• **Handling Files in Playwright**
- File Upload & Download

• **Capturing Test Artifacts**
- Taking Screenshots and Recording Videos

• **Handling Authentication & Sessions**
- Storing and Using Session Data

• **Custom Reporters and Debugging**
- Using Playwright Trace Viewer
- Generating Custom Reports

Module 5:
Playwright with API Testing

• **Introduction to API Testing**
- What is API Testing?
- Benefits of API Testing in Playwright

• **Setting Up API Requests in Playwright**
- Sending GET Requests,
- Sending POST Requests,
- Sending PUT Requests,
- Sending DELETE Requests
- Handling API Responses and Assertions

• **Mocking API Responses in Playwright**
- Using Route Interception for API Mocks
- Simulating Different API Scenarios

• **Best Practices for API Testing**
- Validating API Response Time
- Error Handling in API Testing

Module 6:
Database Testing with Playwright

• **Introduction to Database Testing**
- Why Database Testing is Important?
- Overview of SQL Queries

• **Connecting Playwright to a Database**
- Setting Up Database Connection in Playwright
- Running SQL Queries from Playwright Tests

• **Performing CRUD Operations**
- Validating Data from UI VS
- Validating Data fromDatabase
- Using Transactions for Test Isolation

• **Database Testing Best Practices**
- Ensuring Data Integrity in Tests
- Handling Large Data Sets

Module 7:
Playwright Test Automation Framework

• **Introduction PageObjectMode(POM)**
- Benefits of POM
- Implementing POM in Playwright

• **Creating Reusable Components**
- Writing Helper Functions and Utilities
- Managing Configurations &
- Environment Variables

• **Implementing Data-Driven Testing**
- Using JSON and CSV Files for Data
- Parameterized Test Execution

• **Configuring Playwright Config File**
- Setting Up Global Configurations
- Using Multiple Browser Contexts

• **Running Tests Efficiency**
- Running Tests in Parallel &
- Running Tests in Sequential Mode
- Skipping and Retrying Tests

• **Generating Test Reports**
- Using Allure and HTML Reports
- Understanding Test Execution Logs

Module 8:
Continuous Integration & Deployment (CI/CD) with Playwright

- **Introduction CI/CD in Test Automation**
  - Benefits of CI/CD for Automated Testing
  - Overview of CI/CD Tools
  - Azure DevOps,
  - GitHub Actions,
  - Jenkins
- **Setting Up Azure Pipelines for Playwright Tests**
  - Creating a Playwright Test Pipeline
  - Running Tests on Different Environments
- **Integrating Playwright with GitHub Actions**
  - Automating Test Execution on Code Commits
- **Running Tests in Docker Containers**
  - Setting Up Playwright with Docker
  - Executing Tests in Isolated Environments
- **Best Practices for CI/CD Automation**
  - Handling Flaky Tests
  - Maintaining Test Stability

Module 9:
Real-Time Project & Interview Preparation

- **Implementing a Real-Time Web Application Test Framework**
  - Designing a Scalable Test Automation Framework
  - Creating End-to-End Test Suites
- **Debugging and Troubleshooting Playwright Scripts**
  - Handling Test Failures Effectively
  - Debugging with VS Code &
  - Playwright Debug Mode
- **Best Practices in Test Automation**
  - Writing Maintainable Test Code
  - Handling Test Data Efficiently
- **Common Playwright Interview Questions and Answers**
  - Covering Playwright,
  - TypeScript,
  - API Testing and
  - Database Testing
- **Mock Interviews & Hands-on Assignments**
  - Conducting Mock Interviews
  - Assignments on Real-Time Scenarios

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G. Rambabu	JD Sports Fashion	4.0 LPA
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A. Satya Prakash	Corpus	3.6 LPA
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Sushmitha	TCS	3.53 LPA
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M. Shivakumar	Gaian Solutions	3.5 LPA
B. Sandhya Rani	Gaian Solutions	3.5 LPA
E. Bharathi	Gaian Solutions	3.5 LPA
D. Sowmya	Gaian Solutions	3.5 LPA
B. Sravani	TCS	3.5 LPA
V. Rakesh	Defteam	3.5 LPA
Ajay Jikare	TCS	3.36 LPA
Govind Dasharathe	TCS	3.36 LPA
K. Tharun	Piersoft	3.0 LPA
B. Ananya	Pronix	3.0 LPA
Poorna	Capgemini	3.0 LPA
T. Kalyankar	Infosys	3.0 LPA
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Playwright Automation

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