

5th GLOBAL POWER PLATFORM BOOTCAMP 2023



POWER PLATFORM
BOOTCAMP

Best practice from the field
Tips and tricks for cloud flows



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#GlobalPowerPlatformBootcamp
#GPPB2024

Best practice from the field

Tips and tricks for cloud flows



Martin Boejstrup

Senior Cloud Solution Architect

✉ maboiej@microsoft.com

[in aka.ms/maboiej](https://aka.ms/maboiej)

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Agenda

- Microsoft Graph Calls
- Microsoft Graph Calls with nextlink
- Using Try-Catch
- Reusing a Flow as Template
- Formatting Hyperlinks in HTML Table
- Sort an Array of Objects with the Sort Function
- Apply styles to a HTML table
- Use select and filter actions

Microsoft Graph calls

Using the HTTP connector

The screenshot shows a configuration window titled "HTTP - Use Graph to get Teams". It contains the following fields:

- * Method:** A dropdown menu set to "GET".
- * URI:** A text box containing the URL: `https://graph.microsoft.com/v1.0/groups?$filter=resourceProvisioningOptions/any(c:c+eq+'Team')`.
- Headers:** A table with columns "Enter key" and "Enter value".
- Queries:** A table with columns "Enter key" and "Enter value".
- Body:** A text box with the placeholder "Enter request content".
- Cookie:** A text box with the placeholder "Enter HTTP cookie".
- * Authentication:** A dropdown menu set to "Active Directory OAuth".
- Authority:** A text box with the default value: `https://login.windows.net/`.
- * Tenant:** A text box with a variable placeholder: `{x} TenantName x`.
- * Audience:** A text box containing the URL: `https://graph.microsoft.com`.
- * Client ID:** A text box with a variable placeholder: `{x} ClientID x`.
- * Credential Type:** A dropdown menu set to "Secret".
- * Secret:** A text box with a variable placeholder: `{x} ClientSecret x`.

At the bottom left, there is a link "Hide advanced options" with an upward arrow.

Pros: Multiple authentication methods, least privilege permissions

Cons: Premium license, Secret/password in clear text

Using the Office 365 Groups connector

The screenshot shows a configuration window titled "Send an HTTP request V2". It contains the following fields:

- * URI:** A text box containing the URL: `https://graph.microsoft.com/v1.0/groups?$filter=resourceProvisioningOptions/any(c:c+eq+'Team')`.
- * Method:** A dropdown menu set to "GET".
- Body:** A text box with the placeholder "The request body content."
- Content-Type:** A text box containing the value: `application/json`.

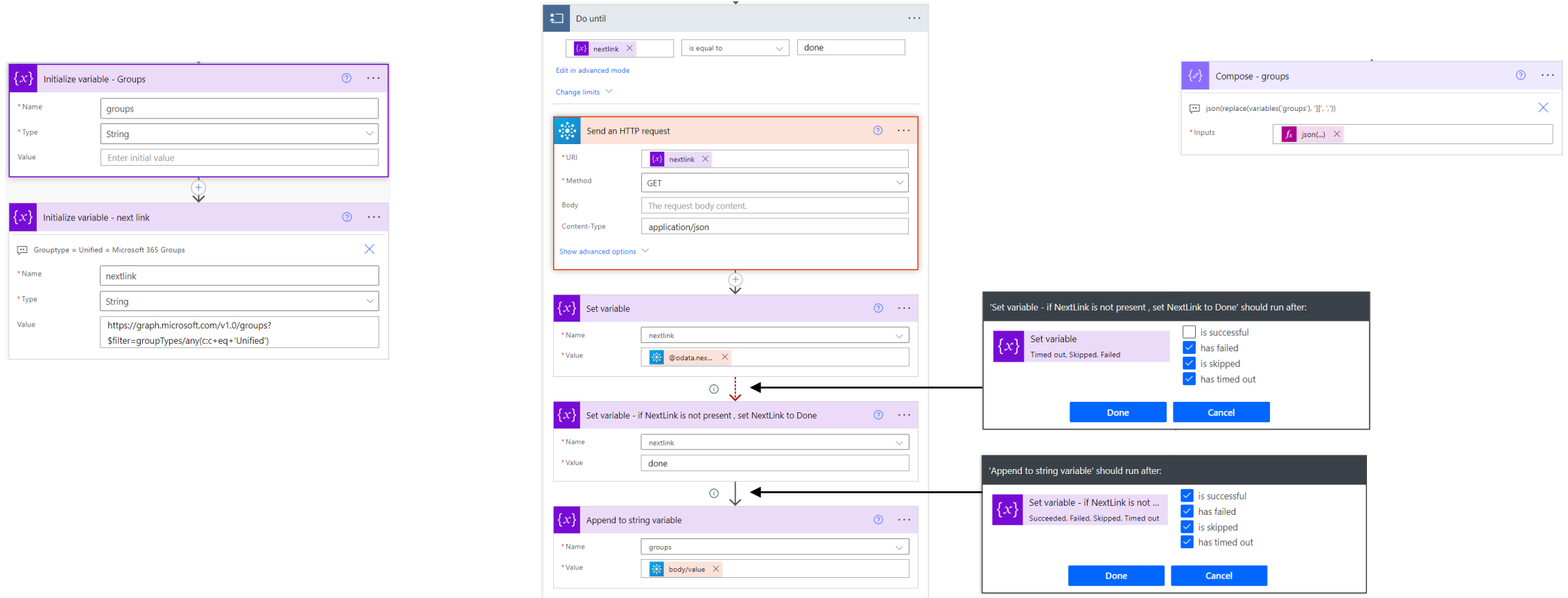
At the bottom left, there is a link "Show advanced options" with a downward arrow.

Pros: Standard license, run in the context of a user account

Cons: Run in the context of a user account

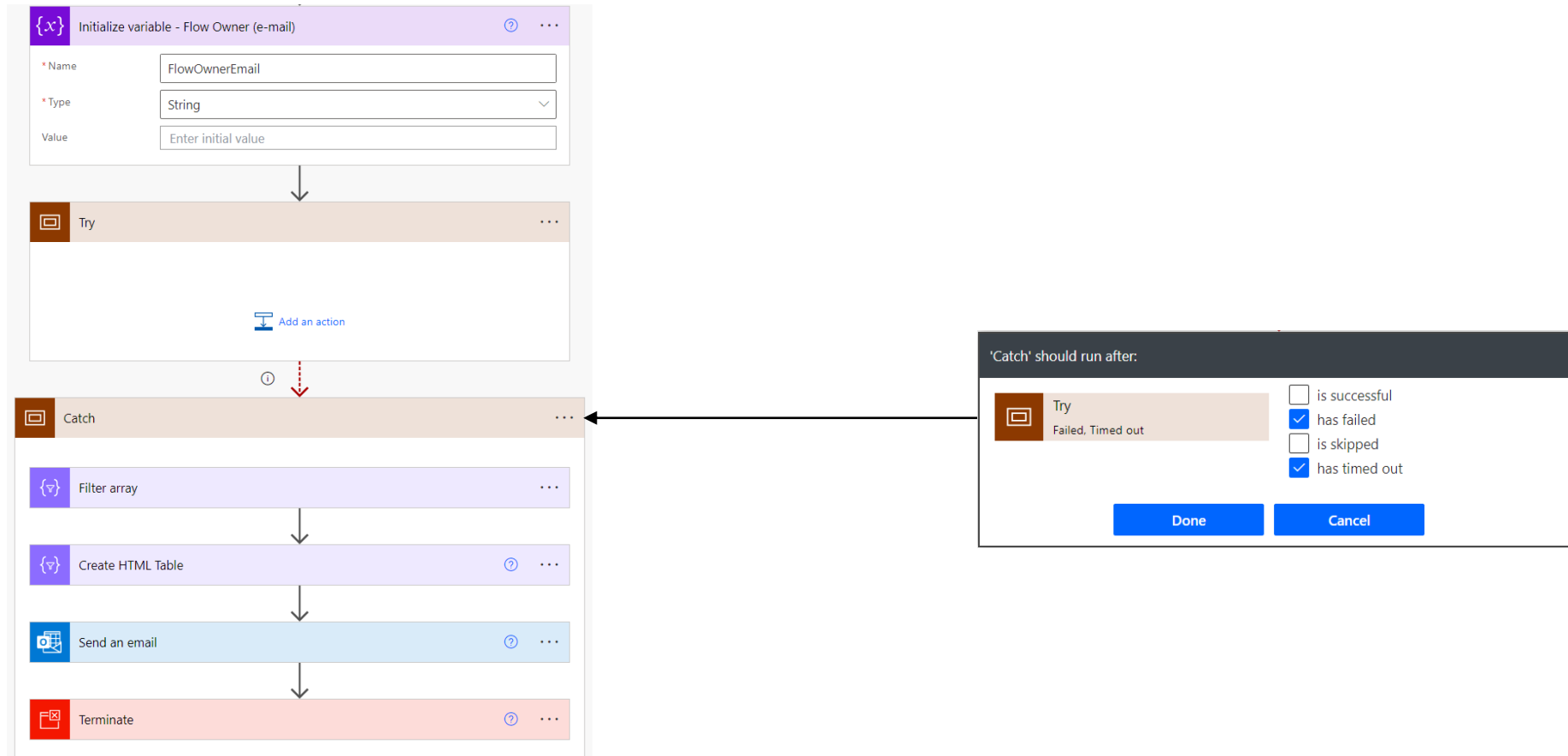
Microsoft Graph calls with nextlink

Graph is paging with the first 100 items. It will continue to return a reference to the next page of results in the **@odata.nextLink** property with each response until there are no more pages of results to retrieve



Always use Try-Catch

Use the try-catch approach to ensure you always get notified with at cloud flow has errors.



Always use Try-Catch - continue

Flow run information:

Send an email

*To: FlowOwnerEmail

*Subject: Flow Failed (workflow)

*Body:

```
</>
<style>
table, td, th {
  border: 1px solid #ddd;
  text-align: left;
}

table {
  border-collapse: collapse;
  width: 100%;
}

th, td {
  padding: 15px;
}
</style>
<p> Output </p>
<a href=' concat(...) '>Check flow Run</a>
<br>
Flow run user: triggerOutputs()
```

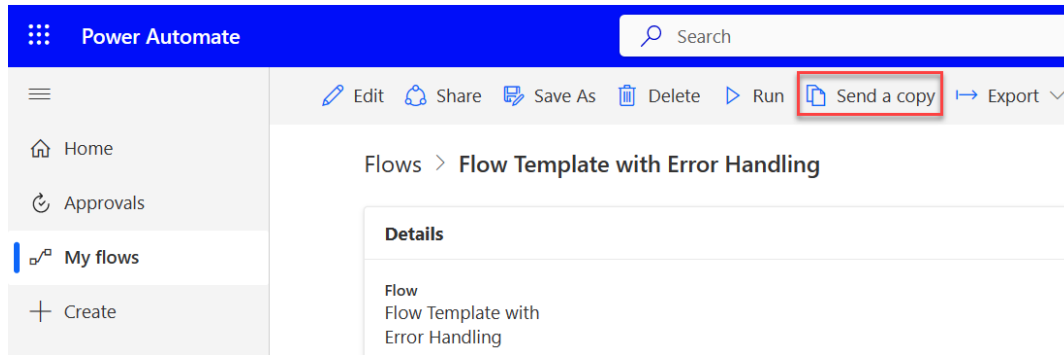
workflow()?['tags/flowDisplayName']

concat('https://make.powerautomate.com/manage/environments/',
workflow()?['tags']['environmentName'], '/flows/', workflow()?['name'],
'/runs/', workflow()?['run']['name'])

triggerOutputs()['headers']['x-ms-user-email']

Reuse a Flow as Template

Create a “Try-Catch Flow Template” and reuse it in the entire company.



To use "send a copy" you need to have a success run.

Send a copy ×

Title *

Flow Template with Error Handling

Description *

specifying which actions failed or time out and the reason for the failure. We will also provide a link back to the flow run for the failed Power Automate flow instance.

Author: Power Platform Administrator

Send to *

AU All Users ×

People in your organization will be able to create a copy of this flow.
There is no way to recall this flow once copied.

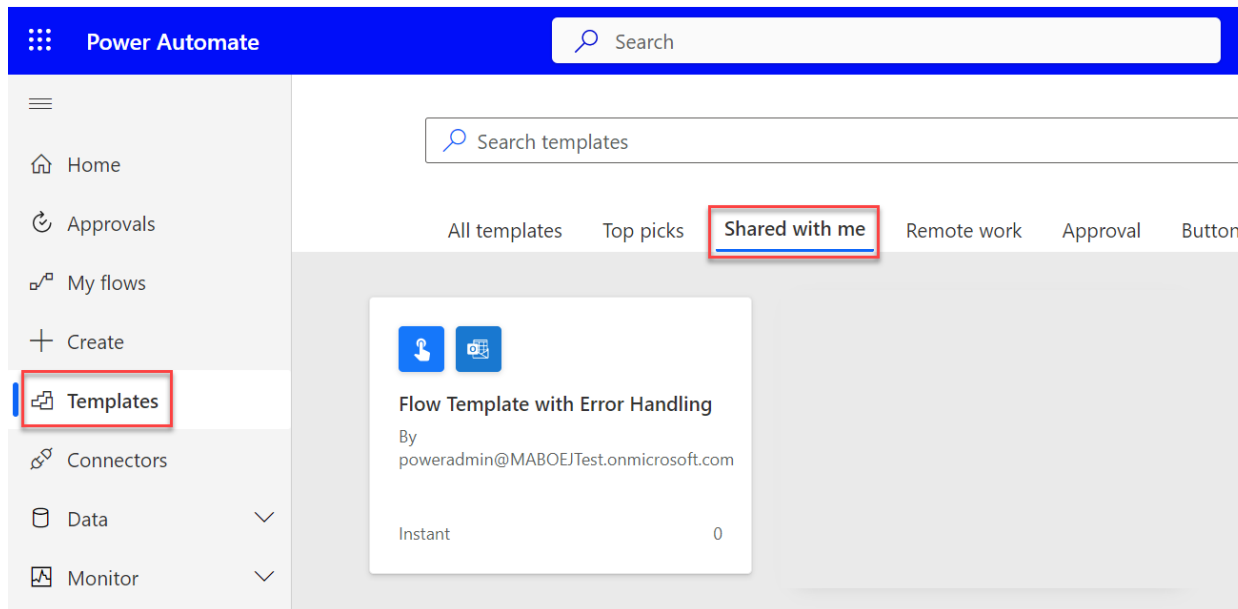
Send **Cancel**

Send to “All users” or any other security group

Reuse a Flow as Template - continue

Create a "Try-Catch Flow Template" and reuse it in the entire company.

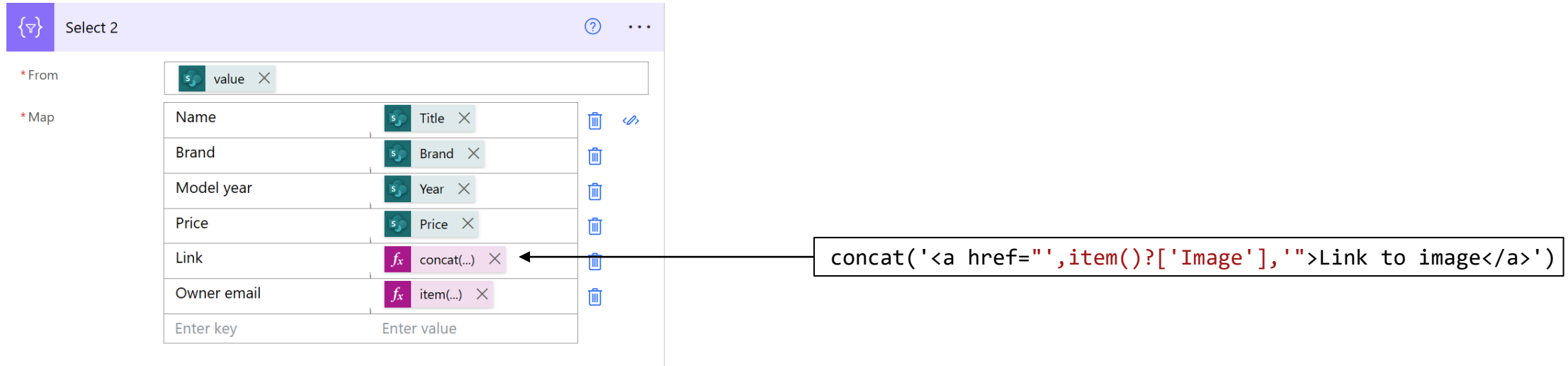
To use the Template :



A template is only available in the environment is' created in.

Format Hyperlinks in HTML Table

In order to add a link to a record, you can do so by adding a "a href" tag in the Select action.

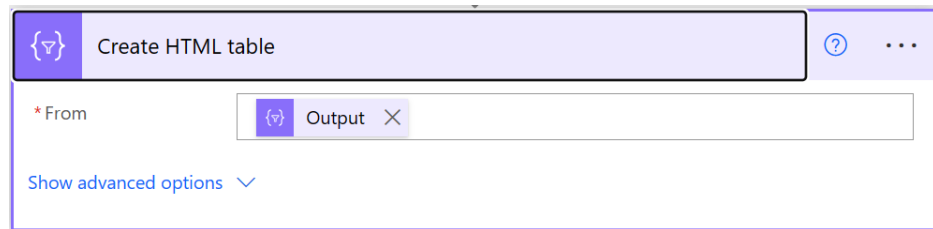


The screenshot shows the configuration for the "Select 2" action. The "From" field is set to "value". The "Map" section contains a table with the following columns and values:

Name	Title
Brand	Brand
Model year	Year
Price	Price
Link	concat(...)
Owner email	item(...)
Enter key	Enter value

The "Link" column is highlighted with a red box. A callout box points to this formula with the text: `concat('Link to image')`

Then we can use the "Create a HTML table" to convert the records to HTML.



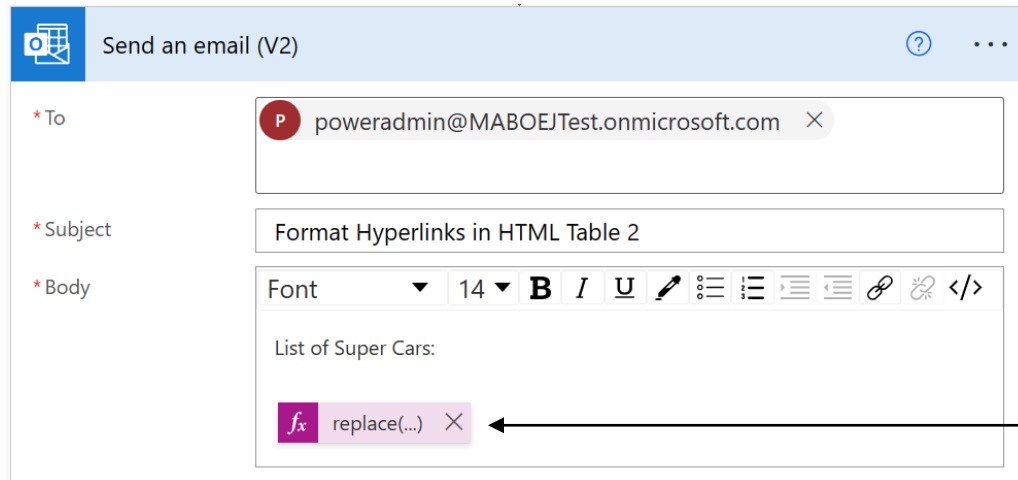
The screenshot shows the configuration for the "Create HTML table" action. The "From" field is set to "Output".

Format Hyperlinks in HTML Table

But when converting to HTML the "a href" will formatted wrong

```
&lt;a href=&quot;https://example.com/image4.jpg&quot;&gt;Link to image&lt;/a&gt;
```

We need to deal with that using a replace command.

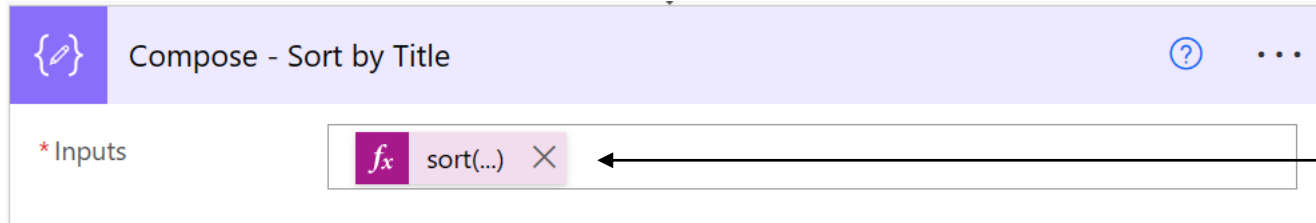


```
replace(replace(replace(body('Create_HTML_table'),  
'&lt;','<'), '&gt;','>'), '&quot;','"')
```

This will convert it to the right format.

```
<a href="https://example.com/image4.jpg">Link to image</a>
```

Sort an Array of Objects with the Sort Function



`sort(body('Select_2'), 'Name')`

Sort by "Name" ascending.

Use the "reverse" command to sort descending.

```
Reverse(sort(body('Select_2'), 'Name'))
```

Apply styles to a HTML table

Compose - HTML style

*Inputs

```
<style>
table {
  border: 1px solid #1C6EA4;
  background-color: #EEEEEE;
  width: 100%;
  text-align: left;
  border-collapse: collapse;
}
table td, table th {
  border: 1px solid #AAAAAA;
  padding: 3px 2px;
}
table tbody td {
  font-size: 13px;
}
table thead {
  background: #1C6EA4;
  border-bottom: 2px solid #444444;
}
table thead th {
  font-size: 15px;
  font-weight: bold;
  color: #FFFFFF;
  border-left: 2px solid #D0E4F5;
}
table thead th:first-child {
  border-left: none;
}
</style>
```

Send an email (V2)

*To

poweradmin@MABOEJTest.onmicrosoft.com

*Subject

Format Hyperlinks in HTML Table 4 - style

*Body

</>

Outputs

<h1>List of Super Cars</h1>

replace(...) </p>

Show advanced options

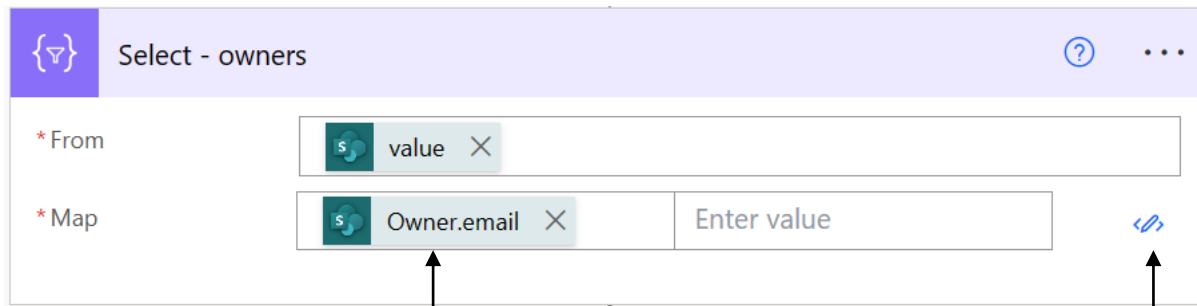
I used this table designer to give me inspiration
<http://divtable.com/table-styler/>

Apply styles to a HTML table

```
<style>
table {
  border: 1px solid #1C6EA4;
  background-color: #EEEEEE;
  width: 100%;
  text-align: left;
  border-collapse: collapse;
}
table td, table th {
  border: 1px solid #AAAAAA;
  padding: 3px 2px;
}
table tbody td {
  font-size: 13px;
}
table thead {
  background: #1C6EA4;
  border-bottom: 2px solid #444444;
}
table thead th {
  font-size: 15px;
  font-weight: bold;
  color: #FFFFFF;
  border-left: 2px solid #D0E4F5;
}
table thead th:first-child {
  border-left: none;
}
</style>
```

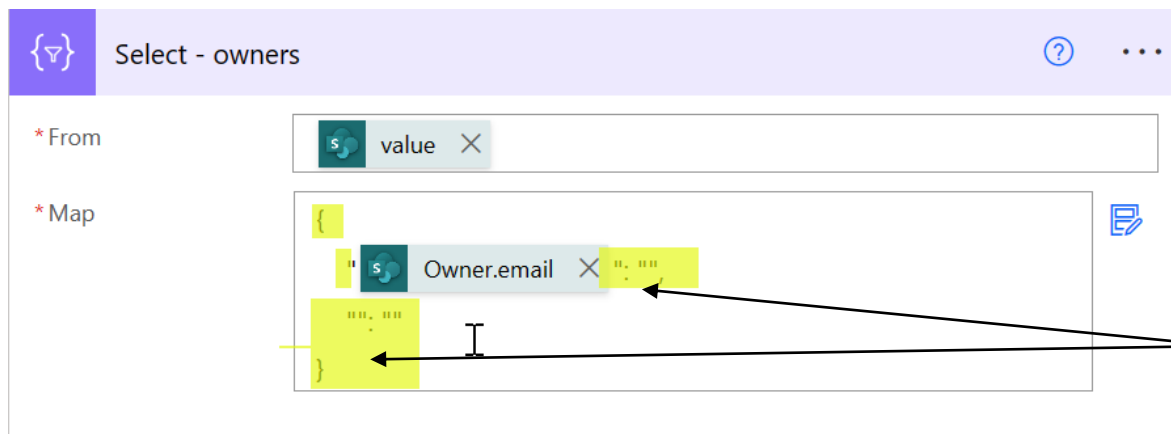
Use select and filter actions

Sometimes you would like to send an email with the items the user own and not one email per item. First, we need to get an array of owners:



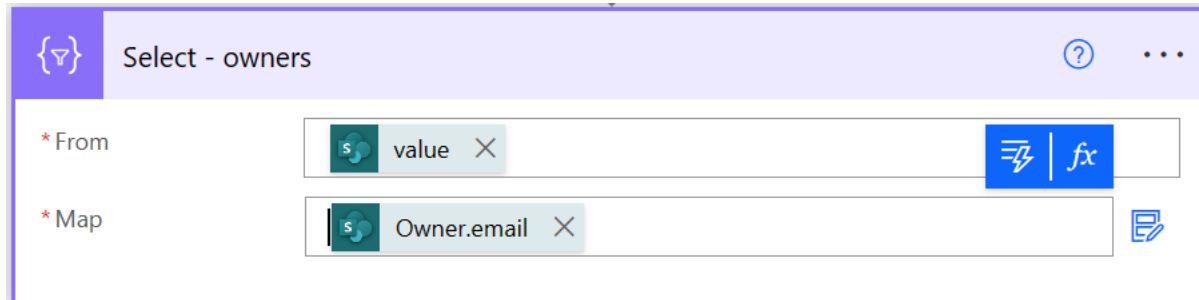
1. Add the owner email field

2. Click the "text mode" button



3. Remove all the highlighted

Use select and filter actions – continue



The result is an array of all owners:

Body

```
[  
  "admin@MABOEJTest.onmicrosoft.com",  
  "user1@MABOEJTest.onmicrosoft.com",  
  "admin@MABOEJTest.onmicrosoft.com",  
  "user1@MABOEJTest.onmicrosoft.com",  
  "user1@MABOEJTest.onmicrosoft.com",  
  "admin@MABOEJTest.onmicrosoft.com",  
  "admin@MABOEJTest.onmicrosoft.com"  
]
```


Use select and filter actions – continue

Next is the only have an array of unique owners:

Compose unique owners

`union(body('Select_-_owners'),body('Select_-_owners'))`

*Inputs

`fx union(...)`

`union(body('Select_-_owners'),body('Select_-_owners'))`

The result is an array of unique owners:

Outputs

```
[  
  "admin@MABOEJTest.onmicrosoft.com",  
  "user1@MABOEJTest.onmicrosoft.com"  
]
```

Use select and filter actions – continue

Next is to add a “Filter” action inside “Apply to each”

The screenshot displays the configuration of a 'Filter array' action inside an 'Apply to each' loop in Power Automate. The 'Apply to each' action is at the top, with a dropdown menu showing 'Outputs' selected. Below it, the 'Filter array' action is configured with the following elements:

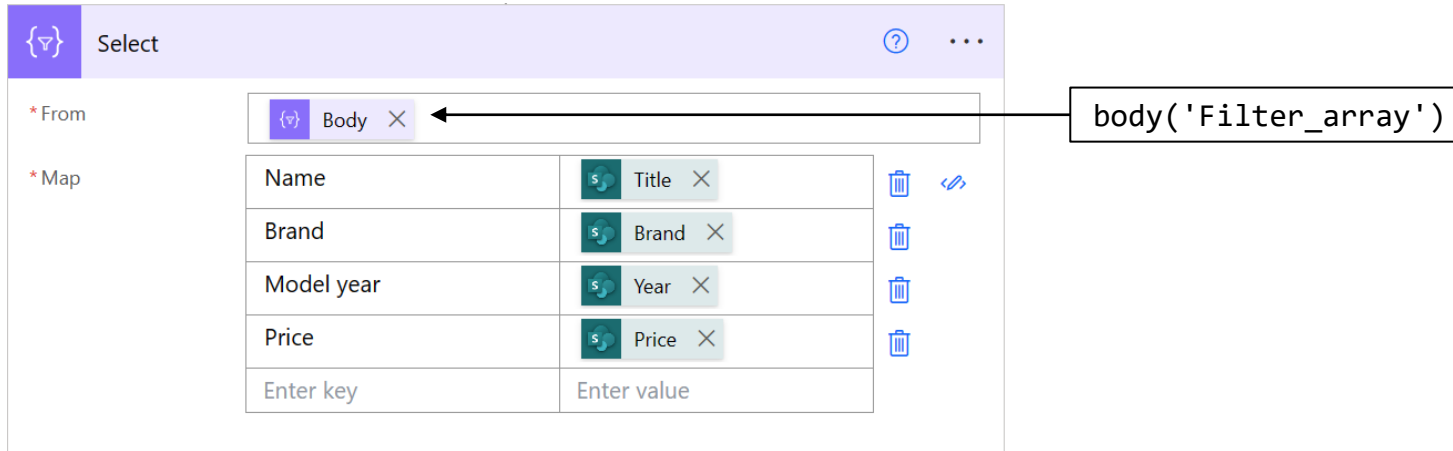
- Filter expression:** `@equals(item()?['Owner/Email'], items('Apply_to_each'))`
- From:** A dropdown menu showing 'value' selected, with a callout box pointing to it containing the expression `outputs('Compose_unique_owners')`.
- Comparison:** A dropdown menu showing 'Owner Email' selected, with a callout box pointing to it containing the expression `item()?['Owner/Email']`.
- Operator:** A dropdown menu showing 'is equal to' selected.
- Current item:** A dropdown menu showing 'Current item' selected, with a callout box pointing to it containing the expression `items('Apply_to_each')`.

Below the 'Filter array' action, there is a link to 'Edit in advanced mode'.

The result of the filter is all items for one owner.

Use select and filter actions – continue

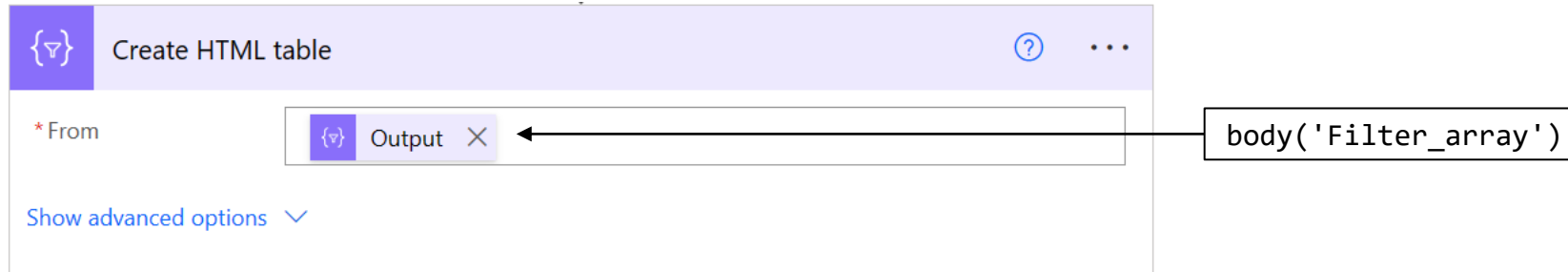
Next is to add a “Select” action inside “Apply to each”



The screenshot shows the configuration for a 'Select' action. The 'From' field is set to 'Body' with a callout box pointing to it containing the text `body('Filter_array')`. The 'Map' section contains a table with the following rows:

Name	Title	✕
Brand	Brand	✕
Model year	Year	✕
Price	Price	✕
Enter key	Enter value	

And an “Create HTML table” action inside “Apply to each”



The screenshot shows the configuration for a 'Create HTML table' action. The 'From' field is set to 'Output' with a callout box pointing to it containing the text `body('Filter_array')`. Below the 'From' field, there is a link that says 'Show advanced options' with a downward arrow.

Use select and filter actions – continue

Last is to add an “Send email” action inside “Apply to each”

The screenshot shows the configuration for the "Send an email (V2)" action. The fields are as follows:

- To:** `Current item` (Annotated with `items('Apply_to_each')`)
- Subject:** `Send e-mail grouped by owner`
- Body:** `</>` (Annotated with `outputs('Compose_-_HTML_style')`)
 - Content: `<h1>List of Super Cars you own</h1>`
 - Content: `
`
 - Content: `
`
 - Content: `Output` (Annotated with `body('Create_HTML_table')`)



Power Platform User Group Denmark



Please join the local user group:

<https://forms.office.com/r/bVs2k6pw6C?origin=lprLink>

Sign up and get an invite to the community using Teams



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Any Questions?



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THANK YOU

Slides and solution – look at my LinkedIn profile:

aka.ms/maboej



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