UiPath Techniques for Web-Based Data Automation

Course Description

In this course, you will learn how to use UiPath to automate the ingestion, parsing, and analysis of web-based data. You will gain hands-on experience with UiPath Studio and UiPath Orchestrator and learn how to apply them to real-world scenarios. You will also learn how to use web scraping and API integration techniques to collect data from various websites and web-based applications, and then parse and analyze that data using UiPath. By the end of this course, you will have the skills and knowledge to develop and implement UiPath solutions for web-based data ingestion, parsing, and analysis

Audience

This course is designed for software developers, data analysts, business analysts, and anyone interested in automating the ingestion, parsing, and analysis of web-based data using UiPath. Some prior programming experience is required, but no prior experience with UiPath or web scraping is necessary.

Pre-requisite Knowledge/Skills

- Basic programming knowledge (Python or Java)

- Familiarity with HTML and CSS

- Basic understanding of web protocols (HTTP, HTTPS)

- Understanding of data structures (JSON, XML)

Course Objectives

By the end of this course, learners will be able to:

- Understand the basics of UiPath and its application in web-based data automation.

- Collect data from various websites and web-based applications using web scraping and API integration techniques.

- Ingest data into UiPath using different techniques and store it appropriately.

- Parse and transform data using UiPath data extraction activities.

- Perform basic and advanced data analysis using UiPath data analysis activities and external data analysis tools.

- Develop and implement UiPath solutions for web-based data automation.

- Apply best practices and lessons learned from real-world case studies.

Course Outline

The course comprises 24-hours of theory and labs. It's divided into 7 different modules.

Module 1: Introduction to UiPath

- What is UiPath?
- Benefits and limitations of UiPath
- Overview of UiPath Studio and Orchestrator
- Use cases for UiPath in web-based data automation

Module 2: Web Scraping Techniques

- Introduction to web scraping
- HTML structure and parsing
- XPath and CSS selectors
- Data extraction using UiPath Web Scraping Wizard
- UiPath web scraping activities

Module 3: API Integration Techniques

- Introduction to APIs
- RESTful APIs and JSON format
- Authenticating and authorizing APIs
- API requests and responses
- UiPath API activities

Module 4: Data Ingestion

- Introduction to data ingestion
- UiPath data ingestion activities
- Data storage options
- Handling large datasets
- Error handling and exception handling

Module 5: Data Parsing and Transformation

- Parsing and transformation techniques

- Regular expressions and string manipulation
- UiPath data extraction activities
- Data cleaning and normalization

Module 6: Data Analysis

- Introduction to data analysis
- UiPath data analysis activities
- Basic data analysis techniques
- Data visualization and reporting

Module 7: Case Studies

- Real-world examples of web-based data automation using UiPath
- Case studies from various industries
- Best practices and lessons learned.