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Microsoft 365 – Advanced

Course Overview – 1-day course

Efficiency in Microsoft 365 through automation

Microsoft 365 is an expansive eco-system of applications extending beyond the traditional word processor and accounting spread sheet. These traditional (and critical) systems sit alongside a new wave of computing power within reach of end-users, in a way that has never been available before.

Taking advantage of the tools at our disposal has never been so obvious of a competitive advantage as it is now. This course will enable advanced end-users, who have started their journey of increased integration between Microsoft 365 products, to raise their skills and knowledge to the next level. It is focused on automation and workflow for increased capabilities in using these tools.

Detailed Content

Introduction

- Course Objectives
- How this manual is organised
- What is Microsoft 365?
- Microsoft 365 Subscriptions

Power Automate – Error Handling

- Introduction to Error Handling
- Error Handling in Power Automate
- Error Types in Power Automate
- Create an error free Flow in Power Automate
- Cause the Flow to error
- View successful actions & triggers
- View failed actions & triggers
- Error handling techniques
- Configuring Run Conditions
- Handle the error with a parallel branch
- Add an action after the parallel branches
- Handle the outcome of all branches
- Use Terminate to successfully end a Flow
- More complex but efficient alternative error handling

Power Automate – Debugging

- Debugging in Power Automate
- View the output of an action
- Using Compose to see data
- Variables for debugging
- Using a variable to capture debug information
- Variables versus Compose
- View a complex output from an action
- Debugging with Static Results
- Causing an error with Static Results
- Advice for Debugging and Error Handling

Power Automate – Data and JSON

- Basic data Types in Power Automate
- Object and Array data types
- What is JSON
- JSON examples
- How to handle JSON
- How a Flow is defined (JSON)
- A string of JSON in a Flow
- An Object of JSON in a Flow
- Handling data in JSON format
- Parse JSON data
- Extended Topic – JSON Schemas
- More complex JSON data
- Accessing an array of JSON data

Power Automate – Expressions

- What is the Workflow Definition Language
- The Workflow Definition Language Schema
- The functions reference for Workflow Definition Language
- Writing Expressions in Power Automate
- The expression pane

Power Automate – String Expressions

- A Basic String function
- Combining String functions together

Power Automate – Variables in expressions

- Variable naming conventions
- The variables() function
- Referencing a variable in another function

Power Automate – Arrays & Collections

- What is an array
- What is a collection
- Defining an array
- Looping through an array
- Filtering an array
- The length of an array
- Find if an element exists in an array
- Accessing an array element by index

Power Automate – Data & Math Expressions

- Arithmetic Functions
- Conversion functions

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Power Automate – Date/Time types and expressions

- The Date and Time data type
- Date and Time functions
- Time Zone functions
- Formatting Dates and Times

Power Automate – Advanced Functions

- The workflow() function
- Data from the trigger
- The dot (.) operator
- Data from an action
- Operators to access data fields
- Avoiding errors with NULL or missing fields
- The ? operator
- Have a default if value is null
- Other function groups

Power Automate – Configuration

- Introduction to limits
- Trigger Conditions
- Tracked Properties
- Create a Tracked Property
- Accessing Tracked Properties
- A calculation from a Tracked Property
- Extended Exercise – Using a calculated output for Tracked Property
- Other Power Automate settings
- Secure Inputs and Outputs
- Concurrency Control
- Timeouts and Retries
- Other settings

SharePoint Automation

- Power Automate and SharePoint
- SharePoint Triggers
- SharePoint Actions
- SharePoint caution with actions and triggers
- Perform an action on an item using Power Automate
- Share a SharePoint Flow
- Select file and initiate the Flow
- Use SharePoint metadata to advise user
- Expand the SharePoint Flow functionality
- Content Approval in SharePoint
- SharePoint Approval Process
- SharePoint Workflows
- Using Power Automate to manage SharePoint Approvals
- Create a Flow to Approve SharePoint files
- Add an approval action to the SharePoint Flow
- The approval response handling
- Testing the approval Flow

Advanced SharePoint Actions via API

- The magic behind Power Automate
- About Application Programming Interfaces
- API Methods
- Other API considerations
- The SharePoint API action
- The SharePoint API via a web browser
- Finding the site Title from the API
- Filter only needed data using ODATA format
- Accessing the property only
- Use the Title in our approval Flow
- More ODATA query examples
- ODATA filters
- Format of a response
- References for the SharePoint API

Teams – Adaptive Cards

- Types of Teams Apps
- What are Adaptive Cards
- Uses for Adaptive Cards in Teams
- Structure of an Adaptive Card
- Templates in Adaptive Cards
- A basic Adaptive Card sample
- Modify the sample Adaptive Card JSON
- Populate an Adaptive Card with data from the Flow
- Adaptive Card Schema
- Text Formatting a Card
- Adaptive Card Designer
- Create an Adaptive Card in designer
- Test run the new card with Power Automate
- Add dynamic fields to the custom card
- Modify the card in designer with fields intact
- Adding inputs to the trigger
- Extended Topic – Actions on an Adaptive card
- Action buttons on cards
- Action on elements
- Adding actions to a card
- Other types of card elements
- At mentions in cards (alternative)

Power Platform in SharePoint

- Why is the Power Platform so useful
- What are Power Apps
- Power Apps and Data (SharePoint)
- Create a SharePoint list
- Manage the list with a 3-screen Power App
- Trying to break the Power App
- Modify the SharePoint column
- Add an option to the column
- Modifying the Power App
- Saving, Sharing and Publishing the Power App
- Housekeeping to clean-up our environment

Cognitive Services

- Traditional Computing
- What is Artificial Intelligence
- What is Machine Learning
- Uses for Artificial Intelligence
- Microsoft Cognitive Services
- What is Azure
- Text Analysis
- Image Analysis
- Computer Vision
- Facial Recognition
- Face Verification
- Face Detection
- Emotion Recognition
- Artificial Intelligence in Microsoft 365
- Artificial Intelligence in the Power Platform
- AI Builder in Power Platform
- Where to from here