



Fast-track Power Automate

Sample manual - first two chapters



Wise Owl
Training

TABLE OF CONTENTS (1 of 5)

1	GETTING STARTED	Page
1.1	What is Power Automate?	7
1.2	Power Automate vs Power Automate Desktop	8
1.3	Licensing Requirements	9

2	WORKING WITH FLOWS	Page
2.1	Getting Started	10
	<i>Logging on to Power Automate</i>	10
	<i>Choosing an Environment</i>	11
	<i>Listing Flows</i>	11
2.2	Creating Flows	12
	<i>Types of Flow</i>	12
	<i>Adding Steps</i>	13
	<i>Adding Dynamic Content</i>	14
	<i>Finishing your Flow</i>	14
2.3	Testing and Running Flows	15
	<i>Testing Flows</i>	15
	<i>Re-testing Flows</i>	16
	<i>Running Flows</i>	16
2.4	Viewing Flows	17
2.5	Improving Flow Readability	18
	<i>Renaming Actions</i>	18
	<i>Adding Notes</i>	19
	<i>Adding Comments</i>	20
2.6	Working with Flows	21
	<i>Checking Flows</i>	21
	<i>Peeking at Flow Syntax</i>	21
	<i>Disabling Flows (but not Actions)</i>	22
	<i>Copying Actions</i>	22
	<i>Copying Flows</i>	23
	<i>Deleting Flows</i>	23

3	TRIGGERS AND TEMPLATES	Page
3.1	Our Example Automated (Triggered) Flow	24
3.2	Creating Automated Flows from Scratch	25
3.3	Creating Automated Flows using Templates	26
	<i>Finding the Right Template</i>	26
	<i>Tweaking your Template</i>	27

4	TESTING AND DEBUGGING	Page
4.1	Testing Flows	28
4.2	Viewing Outputs from Actions	29
	<i>Viewing Outputs</i>	29
	<i>Capturing Outputs - the Compose Action</i>	30
	<i>Seeing Inputs and Outputs</i>	30
	<i>Raw Inputs and Outputs</i>	31
4.3	Interpreting Outputs (JSON)	32
4.4	Writing to Text Files	33
4.5	Dealing with Flow Failures	34

5	PROGRAMMING CONCEPTS	Page
5.1	Overview	35
	<i>Our Example</i>	35
5.2	Simple Variables	36
	<i>Initialising Variables</i>	36
	<i>The Types of Variables</i>	37
	<i>Variable Actions</i>	37
	<i>Debugging Variables</i>	38
5.3	Array Variables	39
	<i>Getting our List of Files - OneDrive</i>	39
	<i>Getting our List of Files – SharePoint</i>	40
5.4	Using Scope to Group Actions	41
	<i>Adding a Scope Action</i>	41
	<i>Tidying Things Up</i>	42
5.5	Parallel Branches	43
	<i>Creating Parallel Branches</i>	43
	<i>Adding Steps to Parallel Branches</i>	44
5.6	Basic Expressions	45
	<i>Basic Expressions and Referencing Variables</i>	45
	<i>Commenting Expressions</i>	46
	<i>Enabling Experimental Features</i>	46
	<i>Editing Expressions using Experimental Features</i>	46
5.7	Single Conditions - If	47
	<i>Adding Conditions</i>	47
	<i>Testing Conditions</i>	48
	<i>Why you Need to Terminate Flows Early</i>	48
	<i>The Terminate Action</i>	49
5.8	Multiple Conditions – Switch	50
5.9	Do Until Loops	51
	<i>Initialising Variables</i>	51
	<i>Adding a Do Until Loop</i>	52
	<i>Setting Limits to Do Until Loops</i>	52

TABLE OF CONTENTS (2 of 5)

6	WORKING WITH ARRAYS	Page
6.1	Creating Arrays	53
	<i>Setting Array Variables Manually</i>	53
	<i>Creating Arrays with Named Properties</i>	54
	<i>Creating Arrays using Expressions</i>	54
	<i>Nested Arrays</i>	55
6.2	Referring to Items within an Array	56
	<i>An Example using a List of Files</i>	56
	<i>Getting Values by their Key</i>	57
6.3	Mapping or Reshaping Arrays using Select	58
	<i>Collapsing Arrays to One Value</i>	58
	<i>Returning Multiple Columns with Renaming</i>	59
6.4	Intersection and Union	60
	<i>Overview of Final Answer</i>	60
	<i>The Union and Intersect Expressions</i>	61

7	GETTING DATA	Page
7.1	Sources Included in this Chapter	62
7.2	Getting Data from Excel	63
	<i>The Need for a Table</i>	63
	<i>Creating a Table</i>	63
	<i>Getting Data from an Excel Table</i>	64
	<i>Bonus: Listing Worksheets and Tables</i>	65
7.3	Getting Data from a SharePoint List	66
	<i>Getting SharePoint List Rows</i>	66
	<i>Showing the Correct Column Names</i>	67
7.4	Listing Files/Folders from OneDrive	68
7.5	Listing Emails from Outlook	69

8	ODATA	Page
8.1	What is OData?	70
8.2	The Need for OData	71
8.3	Using OData	72
	<i>Applying OData when Getting Data</i>	72
	<i>Sorting using OData</i>	72
	<i>Filtering using OData</i>	73
	<i>Combining Filters</i>	74
	<i>Testing for Null Values</i>	74
	<i>Filtering Dates</i>	74
8.4	Issues with Different Data Sources	75
	<i>Excel: Spaces in Column Names</i>	75
	<i>SharePoint: Lookup Columns</i>	75
8.5	Dynamic Filters	76
8.6	OData Filters using Experimental Features	77
8.7	Avoiding OData – the FilterArray Action	78
	<i>Suppressing the GetItems Warning</i>	78

9	HTML TABLES	Page
9.1	Overview	79
9.2	Basic HTML Tables	80
9.3	Custom HTML Tables	81
9.4	Formatting HTML Tables	82

10	APPLY TO EACH	Page
10.1	Our Example	83
10.2	Adding Apply to Each Manually	84
	<i>Getting an Array to Loop Over</i>	84
	<i>Creating an Apply to Each Action</i>	84
	<i>The Current Item</i>	85
	<i>Testing Apply to Each Loops</i>	85
10.3	Adding Apply to Each Automatically	86
10.4	Referring to the Current Item's Contents	87
	<i>Dynamic Content (Visible Fields)</i>	87
	<i>Copying Visible Fields to Expressions</i>	87
	<i>Making Pasted Expressions Valid</i>	88
	<i>Visible Fields and their Underlying Expressions Compared</i>	88
	<i>Using the Simpler Item() Function</i>	89
10.5	Applying Conditions within Loops	90
	<i>The Outline of our Flow</i>	90
	<i>Our Condition</i>	91

TABLE OF CONTENTS (3 of 5)

11	EXPRESSIONS	Page
11.1	Overview	92
11.2	Text Functions	93
	<i>The Main Text Functions</i>	93
	<i>Example Flow using Text Functions - Introduction</i>	94
	<i>Example Flow - Apply to Each Action</i>	95
	<i>Example Flow – Showing the Results</i>	95
11.3	Number Functions	96
	<i>Basic Mathematical Operator Functions</i>	96
	<i>Other Mathematical Functions</i>	96
	<i>Conversion Functions</i>	96
11.4	Date Functions	97
	<i>Date Formats and Timestamps</i>	97
	<i>Getting Dates</i>	97
	<i>Manipulating Dates</i>	98
	<i>Getting Parts of Dates</i>	98
11.5	Collection/Array Functions	99
	<i>Inspection Functions</i>	99
	<i>Joining and Splitting</i>	99
	<i>Picking Items</i>	100
	<i>Ordering Arrays</i>	100
	<i>Set Operations</i>	100
11.6	Comparison Functions	101
	<i>Conditional IF Function</i>	101
	<i>Testing for Equality or Inequality</i>	101
	<i>Combining Conditions</i>	101

12	INPUTS AND TRIGGERS	Page
12.1	Overview	102
	<i>Our Example</i>	102
12.2	Creating a Flow with Inputs	103
	<i>Dropdown Inputs</i>	103
	<i>How Power Automate Refers to Inputs (TriggerBody)</i>	104

13	TRACKED PROPERTIES	Page
13.1	Tracked Properties	105
	<i>Adding Tracked Properties</i>	105
	<i>Referring to Tracked Properties</i>	106
	<i>Getting Start and End Times for Actions</i>	106

14	ERROR HANDLING	Page
14.1	Try / Catch / Finally Blocks	107
14.2	Configuring Run After Actions	108
14.3	Implementing Error Handling – a Case Study	109
	<i>Our Example Error</i>	109
	<i>Summary of Proposed Flow</i>	109
	<i>Step 1 – Getting the Results</i>	110
	<i>Step 2 – Filtering the Results Array</i>	111
	<i>Step 3 – Picking out the Columns of Interest</i>	111
	<i>Step 4 – Presenting an HTML Table</i>	111
	<i>Step 5 – Sending a Notification Email</i>	112
	<i>Step 6 – Creating a Link back to our Flow</i>	112
14.4	Warning: Flows Run Successfully with Error-Handling	113

15	SUBFLOWS AND SOLUTIONS	Page
15.1	Our Example	114
15.2	Creating Solutions	115
15.3	Creating your Child Flow	116
	<i>Step 1 – Asking for Inputs</i>	116
	<i>Step 2 – Completing the Child Flow</i>	117
	<i>Step 3 – Sending Back a Response</i>	117
	<i>Step 4 – Saving your Child Flow</i>	117
	<i>Step 5 – Changing Connection Permissions</i>	118
15.4	Creating the Parent Flow	119

TABLE OF CONTENTS (4 of 5)

16	ADAPTIVE CARDS	Page
16.1	What are Adaptive Cards?	120
16.2	Our Example: a Drinks Order Form	121
16.3	The Structure of Adaptive Cards	122
16.4	Creating an Adaptive Card	123
	<i>Step 1 – Loading the Adaptive Card Designer</i>	123
	<i>Step 2 – Create a New Card</i>	123
	<i>Step 3 – Choose a Host App</i>	124
	<i>Step 4 – Choose a Target Version</i>	124
	<i>Step 5 – Add your Elements</i>	125
	<i>Step 6 – Give Input Elements Ids</i>	126
	<i>Step 7 – Add an Action to your Card</i>	126
	<i>Step 8 – Apply Validation to Input Elements</i>	127
	<i>Step 9 – Copy your Card's JSON</i>	127
16.5	Posting Adaptive Cards in your Flow	128
	<i>Creating the Post Action</i>	128
	<i>Choosing where to Post your Card</i>	128
	<i>Pasting in the Card</i>	129
	<i>Viewing the Results</i>	129
	<i>Getting the Card Inputs</i>	130
16.6	Some Additional Ideas	131
	<i>Showing the Weekday in the Title</i>	131
	<i>Hiding the Sugar Choice Initially</i>	132

17	APPROVALS	Page
17.1	Our Example	133
17.2	Building a Flow Diagram	134
17.3	How the Approval Process Works	135
17.4	Building the Approval Flow	136
	<i>Step 1 – Creating the Trigger</i>	136
	<i>Step 2 – Request Approval</i>	136
	<i>Step 3 – Adding a Condition</i>	137
	<i>Step 4 – Processing Rejections</i>	137
	<i>Step 5 – Processing Approvals (Part 1)</i>	138
	<i>Step 6 – Processing Approvals (Part 2)</i>	139
17.5	Managing Approvals	140
17.6	Custom Responses	141
	<i>Choosing to Set Custom Responses</i>	141
	<i>Testing the Different Responses</i>	142

18	SCHEDULING FLOWS	Page
18.1	Creating Scheduled Flows	143
	<i>Our Example</i>	143
	<i>Creating a Scheduled Flow</i>	143
	<i>Turning a Normal Flow into a Scheduled One</i>	144
18.2	Power Automate Desktop Flows	145

19	FLOW ADMINISTRATION	Page
19.1	Summary of Copying, Sharing and Exporting	146
19.2	Speeding Up Apply to Each Loops	147
	<i>Our Example Flow</i>	147
	<i>Changing Concurrency Settings</i>	148
19.3	Limiting Triggers	149
19.4	Pagination	150

20	FORMS	Page
20.1	Overview of Forms	151
	<i>Creating Forms</i>	152
20.2	Adding Questions	153
	<i>The Types of Question</i>	153
	<i>Sections</i>	154
	<i>Images and Videos</i>	155
	<i>Branching</i>	155
20.3	Testing and Distributing your Form	156
	<i>Previewing a Form</i>	156
	<i>Changing Form Settings</i>	156
	<i>Saving your Form</i>	157
	<i>Distributing your Form via a Web Link</i>	157
	<i>Generating QR Codes and Embed Codes</i>	157
20.4	Viewing Responses	158
20.5	Other Things you can do with Forms	159
	<i>Using Other Apps such as Excel</i>	159
	<i>Creating and Applying Themes</i>	159
	<i>Letting Users Upload Files</i>	160
	<i>Quizzes</i>	161
20.6	Responding to Form Events in a Flow	162

TABLE OF CONTENTS (5 of 5)

21	SHAREPOINT LISTS	Page
21.1	About SharePoint Lists	163
21.2	Creating a SharePoint Site	164
21.3	Working with SharePoint Lists	165
	<i>Creating a New List</i>	165
	<i>Renaming the Title Column</i>	166
	<i>Adding/Editing List Data</i>	166
	<i>Creating Choice and Lookup Columns</i>	167
21.4	Internal SharePoint List Column Names	168
	<i>Finding Column Names in Power Automate</i>	168
	<i>Finding Column Names in SharePoint</i>	168
21.5	Referencing Choice and Lookup Columns	169

22	POWER BI DESKTOP FLOWS	Page
22.1	Our Example	170
	<i>Some Limitations of Running Flows from Power BI Desktop</i>	170
22.2	Creating a Power Automate Button	171
	<i>Step 1 – Creating the Button</i>	171
	<i>Step 2 – Assigning Data Fields</i>	171
	<i>Step 3 – Start Editing your Flow</i>	172
	<i>Step 4 – Add Actions (and Data)</i>	172
	<i>Step 5 – Saving and Applying your Flow</i>	173
	<i>Step 6 – Formatting your Button</i>	173
	<i>Step 7 – Test your Button</i>	173
22.3	Editing Power BI Flows in Power Automate	174

23	POWER APPS FLOWS	Page
23.1	Our Example	175
23.2	Designing an Information Flow	176
23.3	Creating the Flow	177
	<i>Step 1 – Creating the Flow with a Trigger</i>	177
	<i>Step 2 – Creating Parameters with Good Names</i>	177
	<i>Step 3 – Getting the Number of Excel Films</i>	178
	<i>Step 4 – Adding the Film to Excel</i>	178
	<i>Step 5 – Returning Values to Power Apps</i>	179
23.4	Creating the App	180
	<i>Step 1 - Creating the App Framework</i>	180
	<i>Step 2 – Adding the Flow</i>	180
	<i>Step 3 – Calling the Flow</i>	181
23.5	Possible Problems	182

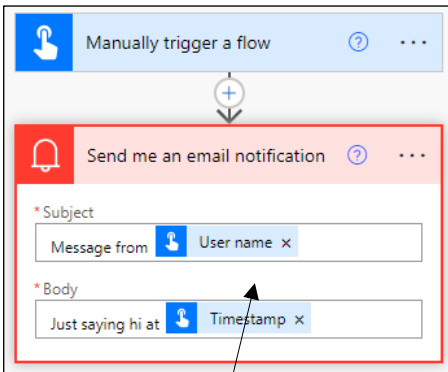
24	TEAMS	Page
24.1	Teams Triggers and Actions	183
24.2	Our Example – Listening for Keywords	184
24.3	Creating our Example Flow	185
	<i>Step 1 - Setting the Trigger</i>	185
	<i>Step 2 - Starting to Post our Message</i>	185
	<i>Step 3 - Getting the Keyword Message's Details</i>	186
	<i>Step 4 – Posting the Notification Message</i>	187
	<i>Step 5 – Testing your Flow</i>	187

25	PLANNER	Page
25.1	Triggers and Actions	188
25.2	Simple Example – Listing Tasks	189
25.3	Harder Example – Getting Assigned Users	190
	<i>Step 1 – Prepare the Way</i>	190
	<i>Step 2 – Create the Nested Loops</i>	191
	<i>Step 3 – Configure the Inner Loop over Users</i>	191
	<i>Step 4 – Add this Task and List of Users</i>	192
	<i>Step 5 – Show the Results</i>	192

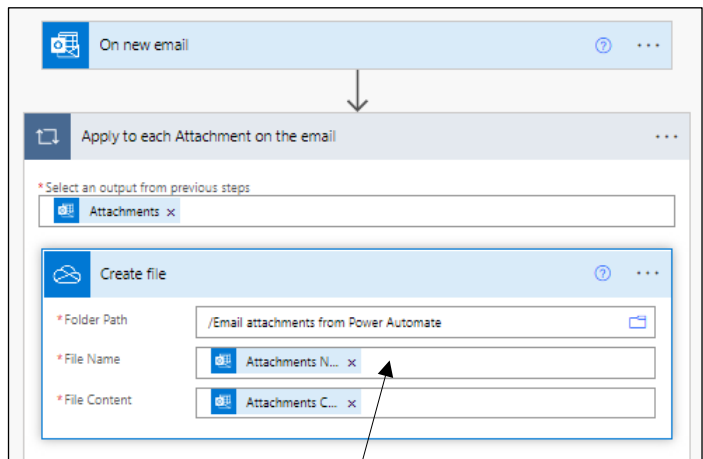
CHAPTER 1 - GETTING STARTED

1.1 What is Power Automate?

Power Automate (PA) used to be called Microsoft Flow (Microsoft renamed it in 2019). PA allows you to create flows (series of saved instructions) online:



A simple manual flow to send an email greeting to yourself.



A flow using a trigger (when you receive an email, PA will save its attachments to a specified folder in OneDrive).

Flows can connect to literally hundreds of cloud-based services – here is a small sample:



Just a few of the over 370 connectors that you can use to link to online services.



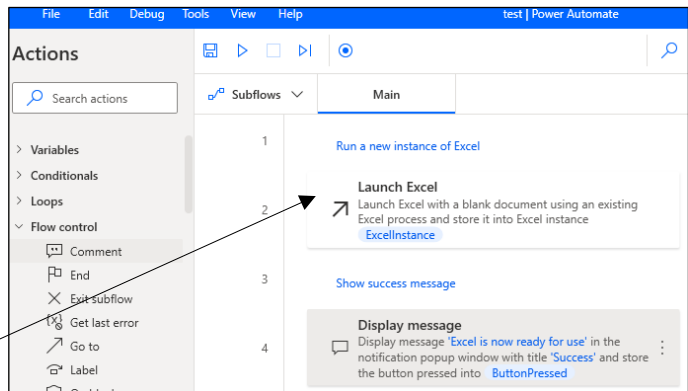
If you commit to using Power Automate, you are trusting your data, business processes and probably career to Microsoft and the Internet: if your web connection should happen to go down or Microsoft's servers fail, there won't be much that you can do!

1.2 Power Automate vs Power Automate Desktop

Microsoft (confusingly, if typically) market two software products whose names include **Power Automate**:


Software	Runs in	What it does	Typical use cases
<i>Power Automate</i>	The cloud	Automates a series (or <i>flow</i>) of instructions to run on Microsoft's servers, under your account.	Collating the results of an online survey, emailing notifications when someone posts a comment in Teams, capturing social media updates in an online database.
<i>Power Automate Desktop</i>	Your desktop	Automates a series (or <i>flow</i>) of instructions to manipulate data on your own computer.	Collating data in Excel workbooks, logging attachments sent in emails, submitting website forms, running backup routines.

Here's what a *Power Automate Desktop* flow looks like:



This flow starts an Excel application and then announces that it's ready for use.

Power Automate and Power Automate Desktop were written by different companies (Microsoft bought *SoftMotive*, authors of Power Automate Desktop, in May 2020) and are different products.



Confusingly, while Power Automate Desktop runs on your desktop it too stores its flows in the cloud (in your online Microsoft account). You can run Power Automate Desktop flows from Power Automate, but the converse isn't true.

1.3 Licensing Requirements

Most users of Power Automate will begin with an Office 365 licence. This allows you to do the following:

Capability	With an Office 365 licence you can ...
<i>Run flows</i>	... create and run automated, scheduled and button flows (that is, most of the flows you are likely to want to run).
<i>Use standard connectors</i>	Use any of the connectors described as <i>Standard</i> by Microsoft. These include Azure Active Directory, Dropbox, Excel online, GitHub, Gmail, Google apps, LinkedIn, Microsoft Forms, Office 365, Outlook, Pinterest, Power Apps and Power BI, Slack, SharePoint, Teams, WordPress and YouTube.
<i>2,000 platform requests per day</i>	During an initial transition period (lasting 6 months or more), you will be allowed up to 10,000 requests per day. The limit is applied on a rolling 24-hour basis. If you exceed your limit you will need to go to another plan (see below).

Here are some of the main things NOT included in this licence:

What	Notes
<i>Premium connectors</i>	To connect to connectors designated as premium by Microsoft, you will need any standalone plan (that is, anything except an Office 365 licence). Premium connectors include ArcGIS, most Azure services, most Dynamics service (for which you can buy a specialist licence), Map Pro, Microsoft Dataverse, MySQL, Oracle, Ordnance Survey Places, Salesforce, SAP, Stripe, Word Online and Zoom Meetings.
<i>Business process flows</i>	For example, you can create a business process flow to ensure that everyone in an organisation follows the same steps every time they handle a customer request. This courseware doesn't consider business process flows, and neither (Wise Owl suspect) will most customers.
<i>Custom connectors</i>	If you can't find a connector for your service, you can create your own with a custom API wrapper.
<i>On premises gateways</i>	These let you build a bridge between a Microsoft cloud service such as Power Automate and a data source in your organisation (such as a SQL Server database).
<i>Robotic process automation</i>	This allows you to build a flow to mimic the keyboard actions and mouse movements of a human user (for example, to fill in a website form), usually using Power Automate Desktop.
<i>AI builder capacity</i>	You can use AI to build and train AI models to make predictions based on your data. The AI builder has its own licensing rules!

To use premium or custom connectors or on premises gateways you will probably need to buy one or more separate per-flow or per-user Power Automate licence plans.



If there's not enough detail in this section, you can always search for the phrase "Microsoft Power Apps, Microsoft Power Automate and Microsoft Power Virtual Agents Licensing Guide" and download the 34-page PDF this leads to.


CHAPTER 2 - WORKING WITH FLOWS

2.1 Getting Started

This section shows how to access Power Automate, choose the environment in which to work and see flows you've created.

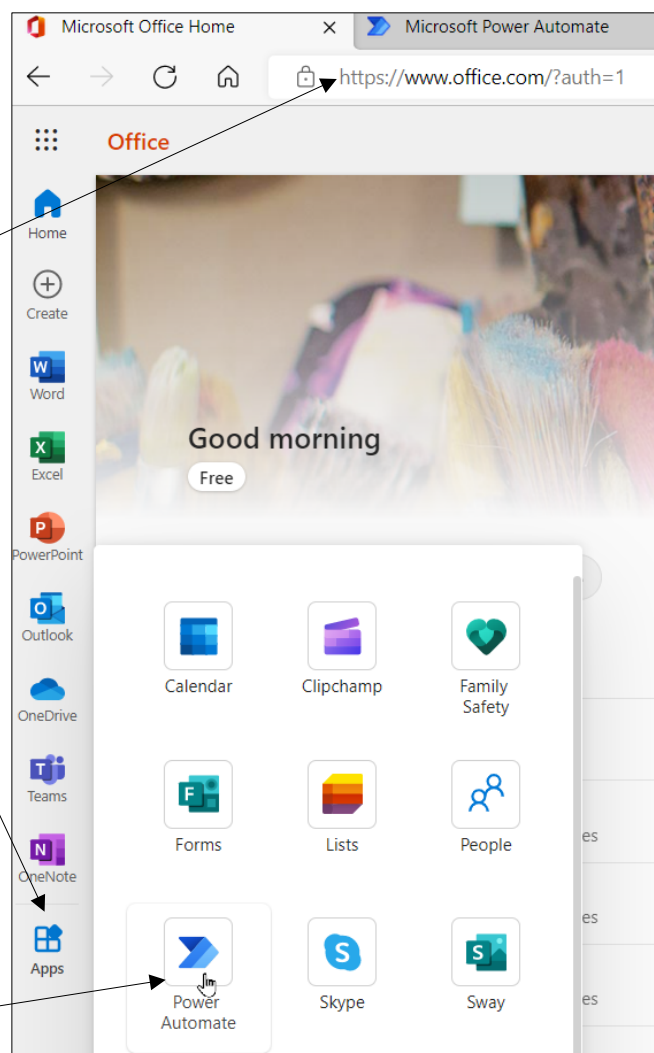
Logging on to Power Automate

If you are using an Office 365 licence to access Power Automate, one reliable way to log in is via the Office 365 home page:

a) Type in the URL **office.com** (it will morph into this longer address when you press ).

b) Choose to run an app (Power Automate isn't listed on the left-hand sidebar).

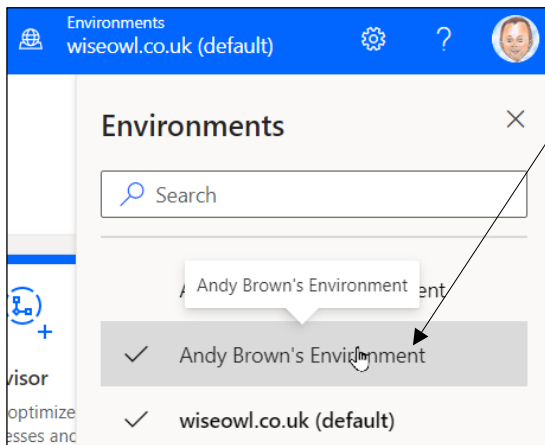
c) Choose to run Power Automate: it will open in a new window.



Alternatively, just visiting the website **powerautomate.com** also seems to work, although again after the website loads a longer URL may appear in your browser's address bar.

Choosing an Environment

You can think of *environments* as different folders in your little bit of the Microsoft cloud. Here's how to change your environment:



Often your organisation will have one environment for development and one production environment. Wise Owl have a shared company environment, plus a private one for each trainer.

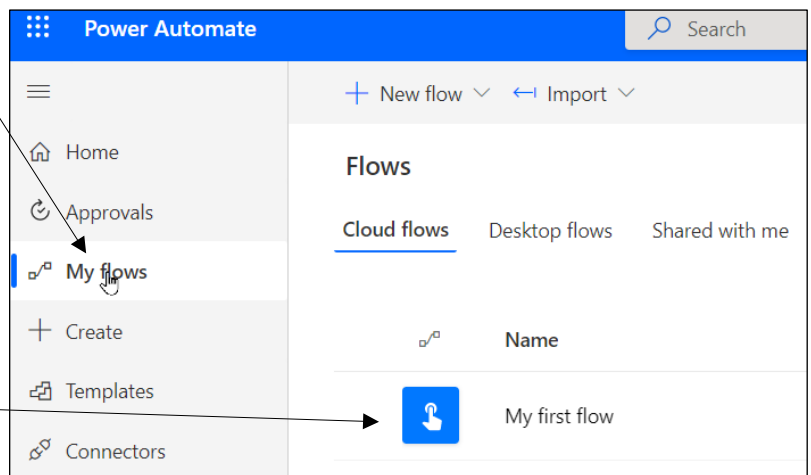


Each environment sits on its own tenant (think of this as a space you've leased from Microsoft on some central server). To move a flow that you've created from environment (tenant) to another is a non-trivial process: you have to export it from the first environment and then import it into the second.

Listing Flows

Once you've chosen your environment, you can see the flows it contains:

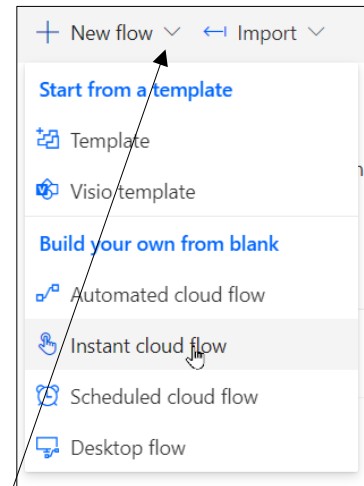
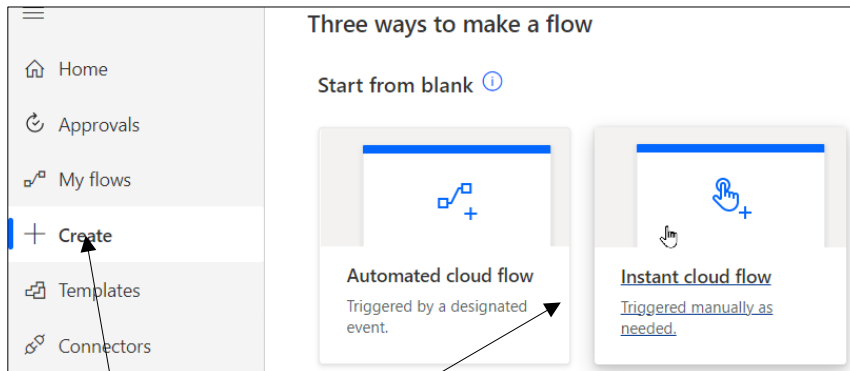
Click on this menu option on the left-hand side ...



... to see the cloud flows or desktop flows that you've created (or the flows colleagues have shared with you).

2.2 Creating Flows

Follow these steps to create a new flow:



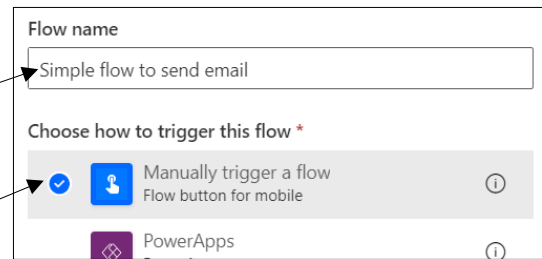
a) Click on this menu to create a new flow.

b) Choose the type of flow to create (see notes below for what each means).

Alternatively, click on the arrow next to the **New flow** button when listing your flows, and choose which one you want to create.

c) Give your flow a name. Avoid punctuation: although you can create flows whose names include characters like `[]`, they will crash when you try to run them!

d) For the example in this chapter the only way to run our flow will be manually.



Types of Flow

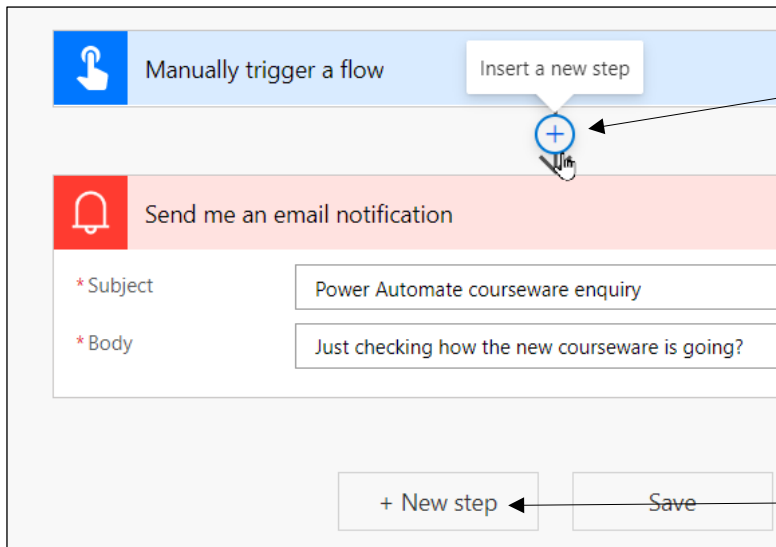
PA lists 5 types of flow, but the first two are the ones which most people will choose:

Type of flow	Description
<i>Automated cloud flow</i>	Any flow which begins when something happens. Triggers can include comments being added to Teams discussions, emails being received or items being added to SharePoint lists (to choose just 3 examples).
<i>Instant cloud flow</i>	When you're testing a flow (or learning PA) this is the best flow type to choose, since you can test it in isolation without having to trigger an event first.
<i>Scheduled cloud flow</i>	When you create a scheduled flow you'll be asked to say when it should run (every week at 10am, for example, or every 10 minutes throughout the day).
<i>Desktop flow</i>	This will launch Power Automate Desktop, the subject of a different Wise Owl training course (and manual!).
<i>Process advisor</i>	Business process flows are a separate topic which won't be of interest to most PA users, and are not covered in this courseware.

*The easiest thing to do, Wise Owl have found, is to create either an automated or instant cloud flow, but then click on the **Skip** button to miss out the stage where you choose the initial trigger. This will bring up a blank flow, and you can then choose which trigger you want to choose more easily.*

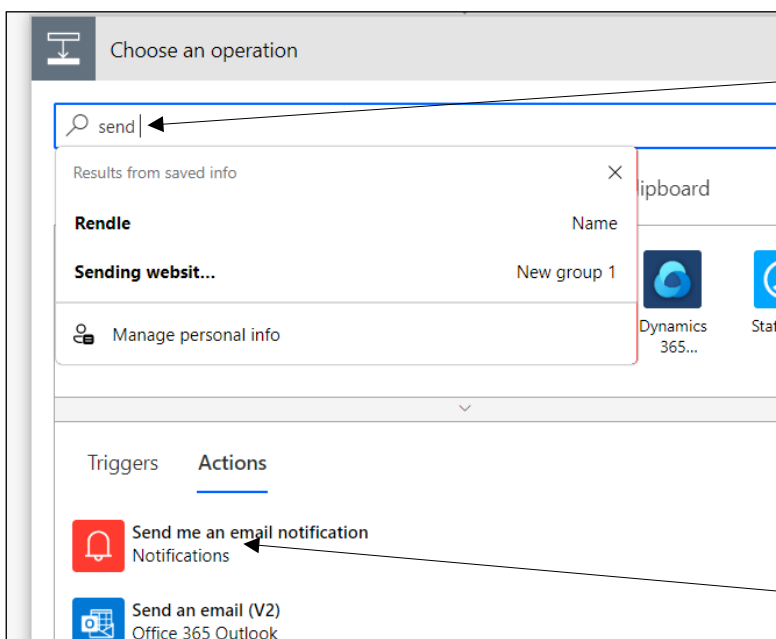
Adding Steps

You can add actions to your flow as follows:



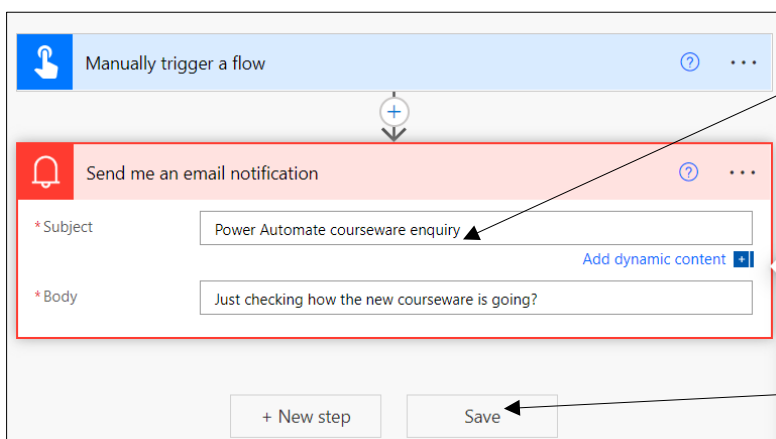
a) To add a new step either let your mouse button linger over the arrow joining two existing steps together, and click on the **+** sign which appears as shown here ...

... or click on this button to add a new step to the bottom of your flow.



c) Type in what you want to do in part (this is by far the easiest way to choose what action you want to add).

d) Choose the action which best describes what you're trying to do.



e) You can now configure the action (here to say what the subject and body of the email you're sending will be).

f) Click on the **Save** button to avoid losing the change that you've just made.

Adding Dynamic Content

When adding a step, PA will always offer up any information that it knows about for inclusion – this is called *dynamic content*. To add this to any action:

a) Click where you want to insert something.

b) Click on what you want to add (here it's the current date). PA will add this in at your cursor position:

Finishing your Flow

When you've finished working with a flow, here are two ways to leave it:

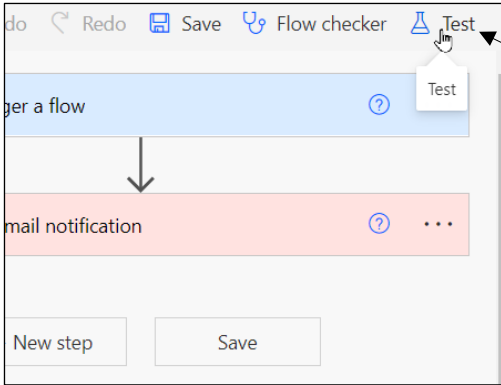
Click on this button to return to the previous screen ...

... or click on **My flows** to list out the flows that you have created (including the one you've just added and saved).

2.3 Testing and Running Flows

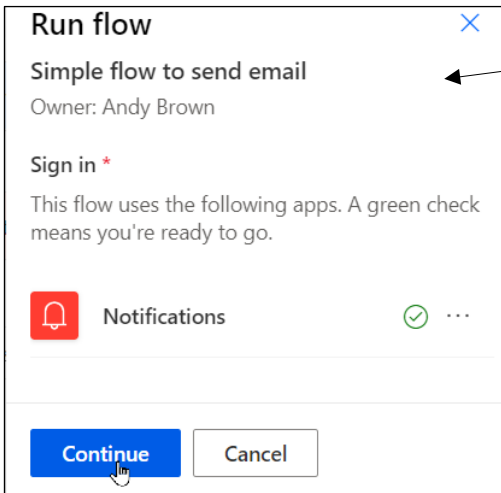
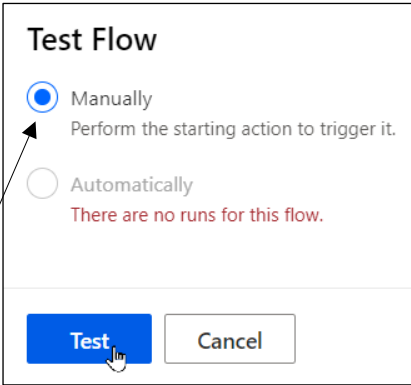
Testing Flows

One way to test a flow is to do whatever triggers it (whether this be sending an email, adding a comment or whatever). However, you can also test and run instant flows as follows:



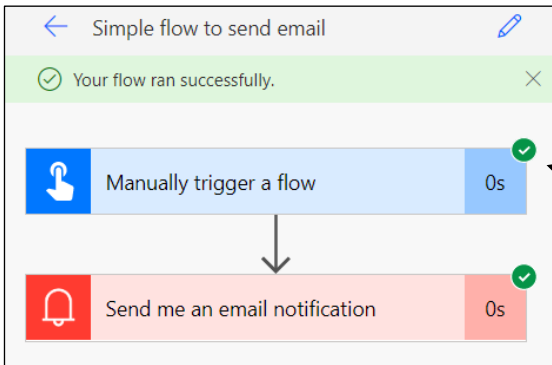
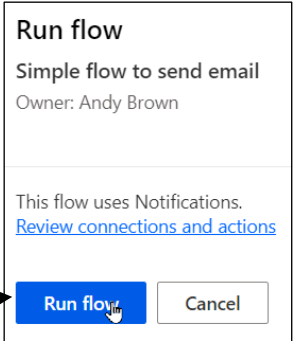
a) Click on this button to test the flow you're editing.

b) Choose to test your flow (see overleaf under re-testing flows for what **Automatically** means).

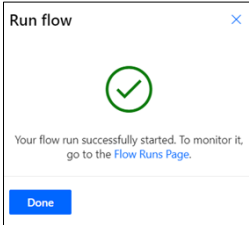


c) If your flow is using any connections to other services, you'll be asked to check that these are set up OK (here the green tick means we're good to go).

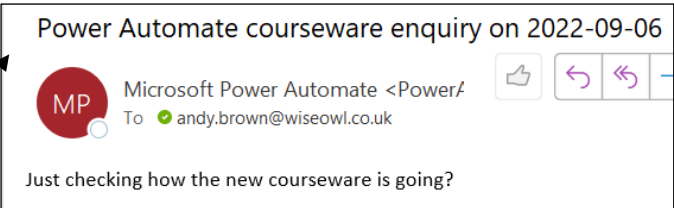
d) You can now choose to run this flow.



e) When you choose to confirm that you want to run the flow as below, you'll see green ticks appearing next to each completed action:

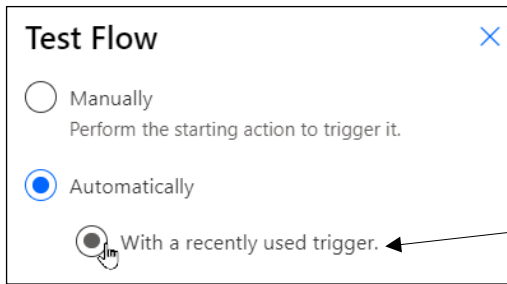


f) The result of running this flow: after a short while this email will appear in your inbox, together with the delivery date we added as dynamic content.



Re-testing Flows

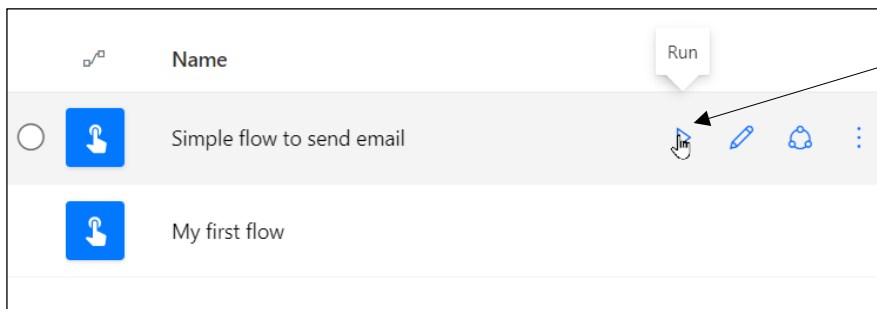
Once you've run a flow once, there's a different way to test it:



When you click on the button to test your flow you'll see a list of all the previous occasions on which it's run. You can choose any of these to re-run the flow using the same starting conditions.

Running Flows

Another way to run a flow is after you've saved it:

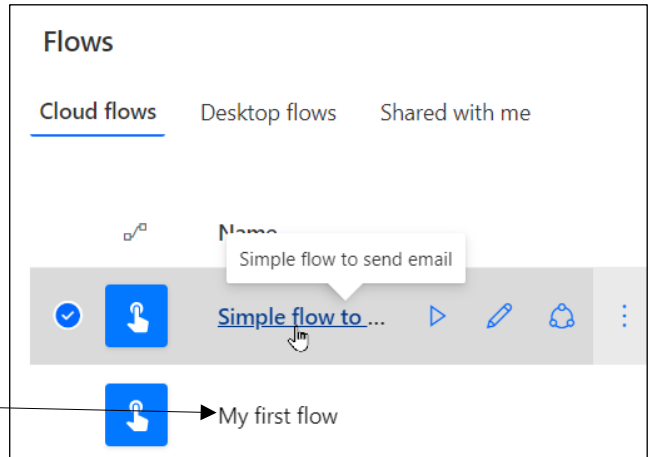


Click on this play button to run a flow from your list.

2.4 Viewing Flows

Click on the name of a flow to view it:

You can click on the pencil symbol to go directly to editing the flow, but if you click on the name of the flow you'll see the results below.



Here's what you then see:

Details about this flow (who created it and when, and what type of flow it is).

A list of the connections used by this flow.

Flows > Simple flow to send email

Details Edit

Flow	Simple flow to send email	Status	On
Owner	Andy Brown	Created	Sep 6, 12:06 PM
		Modified	Sep 6, 01:22 PM
		Type	Instant
		Plan	The user who runs the flow

Connections Edit

Notifications Notifications

28-day run history All runs

Start	Duration	Status
Sep 6, 01:43 PM (2 min ago)	11 ms	Succeeded
Sep 6, 01:28 PM (18 min ago)	45 ms	Test succeeded

Owners Edit

Want to share your flow with others? Upgrade now for more features and faster performance. Compare plans

Run only users Edit

Want to share your flow with others? Upgrade now for more features and faster performance. Compare plans

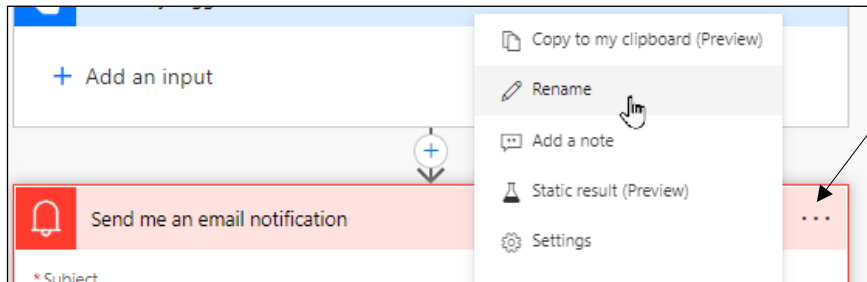
A history of when the flow has been run (twice in the last 20 minutes for this flow, both times being successful).

2.5 Improving Flow Readability

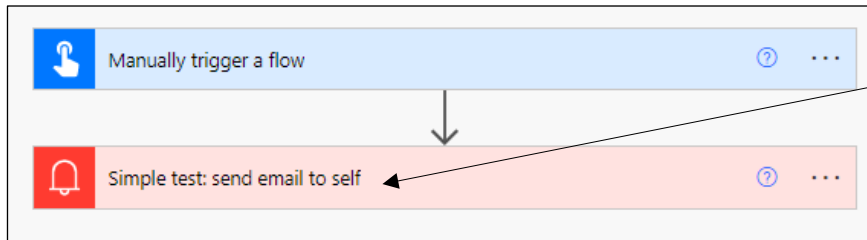
There are three ways to make your flows easier to read: renaming actions, adding *notes* and adding *comments*.

Renaming Actions

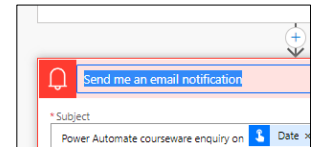
Renaming actions makes it easier to see what your flow is doing:



a) Click on these three dots in an action's title bar and choose the **Rename** menu option, as shown here.



b) Overtyping what's in the action's name:



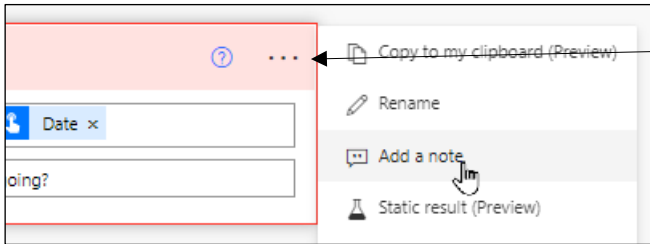
to get a more meaningful name such as this.



The downside of this? Many expressions that you create in PA refer to actions by name. The longer your action names are, the longer (and more cumbersome) your expression formulae will be!

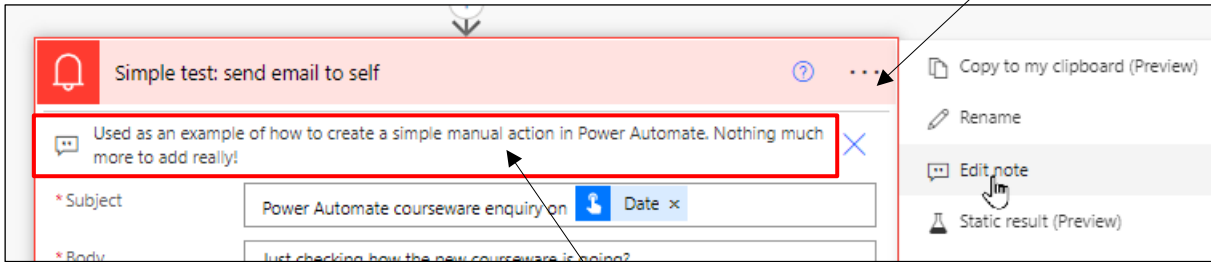
Adding Notes

Notes explain what actions are doing:



Click on the 3 dots in an action's title bar to add a note to it, choosing this menu option.

Once you've created a note, you can click on the same 3 dots and choose to edit it, as shown here.



There doesn't seem to be any way to add a carriage return within a note, but the text wraps round when what you type in takes up more than one line (as here).

Adding Comments

Different viewers of your flows can add *comments* to explain (or ask about!) their use:

You can click on this button to show any comments for a flow.

A number like this against an action shows that it has a comment against it.

When you click on an action, PA highlights (it seems) the first comment for it.

To add a comment to a flow:

a) Click on this button to work with comments.

b) Click on this button to create a new comment.

c) Type in the text of your comment and either click on this symbol to post it or press **Ctrl** + **↵**.



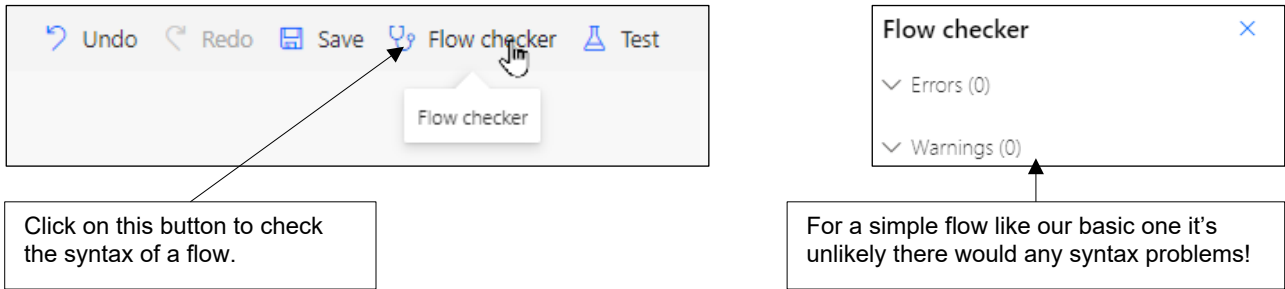
Because comments aren't permanently visible, you should perhaps use them to discuss the contents and purpose of a flow rather than to document it.

2.6 Working with Flows

This section shows some other ways in which you can work with flows.

Checking Flows

The **Flow checker** button at the top right of PA allows you to see if a flow makes syntactical sense:



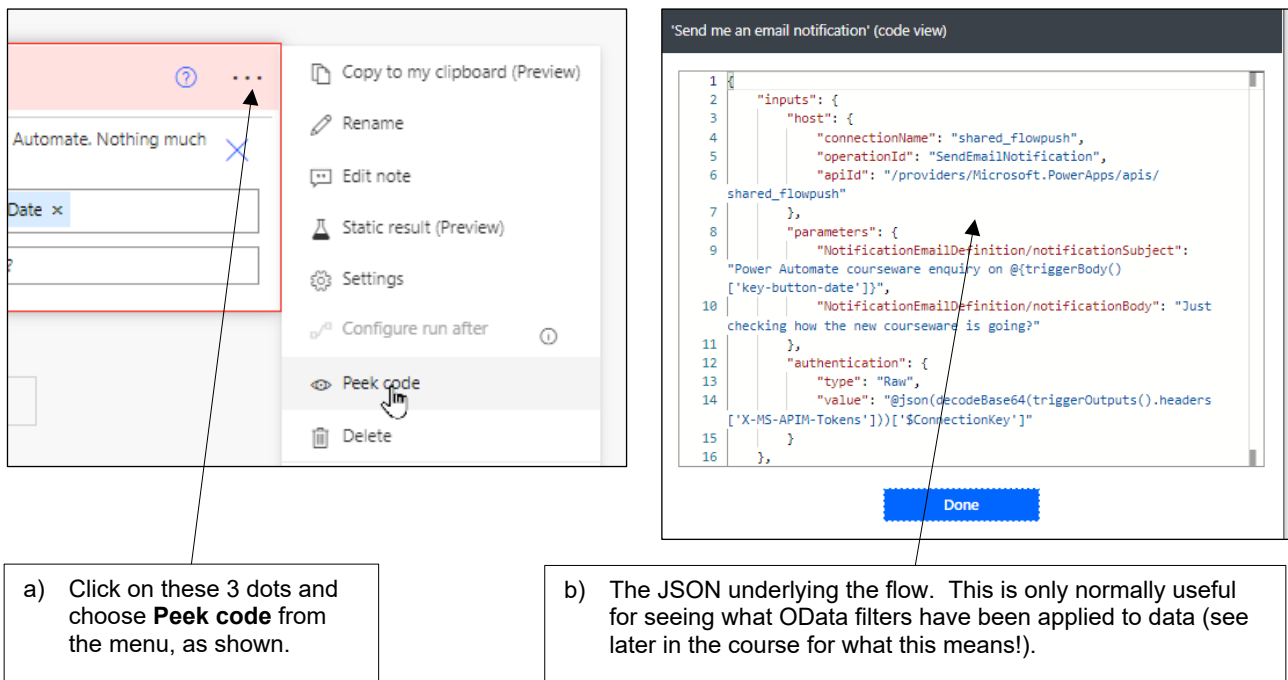
The image shows the Power Automate interface with the 'Flow checker' button highlighted in the top right corner. A callout box points to this button with the text: "Click on this button to check the syntax of a flow." To the right, the 'Flow checker' dialog box is open, showing 'Errors (0)' and 'Warnings (0)'. A callout box points to the dialog with the text: "For a simple flow like our basic one it's unlikely there would any syntax problems!"



When you run a flow, PA automatically invokes the flow checker anyway, so checking flows manually probably isn't that important.

Peeking at Flow Syntax

If you want to see what an action in your flow is really doing, *peek* at its code:



The image shows the 'Peek code' menu option in the Power Automate interface. A callout box points to the three dots menu with the text: "a) Click on these 3 dots and choose **Peek code** from the menu, as shown." To the right, the 'Send me an email notification' (code view) is shown, displaying the underlying JSON code. A callout box points to the JSON code with the text: "b) The JSON underlying the flow. This is only normally useful for seeing what OData filters have been applied to data (see later in the course for what this means!)."

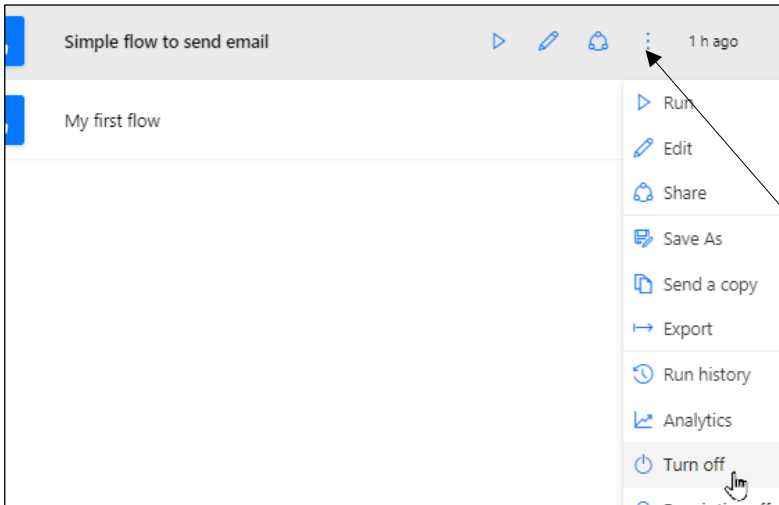
```

1 {
2   "inputs": {
3     "host": {
4       "connectionName": "shared_flowpush",
5       "operationId": "SendEmailNotification",
6       "apiId": "/providers/Microsoft.PowerApps/apis/
shared_flowpush"
7     },
8     "parameters": {
9       "NotificationEmailDefinition/notificationSubject":
"Power Automate courseware enquiry on @{triggerBody()
['key-button-date']}",
10      "NotificationEmailDefinition/notificationBody": "Just
checking how the new courseware is going?"
11    },
12    "authentication": {
13      "type": "Raw",
14      "value": "@json(decodeBase64(triggerOutputs().headers
['X-MS-APIM-Tokens']))['$ConnectionKey']"
15    }
16  },

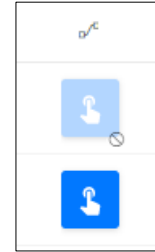
```

Disabling Flows (but not Actions)

If you don't want a flow to run, but want to keep it in your list, turn it off:



Click on the 3 dots next to a flow's name and choose **Turn off**. Disabled flows appear with a lighter background:



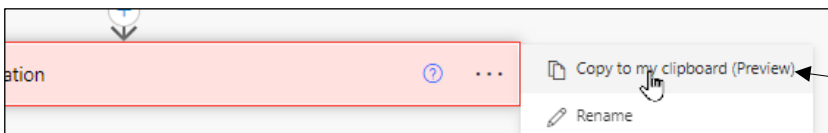
To turn a flow back on again choose the same menu option (which will now say **Turn on**).



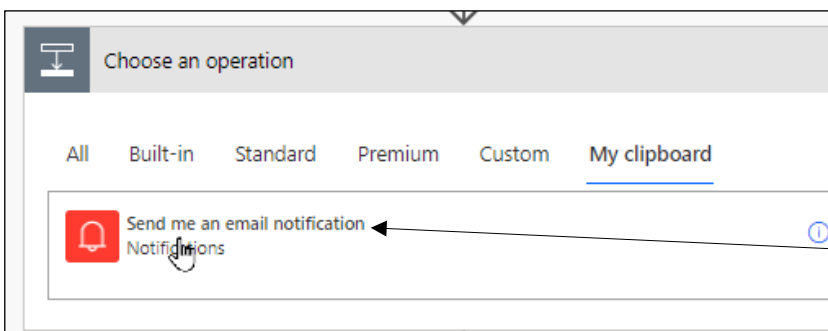
There is no way to disable a single action within a PA flow (more's the pity); only complicated workarounds.

Copying Actions

If you have an action which you may want to repeat, copy it to the PA clipboard:



a) While viewing an action, click on the 3 dots to the right of its name and choose to copy it to your clipboard.



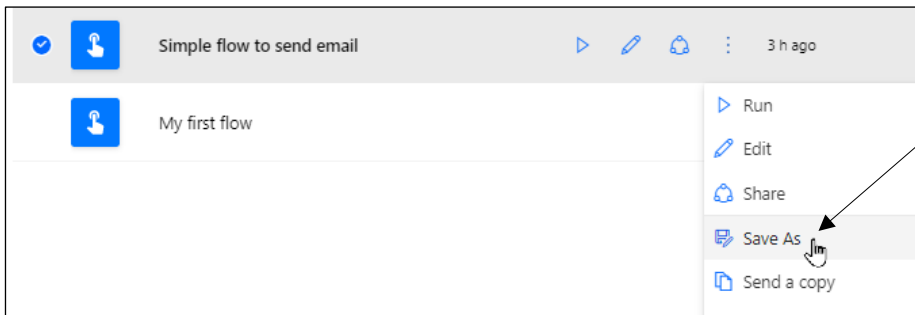
b) When creating another action, you can then retrieve the details of this action from your clipboard for further editing.



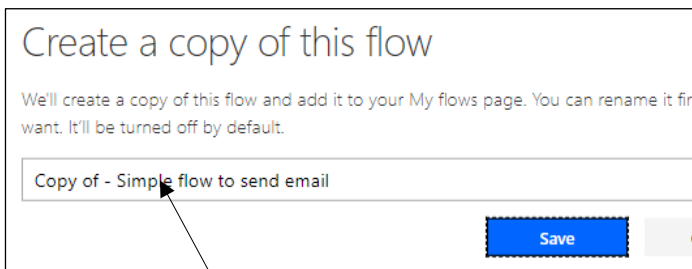
Bug alert! When you copy actions in PA it's possible to create objects (such as variables) with duplicate names. PA then not only prevents you saving your flow, but also makes it hard to edit or even delete the offending actions!

Copying Flows

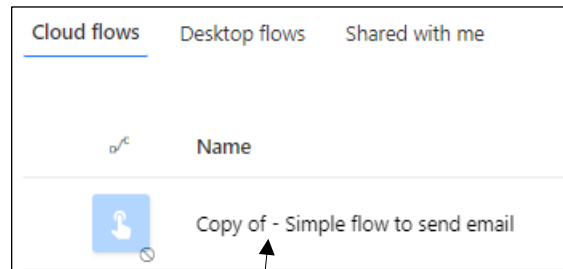
To copy a flow, choose to save it as another name:



a) Click on the 3 dots to the right of a flow's name and choose to save it as another name.



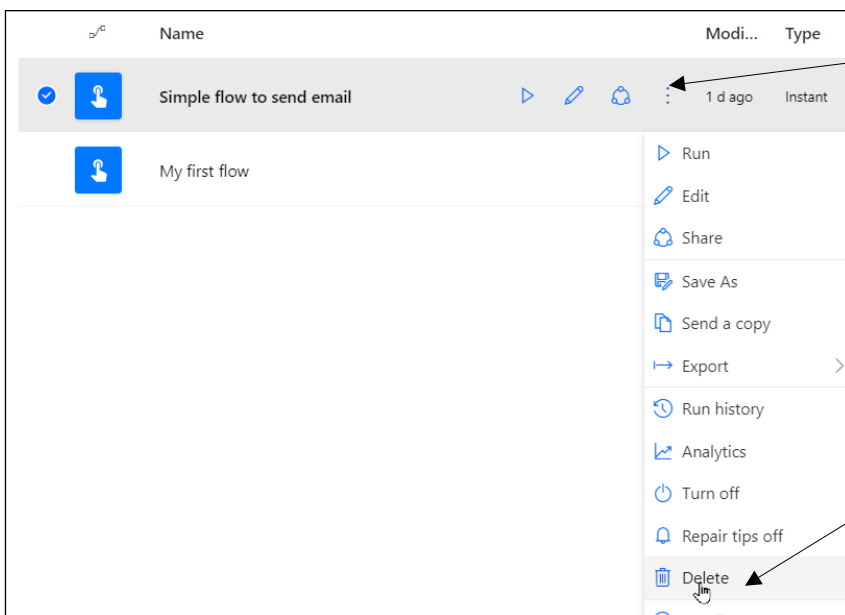
b) Type in a new name for your flow, then choose to save this.



c) PA creates the copy of your original flow, and sensibly ensures it is turned off by default.

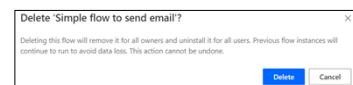
Deleting Flows

Sadly you have to delete flows one at a time (there is no way to select more than one flow at the same time):



































a) Click on the 3 dots to the right of a flow's name.

b) Choose this option from the menu which appears to delete this flow – you'll be asked to confirm this:



What we do!

		Basic training	Advanced training	Systems / consultancy
Office	Microsoft Excel			
	VBA macros			
	Office Scripts			
	Microsoft Access			
Power BI, etc	Power BI and DAX			
	Power Apps			
	Power Automate (both)			
SQL Server	SQL			
	Reporting Services			
	Report Builder			
	Integration Services			
	Analysis Services			
Coding	Visual C#			
	VB programming			
	MySQL			
	Python	