

Creating Approvals in SharePoint Online using Microsoft Flow

Lab Time: 60 minutes

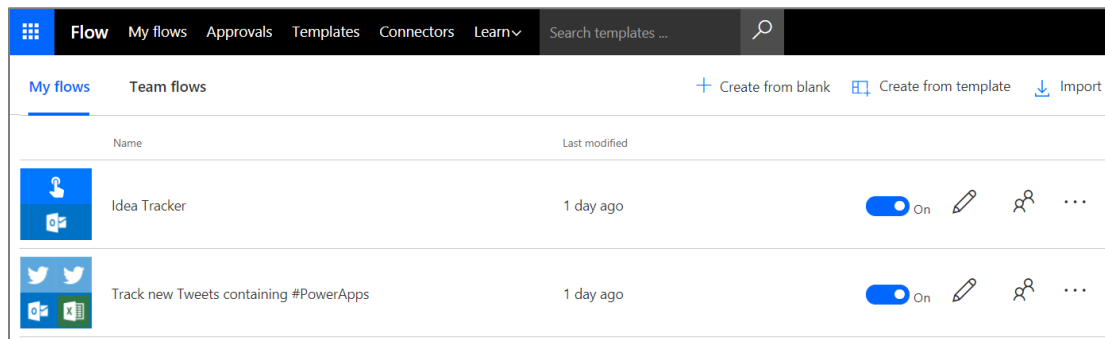
Lab Folder: C:\Student\Modules\05_Approvals\Lab

Lab Overview: In this lab you will continue to work on the Device Ordering App that you began working on in previous lab exercises using PowerApps. You will use Microsoft Flow to add an approval process to the device ordering process.

Exercise 1: Create the Approval Flow

In this exercise, you'll use Microsoft Flow to create a Device Approval workflow associated with the device order that was added to the SharePoint list. You will begin by creating the flow to approve device orders. The flow will be configured to trigger whenever a new device order is added to the SharePoint list.

1. Sign in to Microsoft Flow.
 - a) Navigate to <http://flow.microsoft.com> and sign in using your Office 365 trial account.
2. Create a new blank Flow.
 - a) Click the **My Flows** link to see your existing flows.



- b) Click **+ Create from blank**.

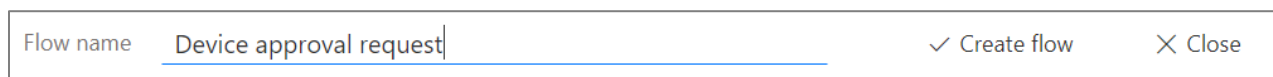


You must start by selecting a trigger for your new flow. In this scenario, you will configure the flow to trigger when a new item is added to the **Device Order** list that you created in your SharePoint site.

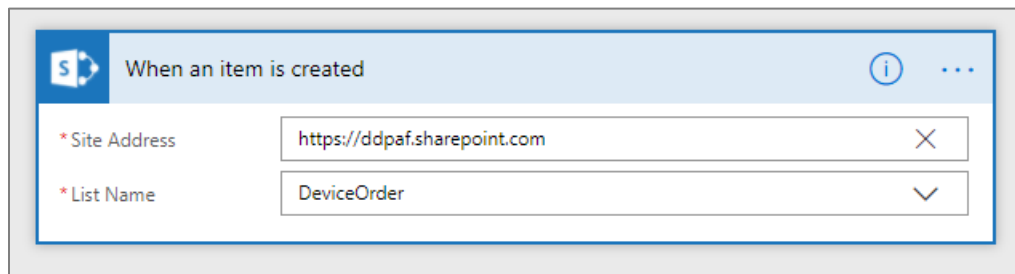
- c) Select the **SharePoint – When an item is created** trigger.



- d) Give the new flow a name of **Device approval request**.



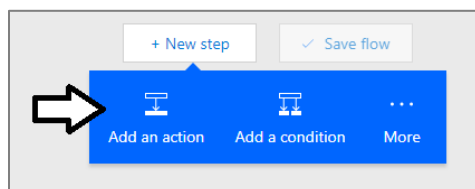
- e) Select your site URL from the **Site Address** dropdown then Select **DeviceOrder** from the list of SharePoint lists.



You have just created the trigger and now you're ready to add actions to the flow. The first thing you want to do is send an approval request. After that, your flow must evaluate the approval response and take appropriate action to complete the approval request.

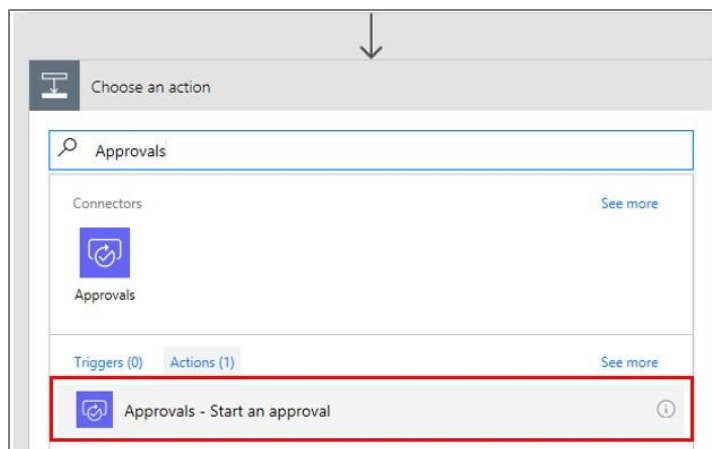
3. Add an Approvals action.

- a) Click +New step and then Add an action.



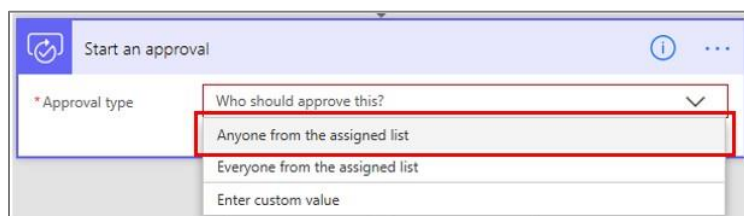
- b) Search for: **Approvals**.

- c) Select the action **Approvals – Start an approval**.



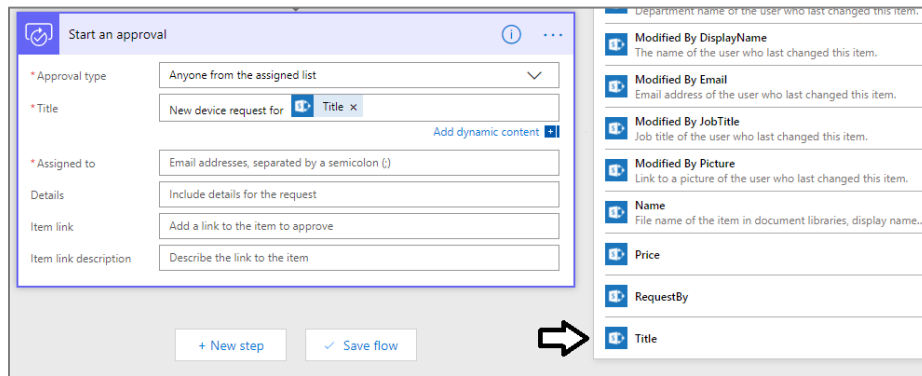
4. Configure the approval so anyone from the assigned list should be able to approve the request.

- a) Set the **Approval type** with the option **Anyone from the assigned list**.



5. Set the title of the request.

- Click on the **Title** edit box and type “**New device request for** ”. (Do not type quotation mark, but add a space at the end)
- In the Dynamic content box on the right, select **Title**

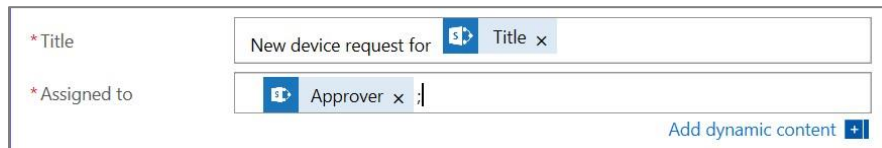


- Your screen should match the following screenshot.



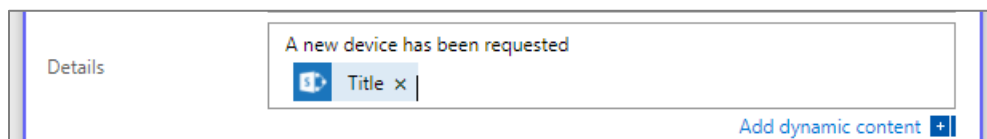
6. Assign the request to the Approver.

- Click on the Assigned To edit box.
- In the dynamic content box on the right, select **Approver**.

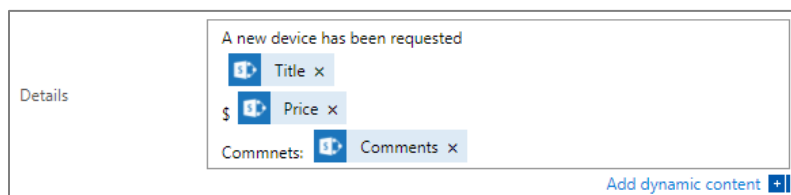


7. Customize the **Details** field to include the **Device Title**, the **Price** and any comments from the requester

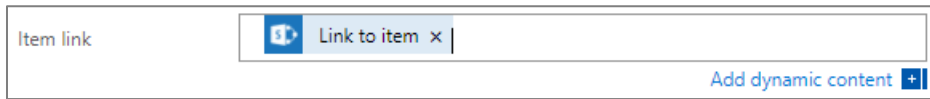
- In the **Details** edit box type “A new device has been requested ” and then press the <Return> key.
- Next, select **Title** from the dynamic content pane.



- Press the <Return> key to create a new line then type “\$” and select **Price** from the dynamic content pane.
- Press the <Return> key to create a new line then type “**Comments:** ” and select **Comments** from the dynamic content pane.
- The **Details** field should match the following screenshot.



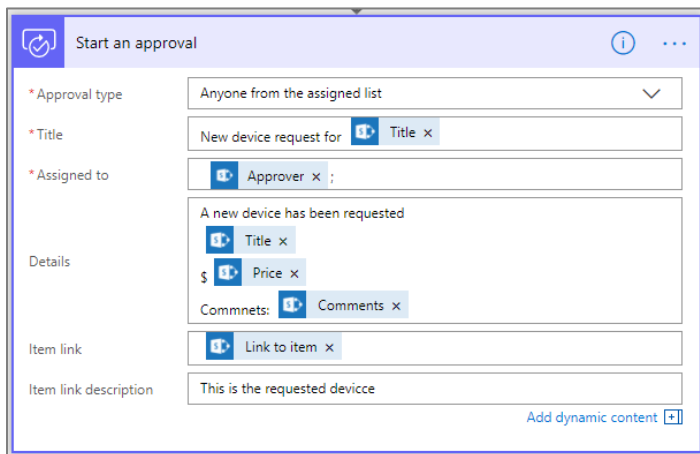
- f) For the **Item link** field, select **Link to item** from the dynamic content pane.



- g) For the **Item Link Description**, type in a text value of **This is the requested device**.



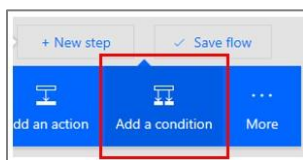
- h) At this point, the Approval action should match the following screenshot.



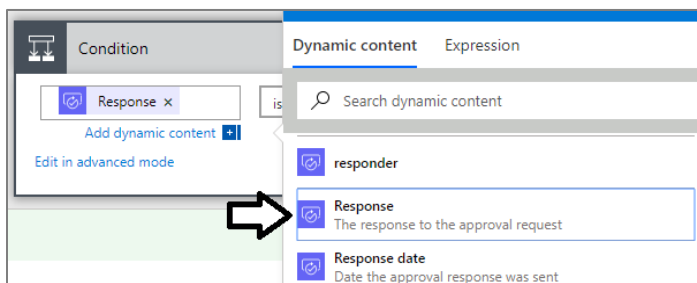
Exercise 2: Implement the (Approved = Yes) Branch

Now that we have an approval, we can customize the actions to take based on the result of the approval. It could be accepted or rejected, this task will create the condition branch and set up the "Approved" side of the branch.

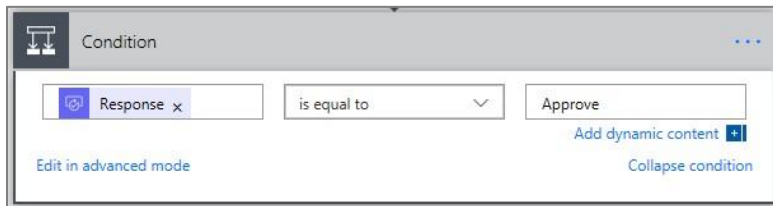
1. Add a condition to the Flow for if the response is approved
 - a) Select + New Step -> Add a condition



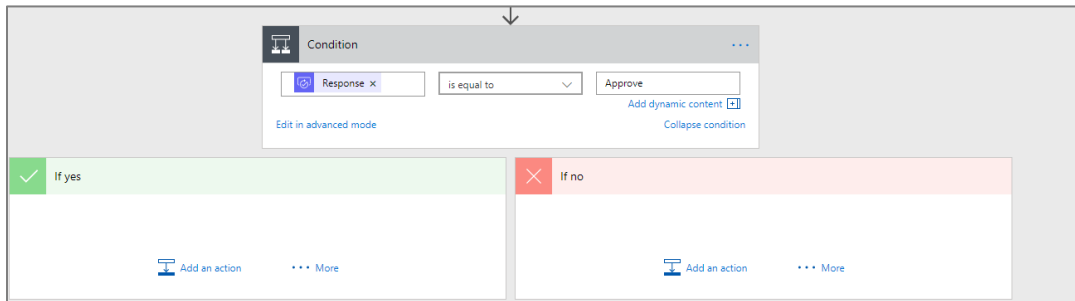
- b) Click in the left edit box with the hint **Choose a value** and select **Response** from the dynamic content pane.



- c) Make sure the dropdown menu in the middle is set to **is equal to**.
- d) Click in the right edit box and type a string value of **Approve**.



- e) Note that below the **Condition** box, there are two more boxes for **If yes** and **If no**.

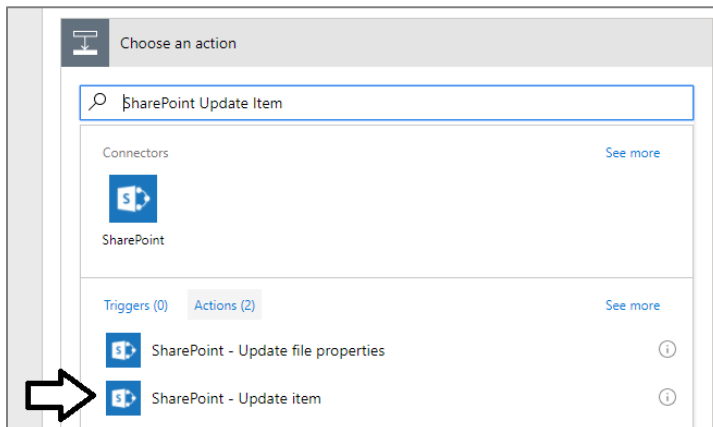


Over the next few steps you will implement the logic for the **If yes** branch. You will update the same list item that trigger the flow, based on the item ID and you will also update the **Approval Status to Approved**. You will also be required to append approver comments to the comments field in such a way that you don't overwrite the comments from the initial submission.

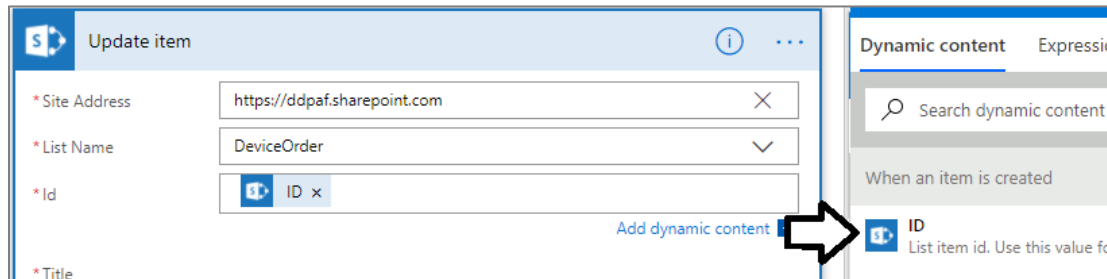
- 2. In the **If yes** branch, add an action to update the record in the SharePoint list.
 - a) In the left **"If yes"** box, click **Add an action**



- b) Search for **SharePoint Update Item**.
 - c) Select: SharePoint – Update item

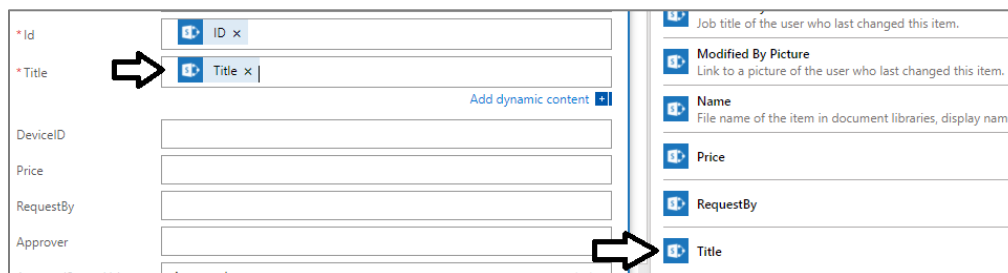


- d) Set the Site Address to your SharePoint URL.
- e) Set the List Name to: **DeviceOrder**
- f) For the **Id** value, select **ID** from the dynamic content pane



This is the unique lookup Id for the SharePoint list item that has just been created.

- g) Set the **Title** field by selecting **Title** from the SharePoint list item properties in the dynamic contents pane.



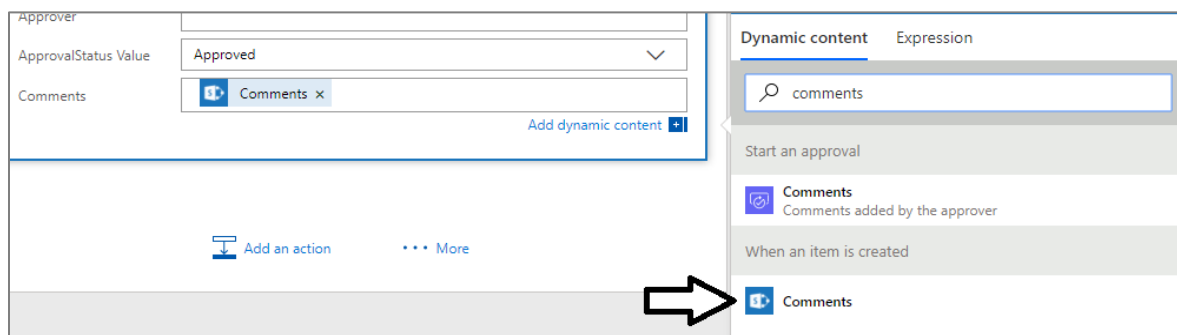
- h) Leave the following fields blank: **DeviceID**, **Price**, **RequestedBy** and **Approver**.

When you leave a field blank, the Update Item action will leave these fields alone and they will retain their existing values.

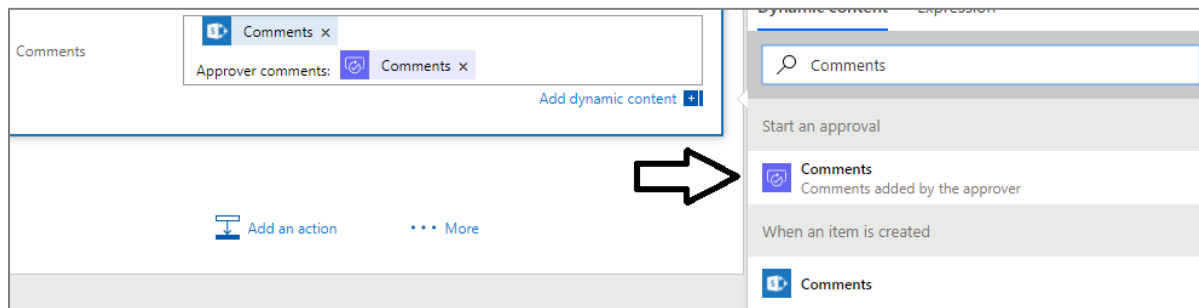
- i) In the **Approval Status** field select **Approved** from the dropdown



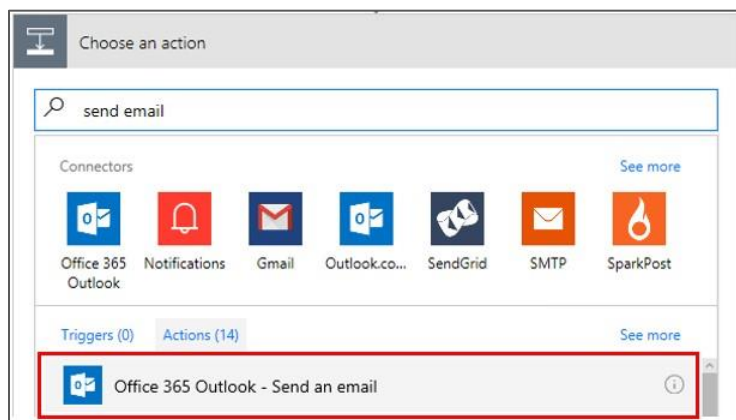
- j) In the Comments field, we want to preserve the earlier comments and append on the comments from the approver.
- k) Click on the **Comments** text box
- l) In the dynamic pane search for the **Comments**.
- m) You'll see two results, pick the **Comments** field from the "When an item is created" section This is the original comments that were add to the SharePoint list.



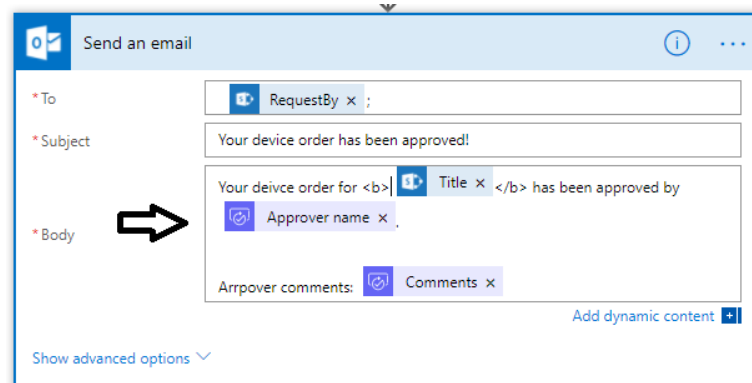
- n) After the Comments field, add a line break and the text string “**Approver’s comments:** “ (without quotes)
- o) Now add the other **Comments** from the **approver**



3. Add an action to send an email from Office 365 back to the requestor letting them know their request was approved. You may want to include things like who approved the request and any comments from the approver.
 - a) In the same **If yes** branch, below the update record action, click **Add an action**.
 - b) Search for “send email”
 - c) Select the action – Office 365 Outlook – Send an email



- d) Set the **To** field to: **Requested By** from the dynamic content pane.
- e) Set the **Subject** to: “**Your device order has been approved!**”.
- f) Set the **Body** to match what you see in the following screenshot. Note that **Title** is from the SharePoint list item and that **Approver name** and **Comments** are from the Approval action data.



- g) Select the **Show advanced options**.
- h) Set **Is HTML** to **Yes** as shown in the following screenshot.

The screenshot shows the 'Send an email' action configuration. The 'To' field is 'RequestBy x;', 'Subject' is 'Your device order has been approved!', and 'Body' contains a placeholder for a device order approval message. The 'Is HTML' dropdown is set to 'Yes', with a black arrow pointing to it. The 'Attachments' section is expanded, showing 'Attachment name' and 'Attachment content' fields. The 'Importance' dropdown is set to 'Importance'. The 'Hide advanced options' link is visible at the bottom.

Exercise 3: Implement the (Approved = No) Branch

Now that you have a branch created for when a device is approved, you need another for when a device is rejected .

1. In the “If No” branch you can pretty much mimic what was done for If Yes.
2. Update the list in the SharePoint the same way. Just set the Approval Status to Rejected
 - a) In the If no branch, click Add an action.
 - b) Add an action for: **SharePoint – Update item**.
 - c) Configure the action as shown in the image below. The only difference from earlier is the **Approval Status** is set to **Rejected**.

The screenshot shows the 'Update item 2' action configuration. The 'Site Address' is 'https://ddpaf.sharepoint.com', 'List Name' is 'DeviceOrder', and 'Id' is 'ID x'. The 'Title' is 'Title x'. The 'ApprovalStatus Value' dropdown is set to 'Rejected'. The 'Comments' field is empty, and the 'Add dynamic content' link is visible at the bottom right.

3. Send an email to the requester that their request has been rejected.
 - a) Create an email just like we did in the **If yes** branch, the only differences are:
 - i) Update verbiage to rejected instead of accepted
 - ii) The Approvers email was added to the email body
 - b) You can use the image in the screenshot below as a guide for the email configuration for the rejection email.

Send an email 2

*To: RequestBy x ;

*Subject: Your request device was rejected

*Body: Your device order for Title x has been rejected by Approver name x . Arrpover comments: Comments x

From (Send as): Email address to send mail from (requires "Send as" or "Send on behalf of" pe

CC: Specify email addresses separated by semicolons like someone@contoso.com

BCC: Specify email addresses separated by semicolons like someone@contoso.com

Attachments Name: Attachment name

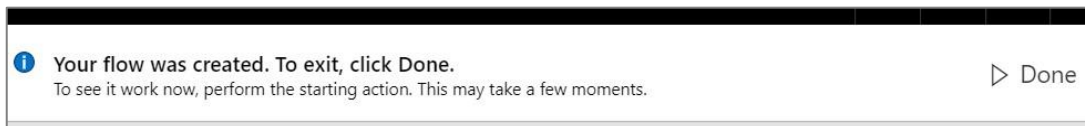
Attachments Content: Attachment content

Importance: Importance

Is HTML: Yes

[Hide advanced options](#)

1. Save the flow by click the **Create Flow** link.
2. Your flow should now be saved and ready for teasing.



Now that the approval flow has been created, go ahead and test it. To test the flow, you will run the Device Ordering app that you created in the earlier labs on PowerApps.

Exercise 4: Test Your New Approval Flow using Approval Through Email Messages

Now that the entire flow has been created, go ahead and save the flow so you can test it.

3. Run the Device Ordering App and submit a new device request.
 - a) Sign-in at <http://web.powerapps.com>.
 - b) Run the Device Ordering App.
 - c) Select a few devices and click Compare.

- d) Create a device request. Make sure to change the approver email to your own email for test purposes, you don't want a real approver request going to your manager.

Device Ordering App

ProBook 4440s
\$679.00
HP Laptop
Intel Core i5-3210M (2.5 GHz)
4GB DDR3
500GB

ProBook 4545s
\$499.00
HP Laptop
Intel Core i3-3110M (2.4 GHz)
4GB DDR3
500GB

Compaq Pro 4300
\$859.00
HP All in one
Intel Core i5-3470S (2.9 GHz)
4GB DDR3
500GB

Title: HP - ProBook 4545s
Price: 499
Approver: student@DDPAF.onmicrosoft.com
Comments: I really need this laptop
RequestBy: Student@DDPAF.onmicrosoft.com

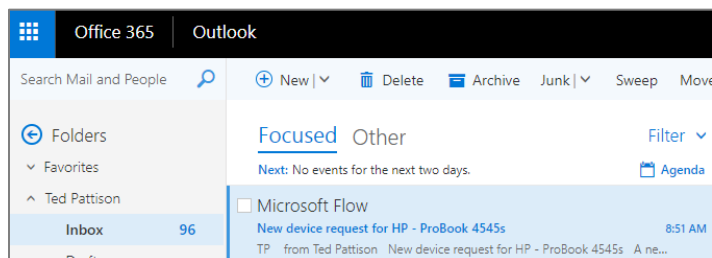
Submit device request

4. Navigate to the **DeviceOrder** list in the SharePoint site and verify a new item has been added for your device request.

Title	DeviceID	Price	RequestBy	Approver	ApprovalStatus	Comments
HP - ProBook 4545s	45	\$499.00	Student@DDPAF.onmicrosoft.com	student@DDPAF.onmicrosoft.com	InReview	I really need this laptop

5. Respond to the email notification to approve the device request

- a) Navigate to your Outlook inbox and find the message from Microsoft Flow that has been sent with the approval request.



6. Open the message and inspect its contents

Approvals | Powered by Microsoft Flow

Pending approval

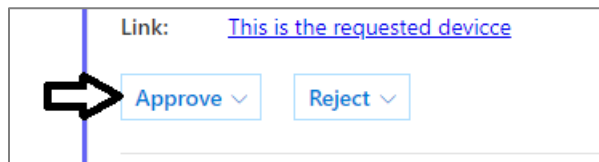
Requested by Ted Pattison
Student@DDPAF.onmicrosoft.com

Details: A new device has been requested
HP - ProBook 4545s
\$499
Comments: I really need this laptop

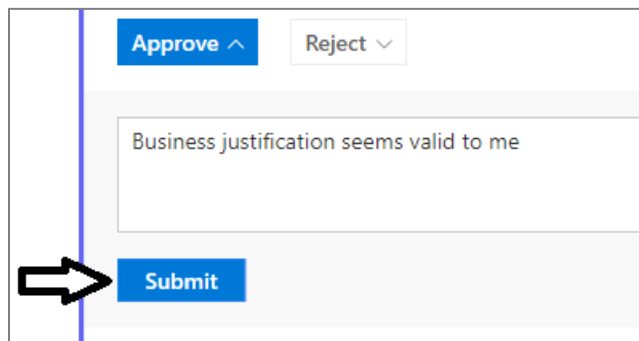
Link: [This is the requested device](#)

Approve Reject

- a) Click the **Approve** link to begin the approval process.

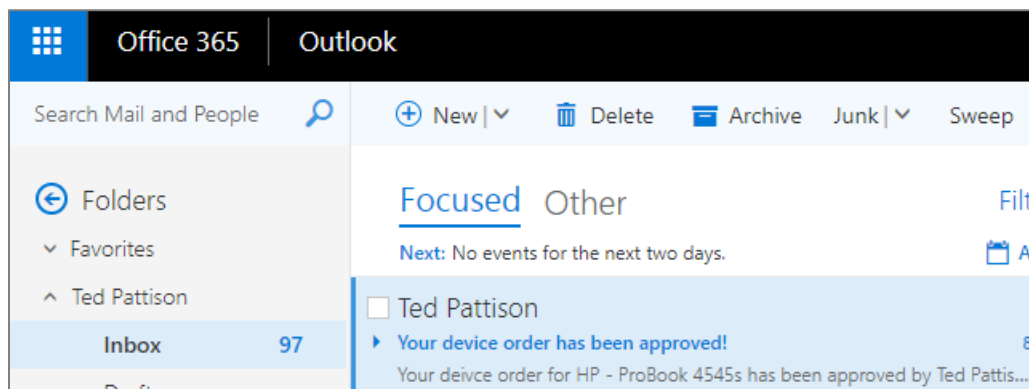


- b) Enter a comment and click the **Submit** button to complete the approval process.

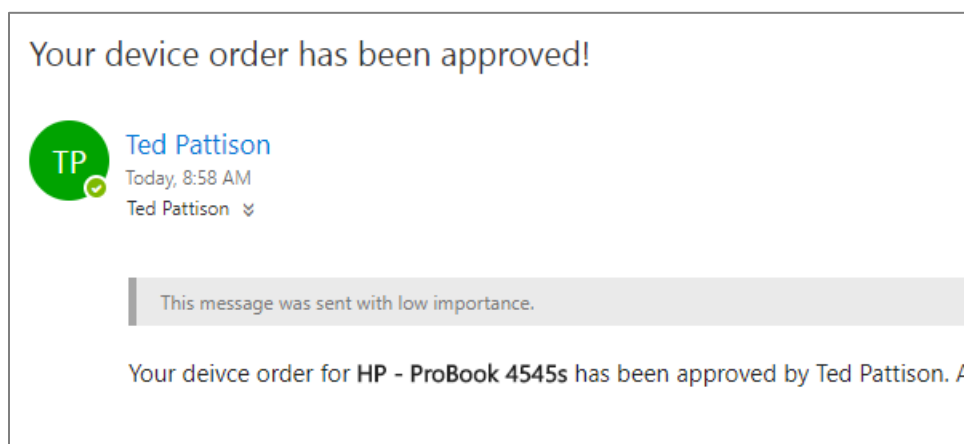


7. Inspect the email message that indicates that the device request has been approved.

- a) After you approve the request, you should see a new email message as shown in the following screenshot.



- b) Inspect the body of this message.



8. Create another device request, but this time you will reject the request instead of approving it.
 - a) Use the Device Ordering app to create a new device request.
 - b) Inspect the SharePoint list to verify you can see the new request.

Title	DeviceID	Price	RequestBy	Approver	ApprovalStatus	Comments
HP - ProBook 4545s	45	\$499.00	Student@DDPAF.onmicrosoft.com	student@DDPAF.onmicrosoft.com	Approved	I really need this laptop. Approver comments: Business justification seems valid to me.
Toshiba - Portege Z935-ST4N02	98	\$979.99	Student@DDPAF.onmicrosoft.com	student@DDPAF.onmicrosoft.com	InReview	I already have a great laptop but I want another one for no good reason.

- c) Navigate back to your Outlook inbox and find the notification message for the new approval request.
- d) Click the **Reject** button.
- e) Add a comment and then click **Submit** to complete the approval request.

Details: A new device has been requested
Toshiba - Portege Z935-ST4N02
\$979.99
Comments: I already have a great laptop but I want another one for no good reason.

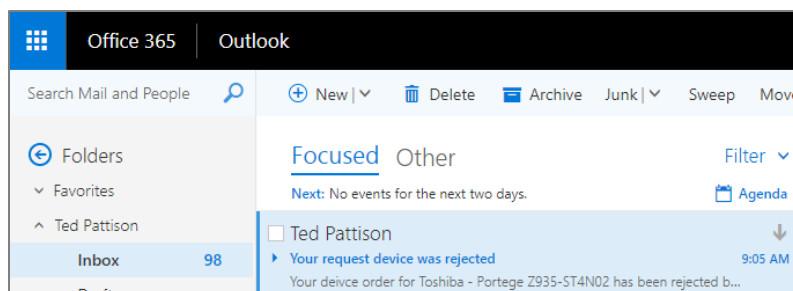
Link: [This is the requested device](#)

Approve **Reject**

You only need one laptop

Submit

- f) Wait until you see the email from the approver indicating that the request has been rejected.



- g) Inspect the body of the message.



9. Inspect the new items in the **DeviceOrder** list in SharePoint.
 - a) Go to your SharePoint site.
 - b) On the top right-hand corner, select the gear icon and then select **Site contents** from the menu.
 - c) Click on the **DeviceOrder** list from the left-hand navigation section.
 - d) Check the items for the device approvals that you just requested and approved
 - e) The **Approval Status** should indicate **Approved** or **Rejected**.

Title	DeviceID	Price	RequestBy	Approver	ApprovalStatus
HP - ProBook 4545s	45	\$499.00	Student@DDPAF.onmicrosoft.com	student@DDPAF.onmicrosoft.com	Approved
Toshiba - Portege Z935-ST4N02	98	\$979.99	Student@DDPAF.onmicrosoft.com	student@DDPAF.onmicrosoft.com	Rejected

Exercise 5: View the History of an Approval Flow

In this exercise, you will examine flow history to see what happened during the lifetime of each flow.

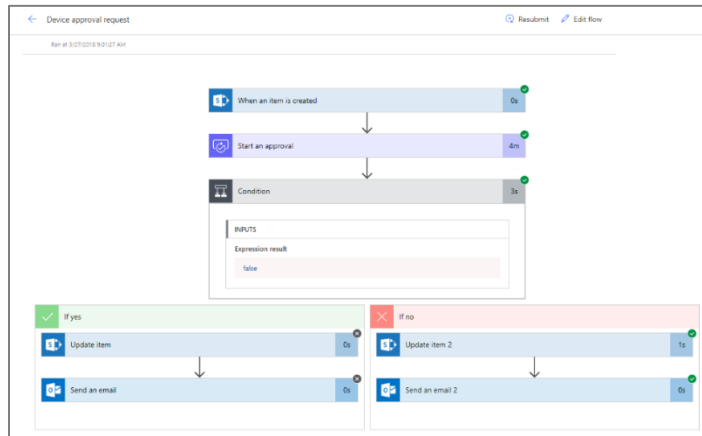
1. Examine the Run History for the Device approval request flow.
 - a) Navigate to Microsoft Flow and click on the **My Flows** link.
 - b) Click on the **Device approval request** flow.

Name	Last modified
Device approval request	1 hour ago
Idea Tracker	1 day ago

- c) You should now be able to see the **RUN HISTORY** list for this flow.
 - d) Click on the top item in the **RUN HISTORY** list.

RUN HISTORY			See all >
Succeeded	54 minutes ago	4 minutes	>
Succeeded	1 hour ago	6 minutes	>

- e) Inspect the flow history of this run. Since this flow run was for the request that was rejected, you can see that the flow execution moves into the **If no** branch and not the **If yes** branch.

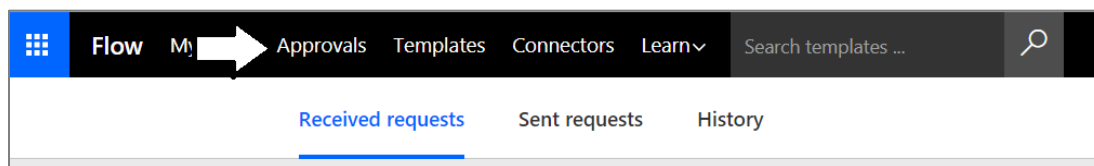


You have now created an approval flow and tested it using email messages. In the final exercise, you will use the Flow Approvals center instead of email messages to approve flows and to monitor the state of each approval flow run.

Exercise 6: Approve a Request using the Flow Approvals Center

In the final exercise, you will approve a device order request using the Flow Approvals Center.

1. Use the Device Ordering App to submit one more device approval request.
 - a) Sign-in at <http://web.powerapps.com>.
 - b) Run the Device Ordering App.
 - c) Select a few devices and click Compare.
 - d) Create a device request. Make sure to change the approver email to your own email for test purposes, you don't want a real approver request going to your manager.
2. Navigate to the Flow Approvals Center
 - a) Go to the flow portal
 - b) Sign-in using your Office 365 trial account.
 - c) Click the **Approvals** link in the top navigation bar.

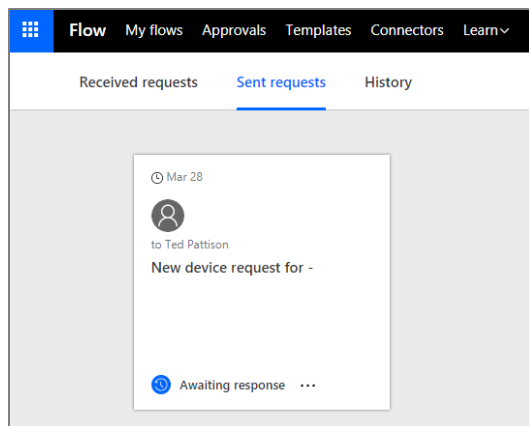


3. Inspect the History tab to see the two approvals that have already run.

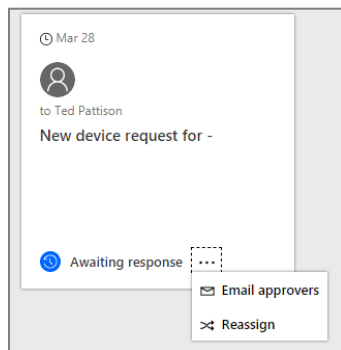
REQUESTER	TITLE	DATE	OUTCOME
Ted Pattison	New device request for Toshiba - Portege Z935-S...	52 minutes ago	Rejected
Ted Pattison	New device request for HP - ProBook 4545s	1 hour ago	Approved

4. Inspect the **Sent requests** tab.

- a) Since you just submitted a request, you can see it in this tab. Note that is indicated you are still awaiting a response.



- b) Drop down the ellipse (...) menu. You can see commands for Email approvers and Reassign.

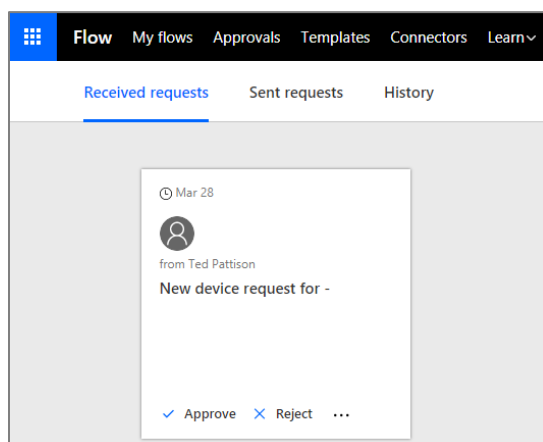


Keep in mind that in a production app that one user will not be both the sender (i.e. the requestor) and the receiver (i.e. the approver). However, this is a specialized case where you are acting as both sender and receiver so you can test the flow from end to end.

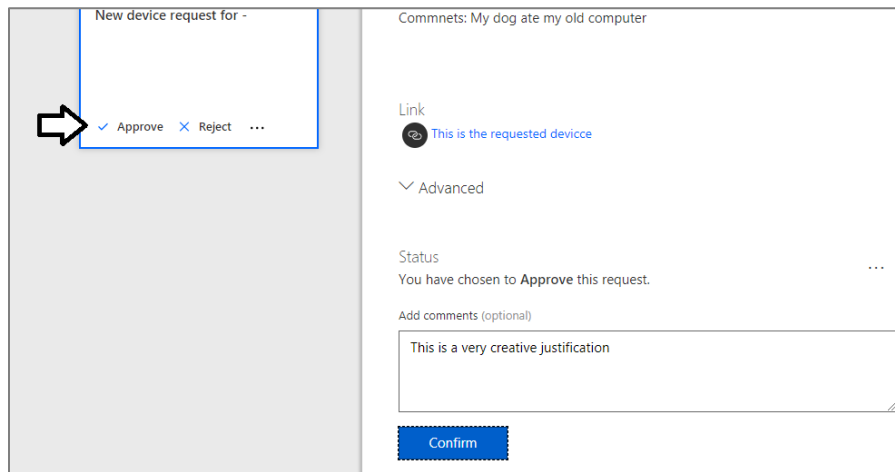
Keep in mind that all approval requests sent from or to the current user will be visible in the Approvals Center. This includes approvals sent from any app or flow.

5. Inspect the **Received requests** tab.

- a) You should see the new request since you are the assigned approver.



- b) Click the Approve link and then enter a comment and click **Confirm** to complete the approval process.



The screenshot shows a SharePoint approval interface. On the left, a card titled "New device request for -" has a blue border and a black arrow pointing to the "Approve" button. The card also contains "X Reject" and "..." options. The main area on the right is titled "Comments: My dog ate my old computer". It includes a "Link" section with a circular icon and the text "This is the requested device". Below this is a collapsed "Advanced" section. The "Status" section shows "You have chosen to **Approve** this request." with a "...". There is an "Add comments (optional)" section with a text box containing "This is a very creative justification". At the bottom right is a blue "Confirm" button.

- c) You should see that the request will no longer be visible once it has been processed.

Congratulations! You have successfully completed the final part of building out the Device Ordering app. You created a PowerApps app, connected it to a SharePoint list to store device requests, and used Microsoft Flow to trigger an approval request.