Lab 6. Task overdue

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Learning objective: Controls, manipulation Excel, conditions, Date & time, expressions

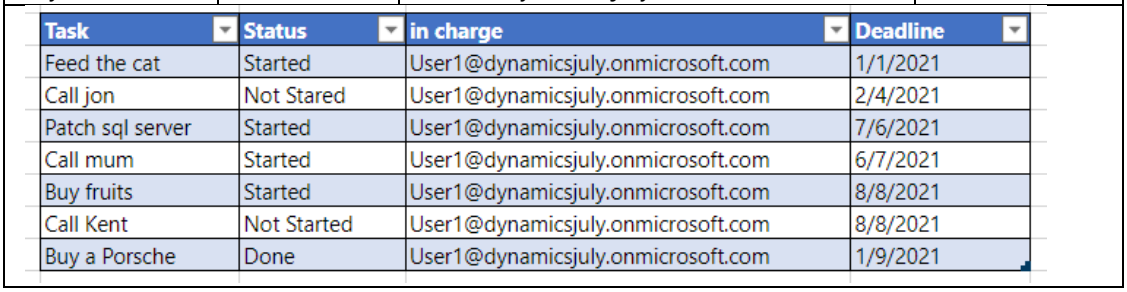
Duration: 20 minutes

Scenario: We have an Excel document with a set of tasks, and some of these tasks are overdue. You will create a Flow that will find all overdue tasks and send a report of these tasks.

Tasks:

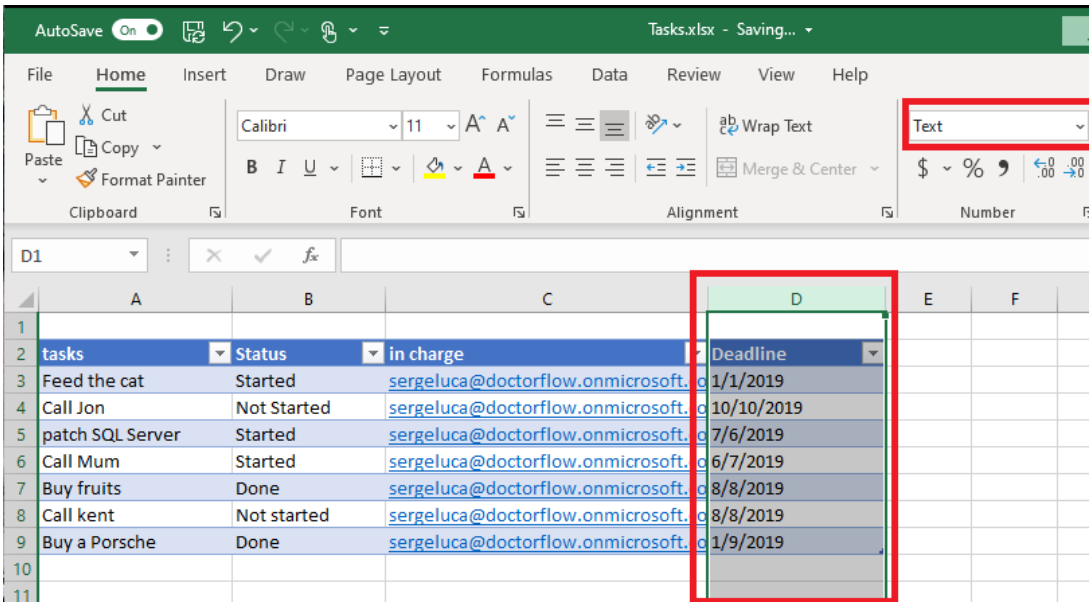
1. Create a new Excel file that looks like this in your OneDrive for Business (use the same columns). Before adding data in the Deadline column, ensure it is in **Text** format (otherwise, your flows will crash!). Create a table, and replace the existing e-mails with your e-mail.

Task	Status	in charge	Deadline
Feed the cat	Started	User1@dynamicsjuly.onmicrosoft.com	1/1/2021
Call jon	Not Stared	User1@dynamicsjuly.onmicrosoft.com	2/4/2021
Patch sql server	Started	User1@dynamicsjuly.onmicrosoft.com	7/6/2021
Call mum	Started	User1@dynamicsjuly.onmicrosoft.com	6/7/2021
Buy fruits	Started	User1@dynamicsjuly.onmicrosoft.com	8/8/2021
Call Kent	Not Started	User1@dynamicsjuly.onmicrosoft.com	8/8/2021
Buy a Porsche	Done	User1@dynamicsjuly.onmicrosoft.com	1/9/2021

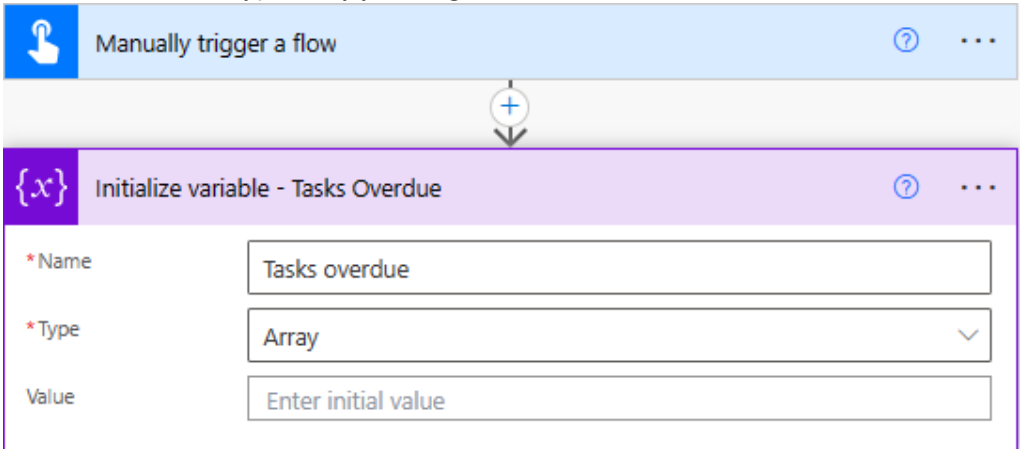


Task	Status	in charge	Deadline
Feed the cat	Started	User1@dynamicsjuly.onmicrosoft.com	1/1/2021
Call jon	Not Stared	User1@dynamicsjuly.onmicrosoft.com	2/4/2021
Patch sql server	Started	User1@dynamicsjuly.onmicrosoft.com	7/6/2021
Call mum	Started	User1@dynamicsjuly.onmicrosoft.com	6/7/2021
Buy fruits	Started	User1@dynamicsjuly.onmicrosoft.com	8/8/2021
Call Kent	Not Started	User1@dynamicsjuly.onmicrosoft.com	8/8/2021
Buy a Porsche	Done	User1@dynamicsjuly.onmicrosoft.com	1/9/2021

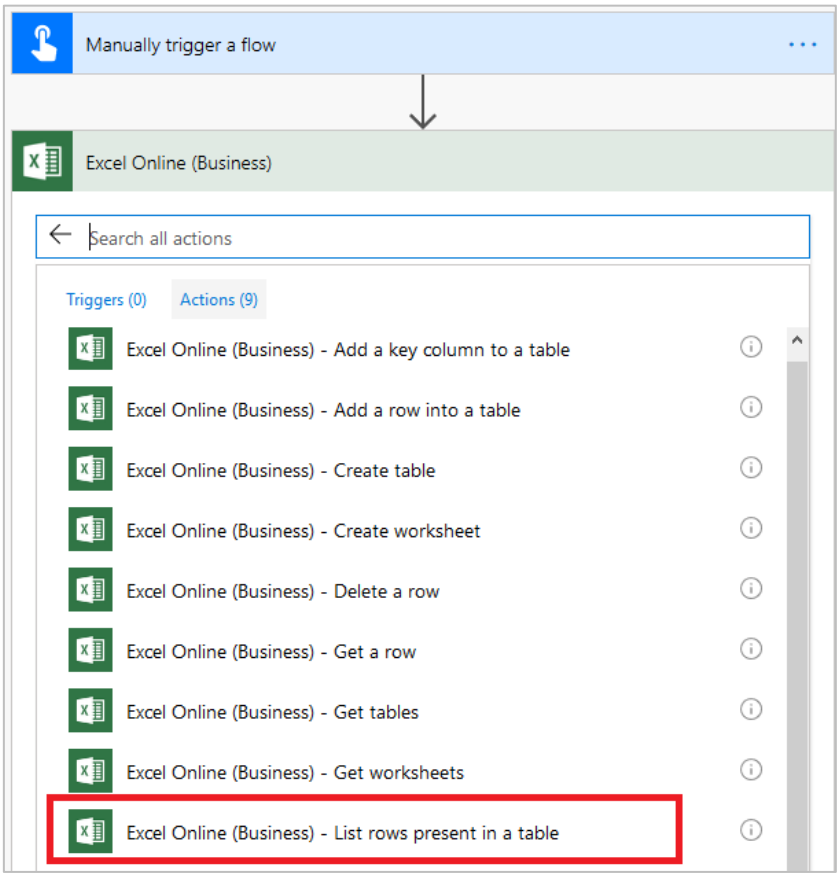
2. If you already have existing data, change the format to Text :



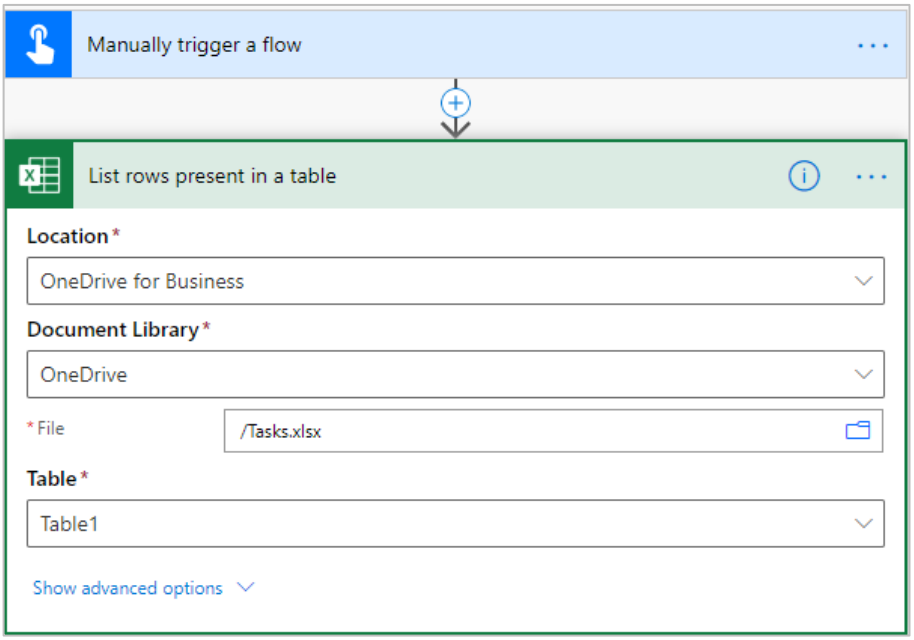
3. Name it **Tasks.xlsx**
4. Change the value of the **in-charge column** to your e-mail address and adjust some deadline value.
5. We want to write a Flow that will loop through all tasks, and that will check if the task is overdue. To do so, **create a new Instant cloud flow** and use a **Manually trigger a flow** as a trigger**.** Name it **my Overdue Tasks.**
6. Define a variable of type Array y adding **an Inialize variable** action as illustrated hereafter:



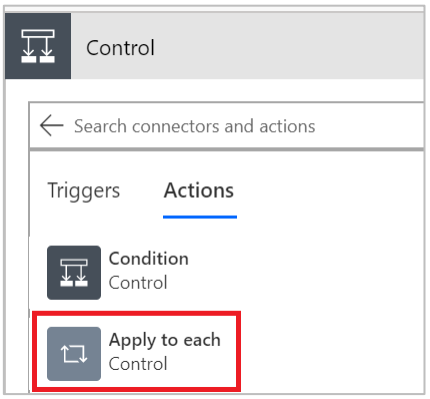
7. The Flow needs to connect to the **Tasks.xlsx** file, so add an **Excel Online (Business) – List rows present in a table** action (Not OneDrive !!!) as illustrated below:



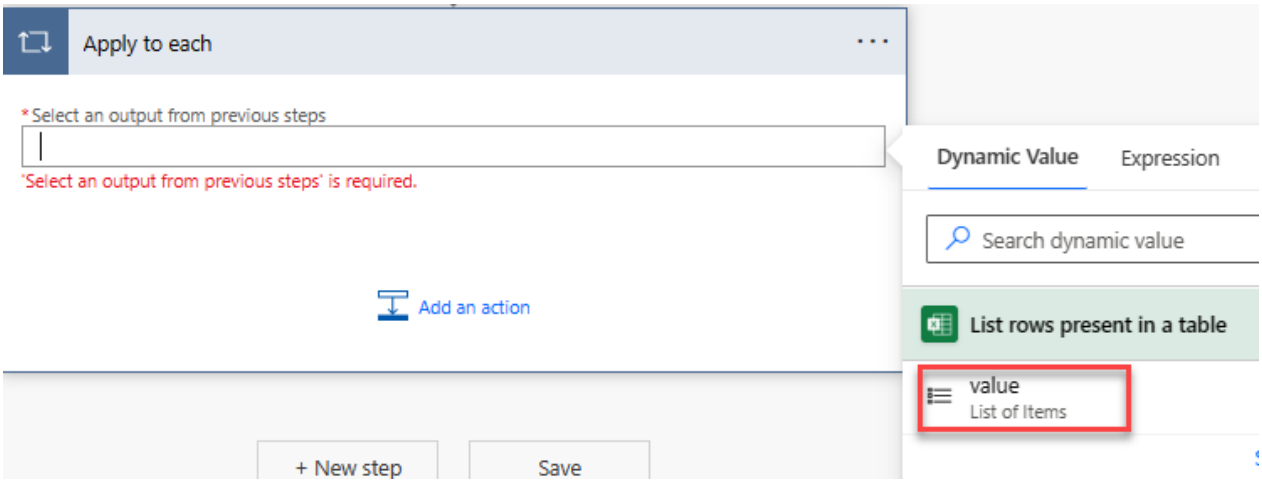
8. Set the action properties, as illustrated in the following picture:

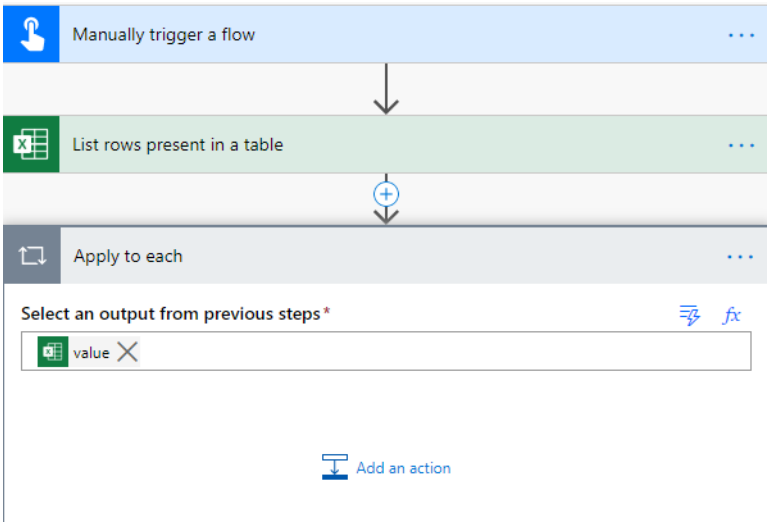


9. Let's loop through all tasks, so we need to add an **Apply to each**:

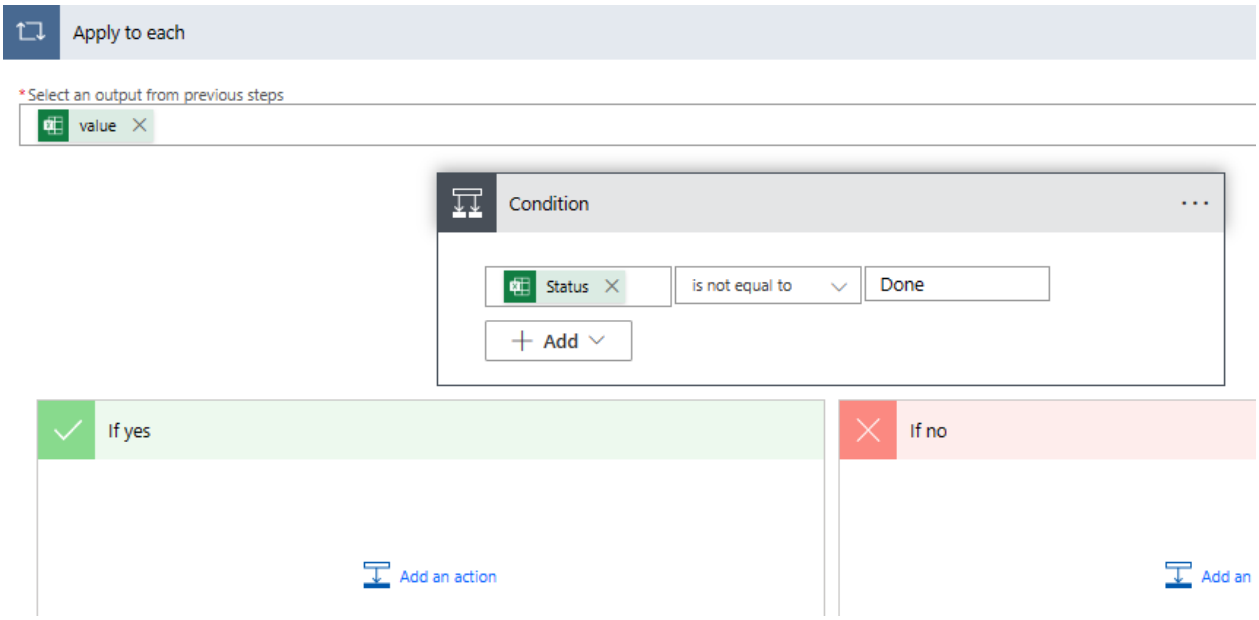


10. Select the add a **Dynamic value** in the **Apply to each** action:





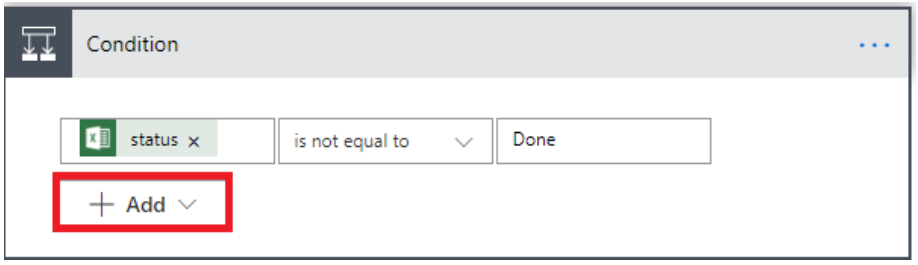
11. Add a **Condition** to filter the task where **Status** is not equal to **Done:**



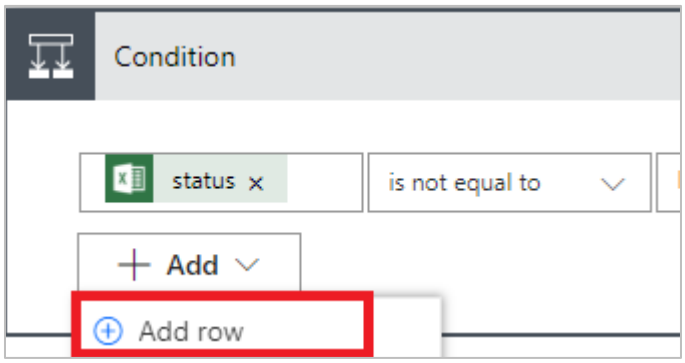
Make sure the operator used is **is not equal**.

12. Add a new sub condition that will check if the task is overdue:

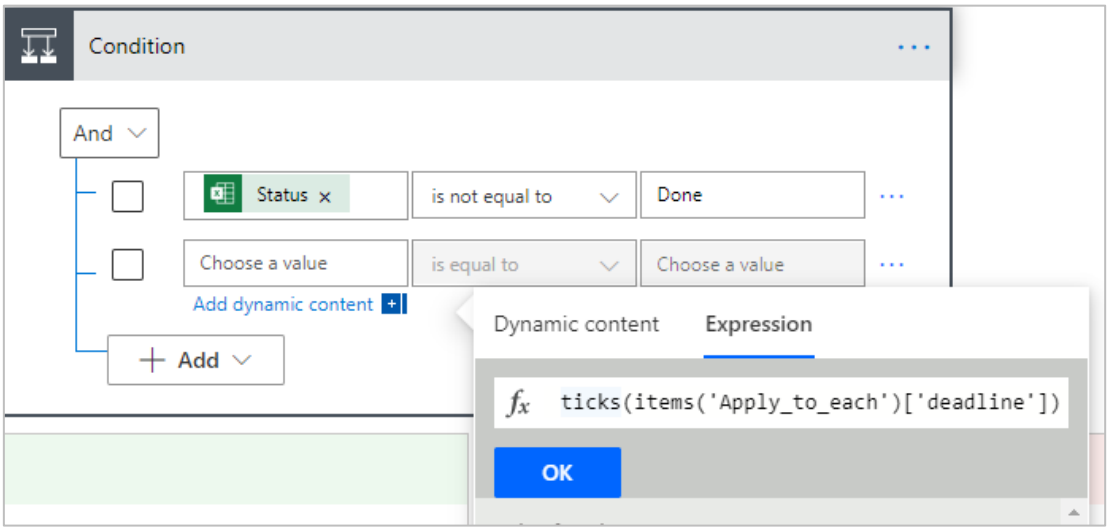
a) Click Add:



b) Select Add row:

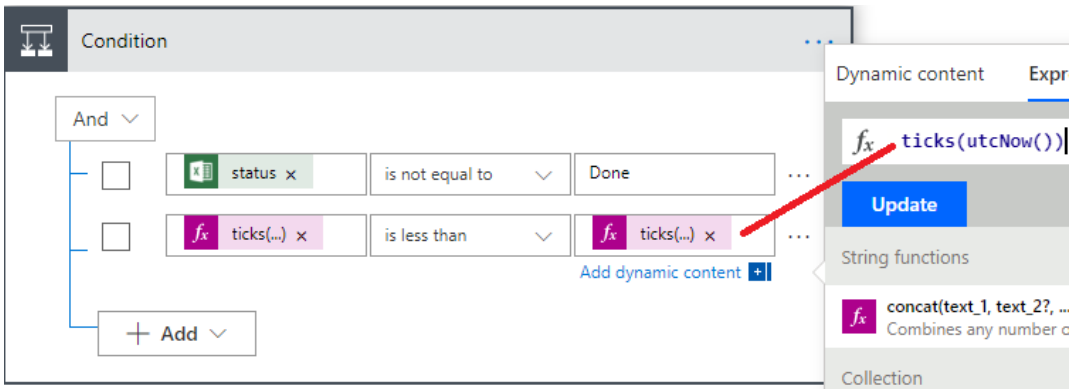


c) In "Choose a value", type the expression (**ticks(),** and In the parentheses, grab the dynamic value for Deadline and click Ok:



Since Deadline is a timestamp and has a string format, the **ticks** expression returns the number of ticks (100 nanosecond intervals) since 1st January 1601. By using ticks, we can compare two different timestamp values.

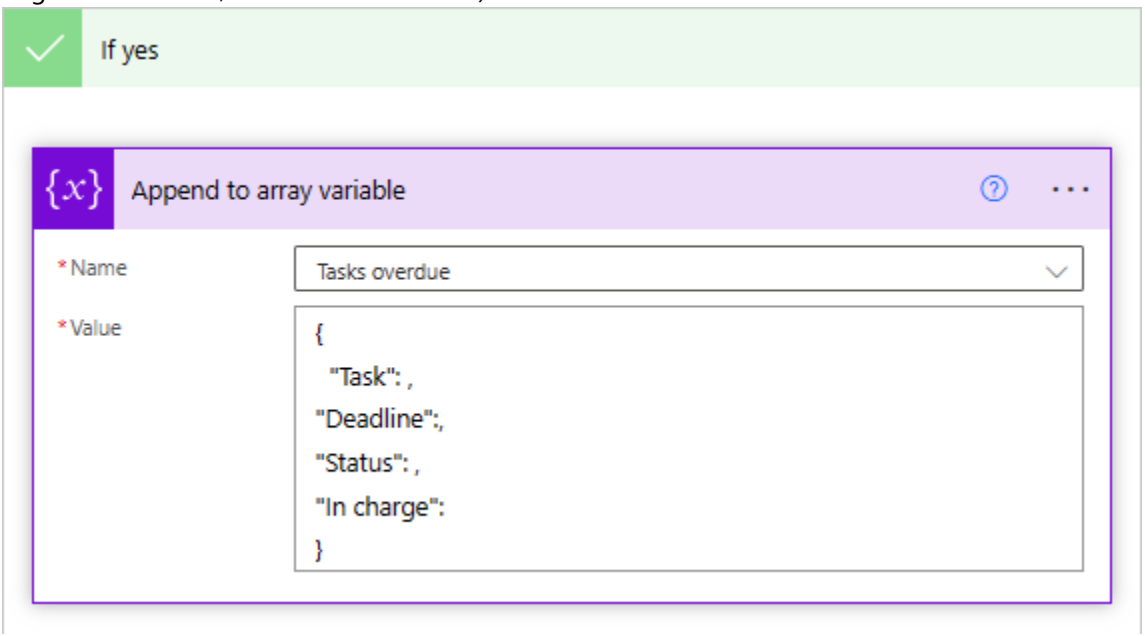
d) Select the operator is less than
e) Type the following expression (and click Ok):



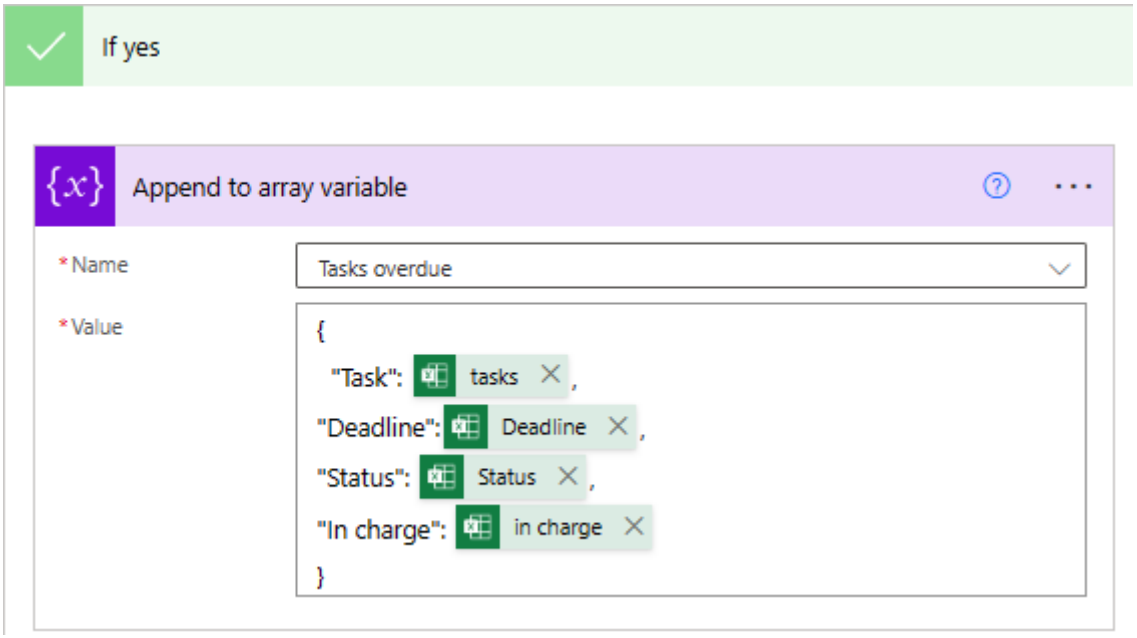
13. In the **If yes branch**, add a new **condition** where we will check if the due date is overdue:

14. Rename the condition to **Check if overdue** to provide your Flow with more clarity:

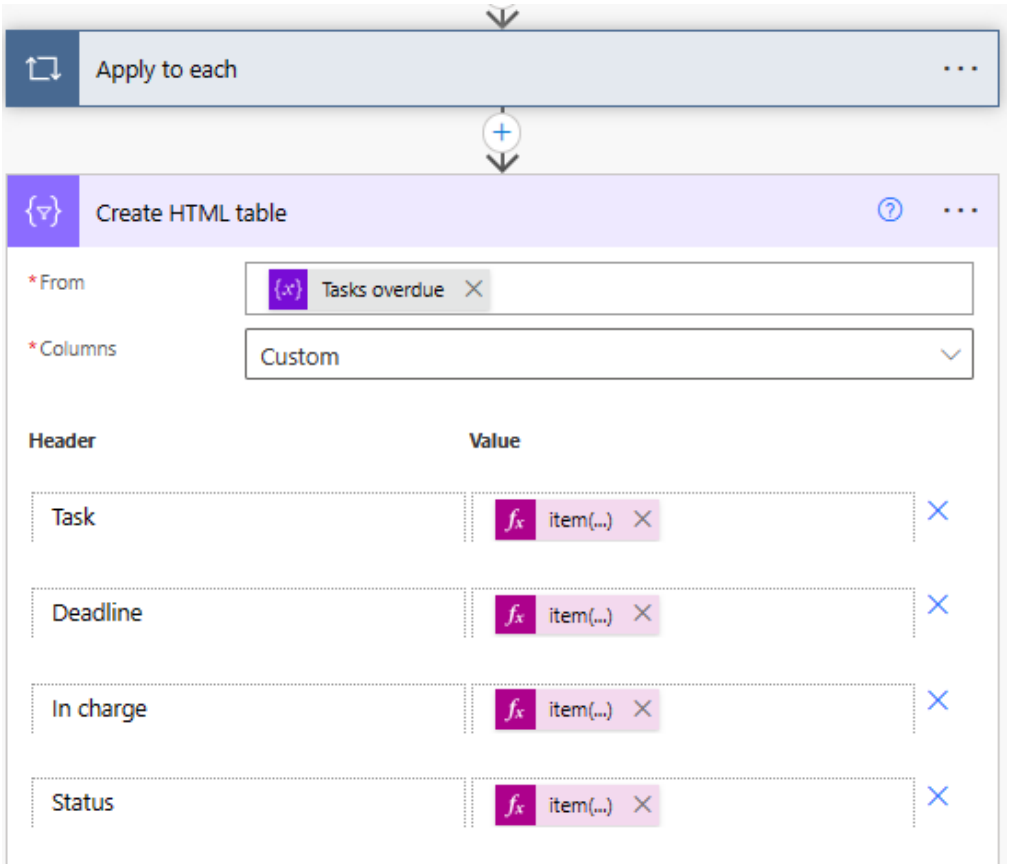
15. In the If yes branch, add an **Append to array variable** action with the following JSON text (don't forget the commas, where it makes sense):



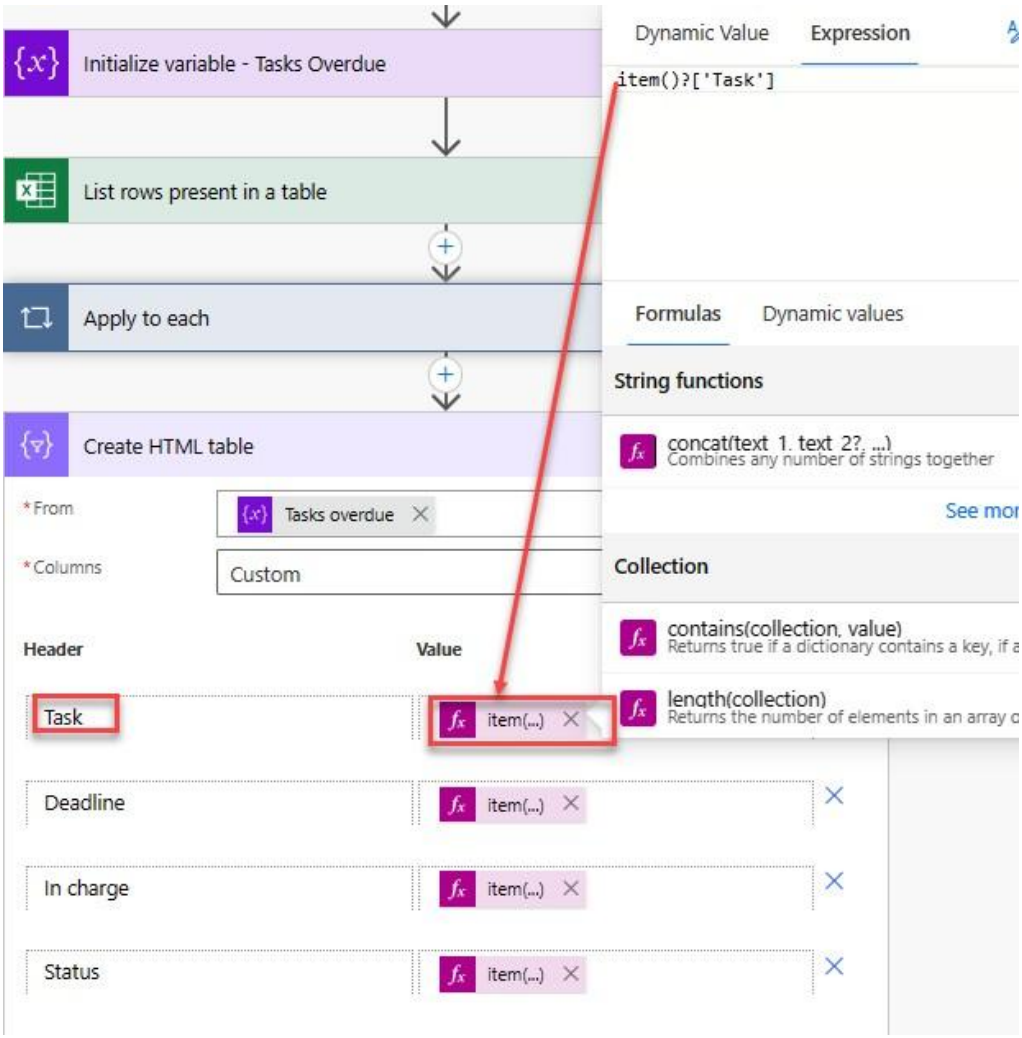
16. Add the dynamic value of **tasks**, **Deadline** , **Status** and **In charge** into this action:



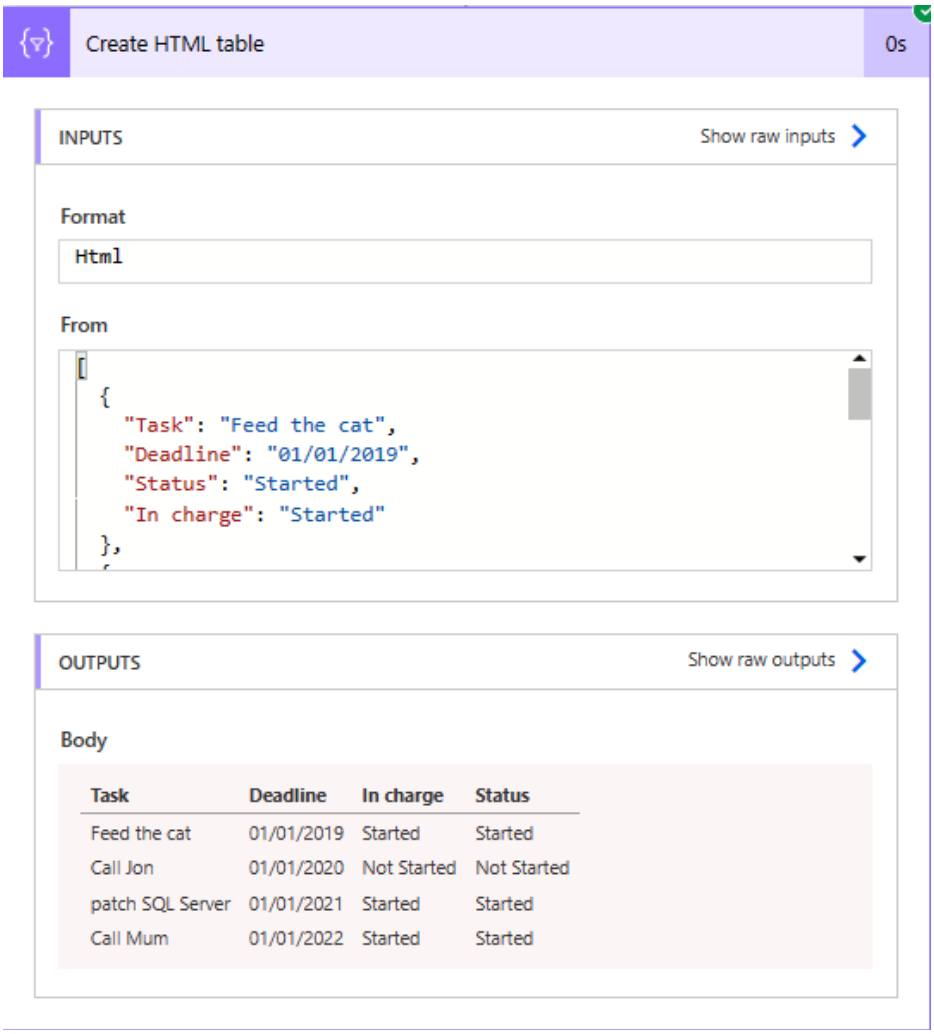
17. After the **Apply to each** add a Create HTML table action where you will generate a report:



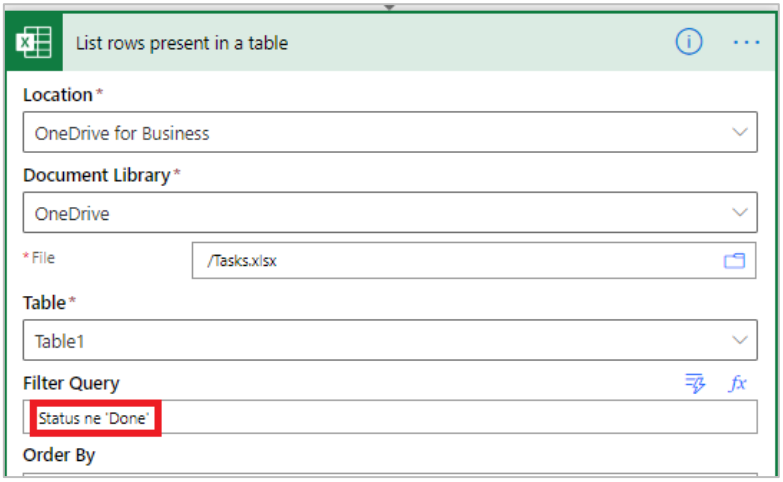
18. Here is how the Task value has been implemented:



Run the flow and check the output of the Create HTML table action:



19. We can drastically simplify this flow : instead of filtering the Tasks with the Status Done in a condition, you can also keep it more straightforward by using an OData Filter (click on Show advanced options) in the List rows present in a table action:

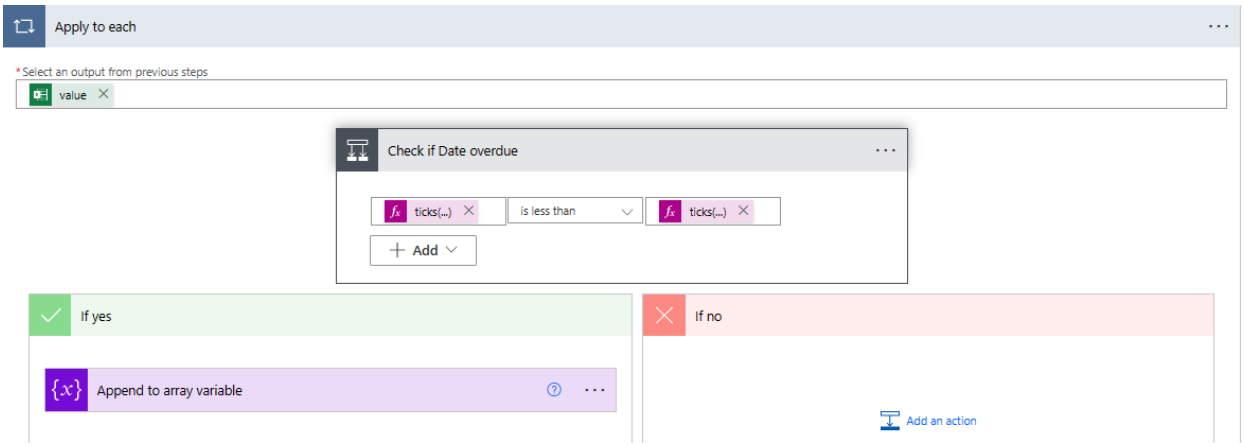


Using OData Filter (Filter query) is often considered as a good practice because the data are filtered on the server-side, and that can make your Flow running faster by using fewer resources.

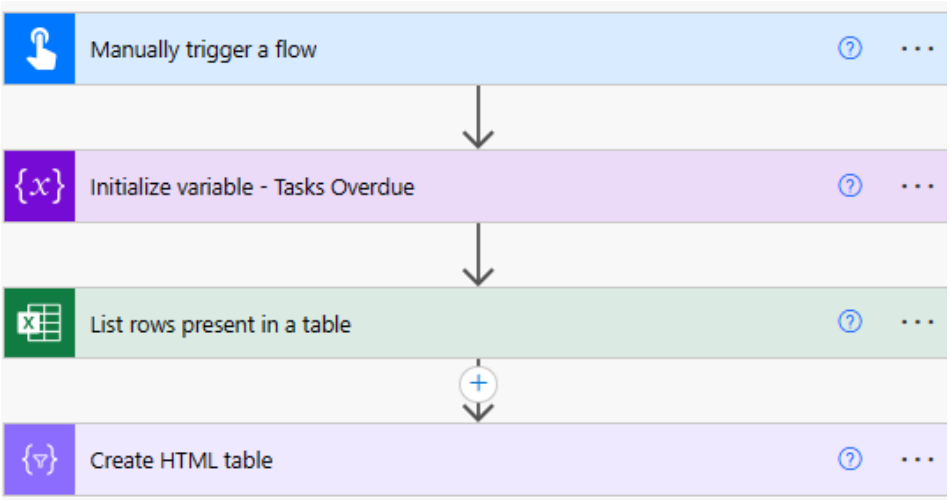
Note: oData expressions are case sensitive!

How can this simplify how flow ?

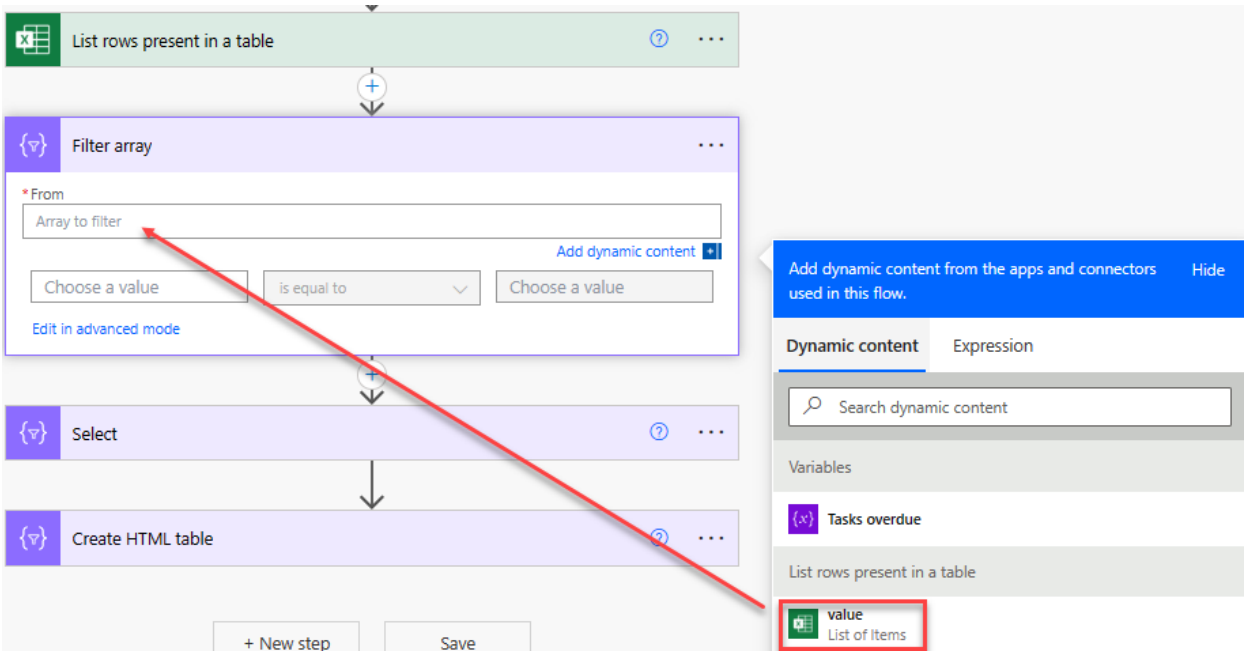
We can remove the **is not equal to Done** condition:



20. But the oData filter does not allow us to compare two dates. Nevertheless, we can **remove** the **Apply to Each**:

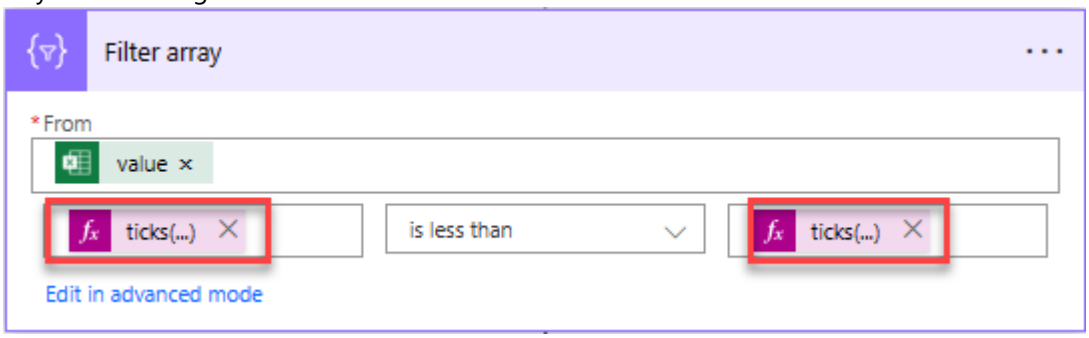


But we still need to feed the Create HTML table action by adding a Filter Array action that we will **connect** to the **List rows present in a table** action:

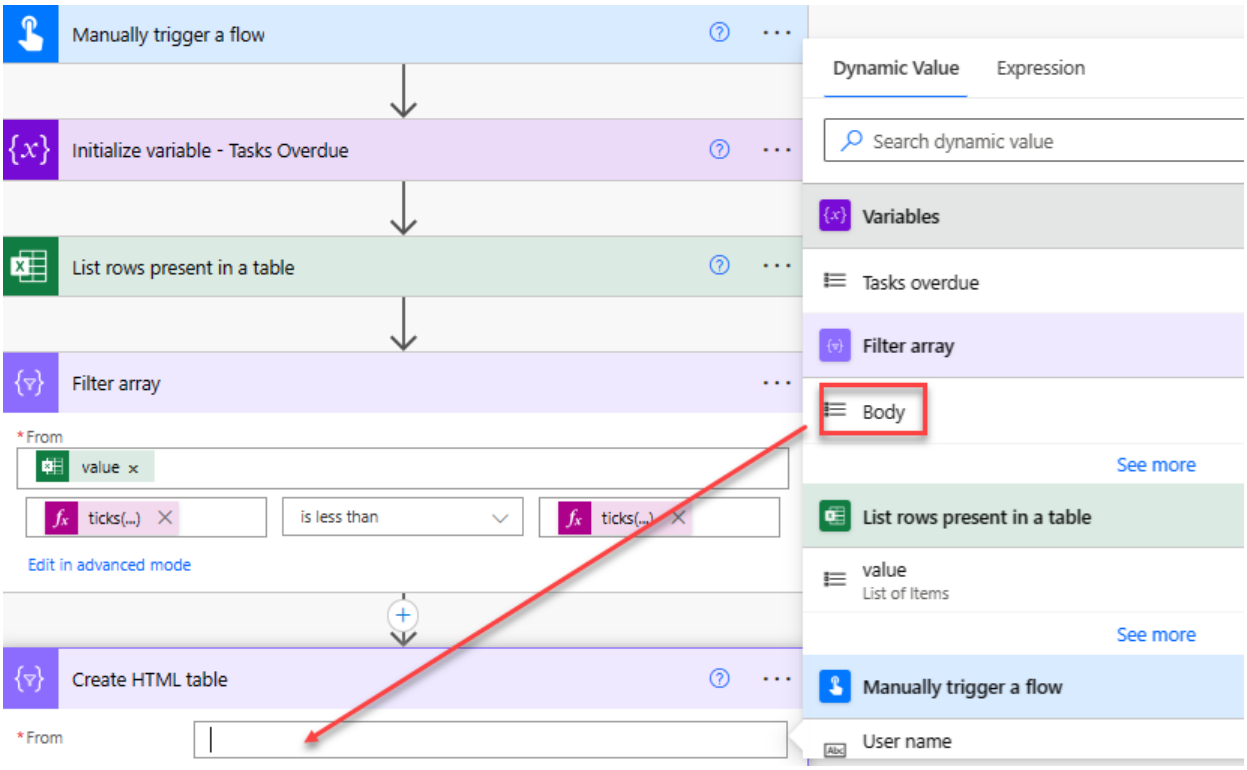


In some cases, filtering data in the Flow itself cannot be avoided. In this case, you can use the Filter Array action instead of adding conditions. The ticks() expression defined before can be reused in the Filter arry:

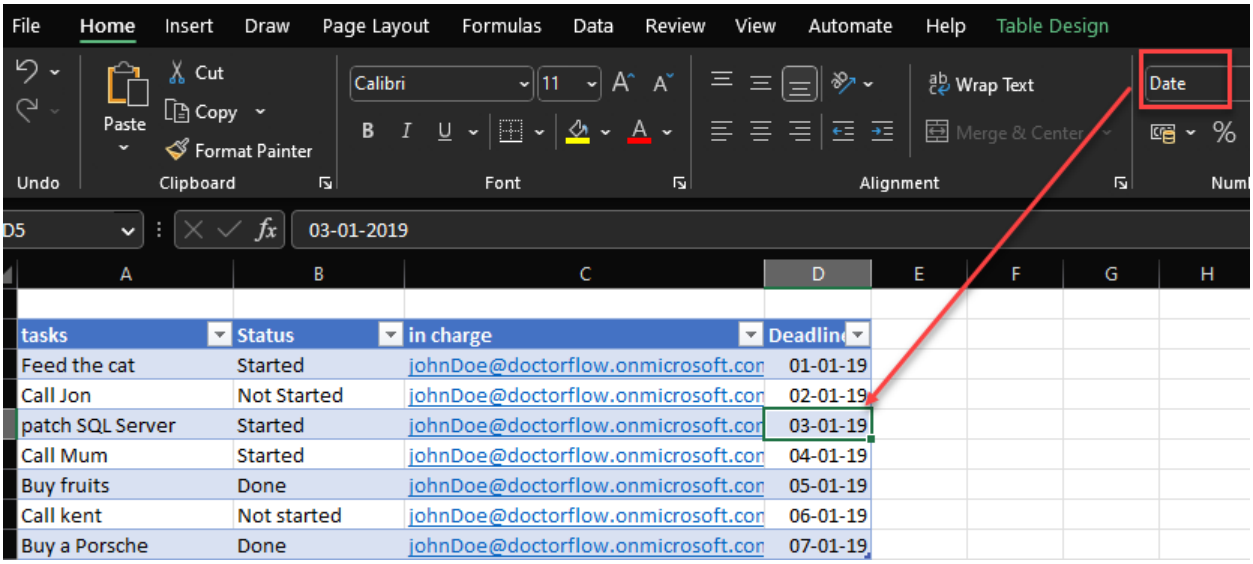
21. Try the following code:



22. We still need to **connect** the **Create HTML table** action and the **Filter array**, by using its **Body** property:

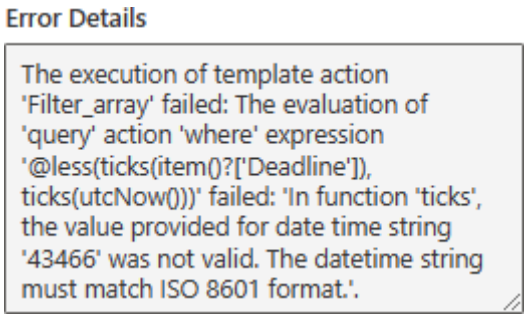


23. You will notice that the Deadline format in the Excel document is in a text format, but if we switch this format to a Date format (and re-enter the dates), our flow will crash:



tasks	Status	in charge	Deadlin
Feed the cat	Started	johnDoe@doctorflow.onmicrosoft.com	01-01-19
Call Jon	Not Started	johnDoe@doctorflow.onmicrosoft.com	02-01-19
patch SQL Server	Started	johnDoe@doctorflow.onmicrosoft.com	03-01-19
Call Mum	Started	johnDoe@doctorflow.onmicrosoft.com	04-01-19
Buy fruits	Done	johnDoe@doctorflow.onmicrosoft.com	05-01-19
Call kent	Not started	johnDoe@doctorflow.onmicrosoft.com	06-01-19
Buy a Porsche	Done	johnDoe@doctorflow.onmicrosoft.com	07-01-19

Indeed, if we switch the Deadline column type to **General** and if re-write (or just update) the data our flow run will generate an error:



24. Deadline field is now a number that give you the number of days between 1899-12-30 and your specific date. The ticks() function expects a real date, so it fails here. It should be updated with:

```
ticks(addDays('1899-12-30',int(items('Apply_to_each')['deadline'])))
```

25. You can test this using the Excel file **Tasks with Date format.xmls** in the provided in the resources.zip file.

We need your feedback

Do you want to report an issue or suggest something? We need your feedback:
https://github.com/Power-Automate-in-a-day/Training-by-the-community/issues