

ABOUT THE COURSE: ROBOTIC PROCESS AUTOMATION

COURSE CONTENT:

UNIT I Robotic Process Automation and Industry opportunities:

Detailed presentation of the publishing process to Orchestrator and learn to run the process with Assistant- The key components of the UiPath Studio user interface (UI).-Accessing of the ACME System; web application to receive a set of invoices in your mailbox. - steps of the process to be built based on the business needs. - UiPath Studio activities - publishing options for a process in Studio - Run a published process from the UiPath Assistant. Variables & Arguments in Studio

LEARNING OUTCOME:

Variables – Creation, Configuration in an automation project – Data types, application of conversion methods of data types – Arguments-Usage of workflow file activity to chain workflow execution and pass data through arguments – Differentiation between variables and arguments – Arrays and its use
Control Flow in Studio - control flow statements - Differentiation between the most common control flow statements -Configuration of control flow statements – Parallel Activity

UNIT II UI Automation:

UI automation with UiPath – Key elements of UI Automation with UiPath Studio - Differentiation between the modern and the classic design - Changing the design experience in Studio based on the automation requirements.

UI Automation with the Modern Design Experience Indication and selection the target required for UI Automation using the Selection Option window – Configuration of the key container Activity in the modern experience - correct input activities used in the modern design experience - input methods used in modern design experience - suitable input methods based on the requirements of an automation - input mode works - key output activities used in the modern design experience - output methods used in modern design experience-

LEARNING OUTCOME:

Table extraction – Configuration of all the Key properties -Building user interface automation - nested card when working with multiple applications - Debug UI Automation projects built with the modern experience.

UI Automation with the Classic Design Experience

Customization of the properties of the input actions - output actions for automation - Improving UI element identification and efficiency of the automation.

Data Manipulation with Strings in Studio

RPA Development course and Variables course, and, the Arguments and Control Flow in Studio course - Common .NET methods to manipulate values contained in variables of type String - RegExbuilder in UiPath Studio to perform complex string manipulation.

Selectors

Selectors: Full Selectors and Partial Selectors, the UI Explorer, the Property Explorer, and finetuning selectors to handle different situations- Selector and its structure - various types of selectors and their settings when automating - The attributes of User Interface element - approaches to finetune selectors to make them reliable. Fine-tune selectors to improve element identification precision.

Descriptors

Advanced options of the selection window – Using of Enforce visibility, Dynamic Text Target and Native Text Target options - Image selection option - UI Descriptors, generation- target element validation - correct targeting method while automating UI elements - attributes of UI elements to build the automation logic - Fine-tune Descriptor to uniquely identify the required UI elements on the screen - Object Repository, key benefits of Object Repository, key concepts in the Object

Repository: UI Descriptors, UI Elements, Screens, Applications, UI Libraries.

UNIT III Project Organization in studio

Choose a suitable project layout for each workflow - Splitting a complex automation project into functional workflows - Creation and sharing of project template -Reusable components across projects and store them as libraries - exception handling techniques - versioning capabilities of UiPath

LEARNING OUTCOME:

Debugging features - remote debugging - overview of the debugging features, including actions and panels, followed by a basic entry into them and then the advanced tools.

Error & Exception Handling Exception handling activities like TryCatch, Throw, Rethrow, Retry Scope, and Global Exception

Handler-Different types of exceptions-common exception handling techniques and explain when they should be used - TryCatch, Throw, and Rethrow activities in automation projects - Using the Retry Scope activities in automation projects - ContinueOnError Property - Global Exception Handler in both attended and unattended scenarios.

UNIT IV Orchestrator Overview for RPA developers

Creation, configuration, and provision of unattended robots through Orchestrator in UiPath, publish and managing of automation projects, and execution of jobs

using an unattended robot - purpose and main capabilities of Orchestrator - Orchestrator entities - differentiate between the tenant context and the folder context - Creation, configuration and provision unattended robots from Orchestrator

LEARNING OUTCOME:

Differentiation between a background and a foreground process – Execution of jobs using unattended robots in different ways - licenses allocation and consumption in Orchestrator. Orchestrator Overview for RPA developers

Using Orchestrators resources in Studio - Publishing, installing and updating libraries and templates in Orchestrator. Storing files in storage buckets- Creation, population and consumption of Orchestrator queues - relationship between different queue concepts and make the correct correlations - types of processes

Email Automation

Installing the dedicated email activities in UiPath Studio and Retrieving email messages based on the email client and server in use – Automation of the interaction with emails by filtering and downloading attachments - message templates to send emails.

PDF Automation

UiPath PDF scraping and data extraction from blocks of text and tables in PDFs using UiPath Studio – Installing the UiPath PDF Activities Package – Extraction of large text segments from PDF files using different activities - Extracting a single piece of information from a PDF document - Extracting Data using multiple PDFs – Using the UI automation capabilities of Studio to extract fluctuating values from multiple files with the same structure.

Version Control Systems integration

Version control systems - Identification of the version control systems -Version control system Integration

UNIT V RPA testing

RPA testing in the overall automation process and features for testing in UiPath Studio - unit testing for RPA workflows and best practices from projects implemented by the UiPath development teams- Causes that affect the robot stability and how they can be tackled - Build the case for RPA testing - levels of RPA testing – Creation of basic and data-driven test cases for RPA workflows – Dedicated verification features for RPA Testing - Test Explorer to group tests together, perform debugging - mock testing simulation of real objects in RPA testing scenarios - good case practices identified by RPA developers from real automation projects.

USE CASES:

1. Invoice Processing
 - Automate extraction and entry of invoice data into the accounting system.
2. Employee Onboarding
 - Automate the filling of onboarding forms and sending welcome emails to new employees.
3. Customer Support Ticket Handling
 - Automate initial response and routing of customer support tickets to appropriate departments.
4. Data Migration
 - Automate the migration of data from legacy systems to new systems.

TEST PROJECTS:

1. Automating Social Media Posting
 - Create an RPA bot to automate posting updates on social media platforms.
2. Automating Web Scraping and Data Entry
 - Develop an RPA bot to scrape data from a website and enter it into a database.
3. Automating Email Notifications
 - Build an RPA bot to automate sending email notifications based on specific triggers.
4. Automating Report Generation
 - Create an RPA bot to generate and distribute weekly sales reports.
5. Automating Attendance Tracking
 - Develop an RPA bot to automate tracking and reporting student attendance.