



# Microsoft Power Automate RPA Developer

Course PL-500

4 Days

Instructor-led, Hands-on

## Introduction

Candidates for this course automate time-consuming and repetitive tasks by using Microsoft Power Automate. They review solution requirements, create process documentation, and design, develop, troubleshoot, and evaluate solutions. Candidates work with business stakeholders to improve and automate business workflows. They collaborate with administrators to deploy solutions to production environments, and they support solutions.

If you're a developer with a keen interest in providing automated solutions for your organization, this certification could be a great fit for you. You automate time-consuming and repetitive tasks by using Microsoft Power Automate. You review solution requirements, create process documentation, and design, develop, deploy, integrate, troubleshoot, and evaluate solutions. Working with business stakeholders, you help to improve and automate business workflows.

## At Course Completion

After completing this course, students will be able to:

- Take your first steps with Power Automate for desktop
- Power Automate for desktop development essentials
- Build your first Power Automate for desktop flow
- Define input and output parameters in Power Automate
- Integrate desktop flows with Outlook connector in Power Automate for desktop
- Connect a cloud flow to desktop flows in Power Automate for desktop
- Use AI Builder to process invoice forms in Power Automate
- Use the Teams connector in Power Automate
- Run a Power Automate for desktop flow in unattended mode
- Optimize your business process with process advisor
- Handle variables in Power Automate for desktop
- Automate repetitive tasks using loops in Power Automate for desktop
- Adjust process behavior using conditional actions with Power Automate for desktop
- Configure flow control in Power Automate for desktop
- Generate Power Automate for desktop flows by recording
- Configure exception and error handling in Power Automate for desktop
- Control file and folder handling in Power Automate for desktop
- Web automation in Power Automate for desktop

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- Use Power Automate for desktop to interact with windows and applications
- Excel automation in Power Automate for desktop
- Automating email handling in Power Automate for desktop
- Automate system, workstation, and services actions in Power Automate for desktop
- Communicate using message boxes in Power Automate for desktop flows
- Text manipulation in Power Automate for desktop
- Simulate mouse and keyboard actions by using Power Automate for desktop
- Combine Power Automate desktop and cloud flows
- Database handling in Power Automate for desktop
- Active Directory handling in Power Automate for desktop
- Scripting in Power Automate for desktop
- OCR technologies in Power Automate for desktop
- Get started with custom connectors in Power Automate
- Configure custom connectors with authenticated APIs in Power Automate
- Introduction to Microsoft Power Platform security and governance

## Prerequisites

This course requires that you meet the following prerequisites:

- Candidates should have experience with JSON, cloud flows and Azure services, integrating solutions with REST and SOAP services, analyzing data by using Microsoft Excel, VBScript, Visual Basic for Applications (VBA), HTML, JavaScript, one or more programming languages, and the Microsoft Power Platform suite of tools (AI Builder, Power Apps, Dataverse, and Power Virtual Agents).

## Course Materials

The student kit includes a digital workbook and other necessary materials for this class.

## Course Outline

### Module 1: Take your first steps with Power Automate for desktop

- Explore the console and the flow designer.
- Learn how to use the core features of the Power Automate for desktop platform.
- Create and run a flow.

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## **Module 2: Power Automate for desktop development essentials**

- Create a flow from scratch using the flow designer
- Learn how to use actions and variables
- Understand the testing and debugging features of the flow designer
- Configure the error handling properties of individual actions
- Comprehend the use of UI elements and images
- Use subflows to compartmentalize and reuse parts of a flow

## **Module 3: Build your first Power Automate for desktop flow**

- Learn how to use Power Automate to create a new desktop flow.
- Record actions that are performed in a desktop-based application.
- Perform a test run of the new desktop flow.

## **Module 4: Define input and output parameters in Power Automate**

- Learn how to create a desktop flow with predefined inputs.
- Record actions that are performed in the Contoso invoicing desktop application by using your predefined inputs and capturing application data for output.
- Perform a test run of a new desktop flow with a new set of inputs.

## **Module 5: Integrate desktop flows with Outlook connector in Power Automate for desktop**

- Create a new solution to package the complete Contoso invoice processing solution.
- Create a new cloud flow that initiates the invoicing process through receipt of an email.
- Integrate a desktop flow into a cloud flow.
- Test the new cloud flow.

## **Module 6: Connect a cloud flow to desktop flows in Power Automate for desktop**

- Create a cloud flow.
- Configure the on-premises data gateway to enable the cloud flow to run the desktop flow on your device.
- Add the desktop flow to the new cloud flow.
- Test the new cloud flow.

## **Module 7: Use AI Builder to process invoice forms in Power Automate**

- Build a new AI model for form processing.

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- Train the new AI model to process Contoso Invoice forms.
- Integrate the new AI model into an existing cloud flow.
- Test the updated cloud flow and associated AI Builder-based predictions.

## **Module 8: Use the Teams connector in Power Automate**

- Integrate a Microsoft Teams-based approval model and the associated conditional logic into an existing cloud flow.
- Integrate the desktop flow for entering the invoice information into the approval process.
- Integrate Microsoft Outlook-based approval/rejection notifications into the invoice process.
- Test the end-to-end invoice processing cloud flow.

## **Module 9: Run a Power Automate for desktop flow in unattended mode**

- Run a basic desktop flow in unattended mode.
- Run a desktop flow and cloud flow scenario in unattended mode.
- Learn about best practices and setup for unattended desktop flows.

## **Module 10: Optimize your business process with process advisor**

- Create your first recording.
- Edit recordings and group actions.
- Analyze recordings and interpret results.

## **Module 11: Handle variables in Power Automate for desktop**

- Create, edit, and manipulate variables.
- Examine the variables pane.
- Become familiar with various variable data types and their properties.
- Configure input and output variables.
- Automate repetitive tasks using loops in Power Automate for desktop
- Use simple loops to perform a given number of repetitions and iterate through data
- Deploy loop conditions in order to repeat actions until a condition is met
- Iterate through the items of a list using for each loops
- Explicitly end loops when required

## **Module 12: Adjust process behavior using conditional actions with Power Automate for desktop**

- Use "If" conditionals
- Deploy "Switch" conditionals in order to compare a single variable with multiple possible values

- Explore additional options when evaluating conditions
- Provide default and alternative behaviors for flows based on the environment data

### **Module 13: Configure flow control in Power Automate for desktop**

- Learn how flow control works.
- Learn how to use the flow control group of actions to direct and manipulate the flow.

### **Module 14: Generate Power Automate for desktop flows by recording**

- Use the recorder to generate actions automating local Windows UI-based tasks
- Deploy the recorder to automate interactions with a web browser
- Preview and edit the automatically generated actions during and after the recording

### **Module 15: Configure exception and error handling in Power Automate for desktop**

- Configure the exception handling properties of individual actions.

### **Module 16: Control file and folder handling in Power Automate for desktop**

- Learn how to create flows that manage files and folders.
- Learn how to manage the properties of multiple files and folders.

### **Module 17: Web automation in Power Automate for desktop**

- Learn how to configure browser automation actions.
- Learn how to extract data from web pages.
- Create a flow that extracts gainer stocks from the MSN website.

### **Module 18: Use Power Automate for desktop to interact with windows and applications**

- Learn about the concept of UI elements.
- Discover the window and element-handling capabilities of Power Automate for desktop.

### **Module 19: Excel automation in Power Automate for desktop**

- Open Excel files and attach a process to an already opened file.
- Use the Excel group of actions to read data from and write data to an Excel file.
- Create and edit worksheets.

- Save and close Excel files.

## **Module 20: Automating email handling in Power Automate for desktop**

- Become familiar with the email, Outlook, and Exchange actions.
- Create a flow that retrieves, processes, and sends emails.

## **Module 21: Automate system, workstation, and services actions in Power Automate for desktop**

- Automate system-related tasks with the system and workstation groups of actions.
- Automate the management of Windows services with the service group of actions.

## **Module 22: Communicate using message boxes in Power Automate for desktop flows**

- Familiarize yourself with the various preset message box actions

## **Module 23: Text manipulation in Power Automate for desktop**

- Learn how to use the text group of actions.
- Create methods that help you process and edit text.
- Manipulate text type variables for input and output in actions and flows.

## **Module 24: Simulate mouse and keyboard actions by using Power Automate for desktop**

- Learn how to create a flow that simulates human interaction with a PC
- Learn how to automate simulated mouse movement and clicks
- Learn how to select and locate a specific image or area on the screen with the mouse
- Learn how to emulate typing or key presses

## **Module 25: Combine Power Automate desktop and cloud flows**

- Create a cloud flow in Power Automate that calls a Power Automate desktop flow.
- Use the values of variables from Power Automate in a Power Automate desktop flow.
- Use the resulting variables from Power Automate for desktop in Power Automate actions.

## **Module 26: Database handling in Power Automate for desktop**

- Compose a connection string to connect to a database.

- Use the appropriate action to run queries on a database.

### **Module 27: Active Directory handling in Power Automate for desktop**

- Connect to an Active Directory server.
- Manage users, groups, and objects with Active Directory actions.

### **Module 28: Scripting in Power Automate for desktop**

- Learn how to use scripting actions.
- Create two flows using VBScript and JavaScript.

### **Module 29: OCR technologies in Power Automate for desktop**

- Learn how to configure OCR actions.
- Create a flow that extracts text from images using OCR technologies.
- Get started with custom connectors in Power Automate
- Learn about the role of custom connectors.
- Build a connector and use it in a Power Automate flow.

### **Module 30: Configure custom connectors with authenticated APIs in Power Automate**

- Learn about authentication options.
- Learn how to use APIs with Microsoft Azure Active Directory.
- Use a graph API from a custom connector.
- Share and move between environments.

### **Module 31: Introduction to Microsoft Power Platform security and governance**

- Access Microsoft Power Platform admin experiences.
- Create simple environment and tenant-wide DLP policies.
- Discover and identify the differences between the Business data group and the No-business data group.
- Learn about the differences between out-of-the-box Power Automate Admin experiences and Microsoft Power Platform Center of Excellence toolkit.