Microsoft Power Virtual Agents in a Day

Lab 10: Create a chatbot in Microsoft Teams

Hands-on Lab Step-by-Step

January 2022

Contents

Power Virtual Agents

This lab is subject to the Terms of Use on page 84Terms of Use of this document.

Goals for this lab

After this lab you will be able to:

- Create a new chatbot in Microsoft Teams
- Publish the chatbot to Microsoft Teams users
- Enable the chatbot to interact with Microsoft Dataverse for Teams

The time to complete this lab is [60] minutes.

Scenario: Contoso Human Resources

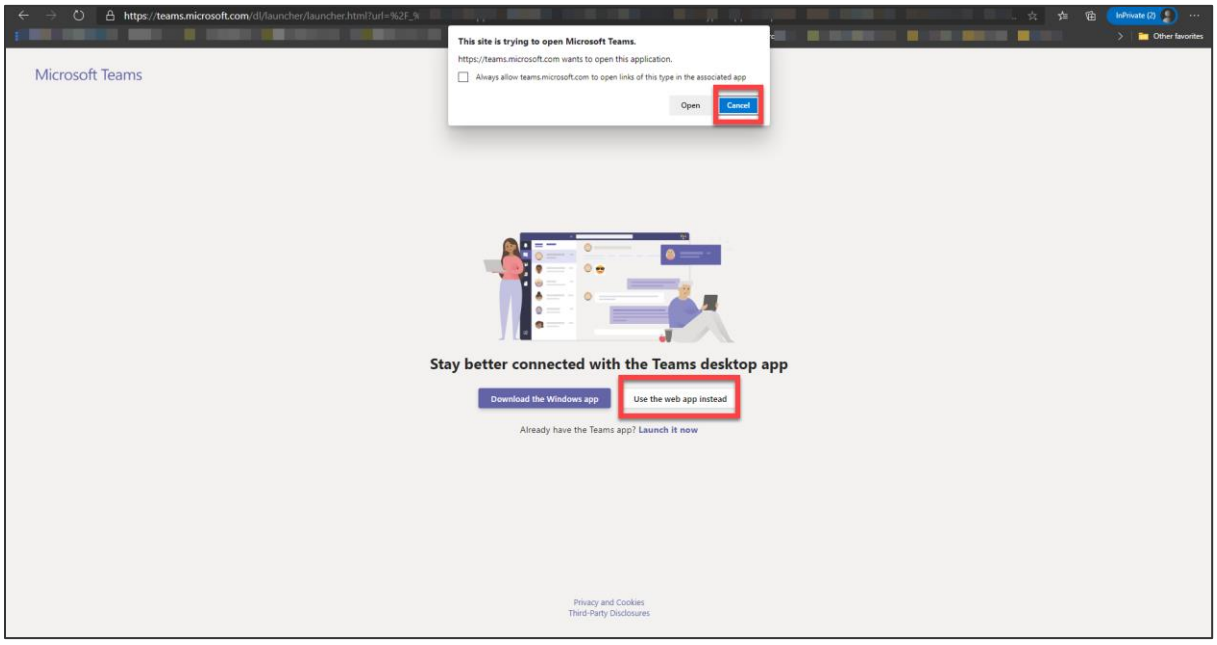
Power Virtual Agents is available as both a standalone web app and as an app in Microsoft Teams. Most of the functionality is the same, but when you use Power Virtual Agents as a Microsoft Teams app, it will only be available internally. This is an ideal solution if you want to create a chatbot to answer common internal questions posed by employees, particularly for areas like IT and human resources where there are a lot of frequently asked questions. If you want to create a chatbot for customers, to deploy on your website or other channels, you should still use the standalone web app.

In this lab, we will be adding the Power Virtual Agents app to Microsoft Teams, and creating a chatbot for the employees of Contoso Retail Company to get quick and easy answers to frequently asked questions about HR in their organization. You will then also see how Microsoft Dataverse for Teams can be used to create a table to store leave requests. Both a Power App and chatbot will be built for users to submit their leave requests.

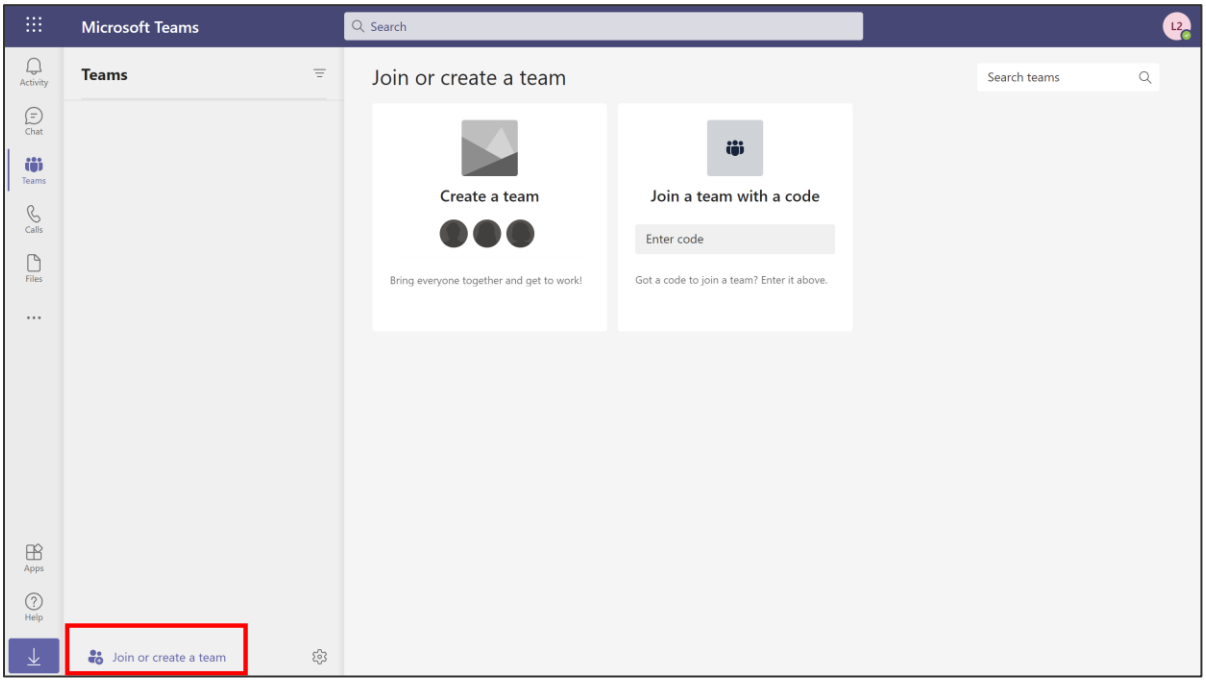
Exercise 1: Create a chatbot in Microsoft Teams

Task 1: Create a new team

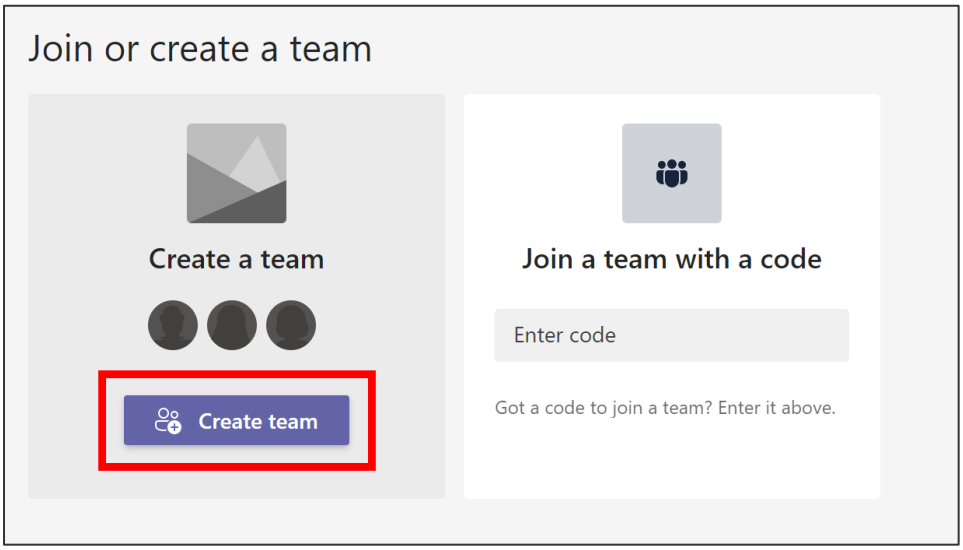
1. Open a new browser tab and navigate to https://teams.microsoft.com/
   Follow the prompts (may vary depending on your browser) to use the web app for Microsoft Teams. As shown here when using Edge, click **Cancel** on the pop up, and then **Use the web app instead**.



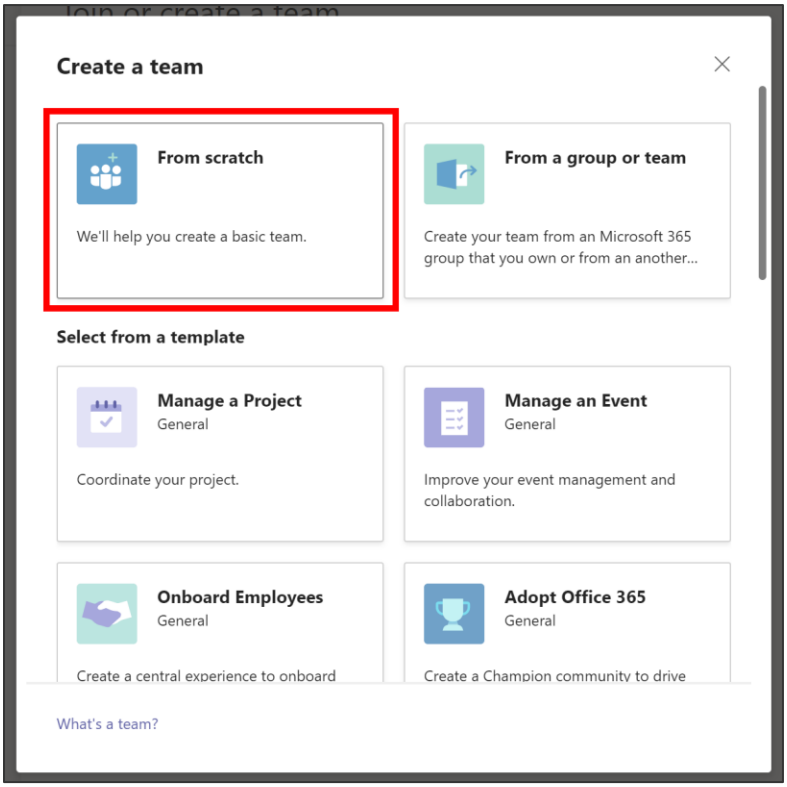
2. Create a new team by clicking on the **Join or create a team** option.



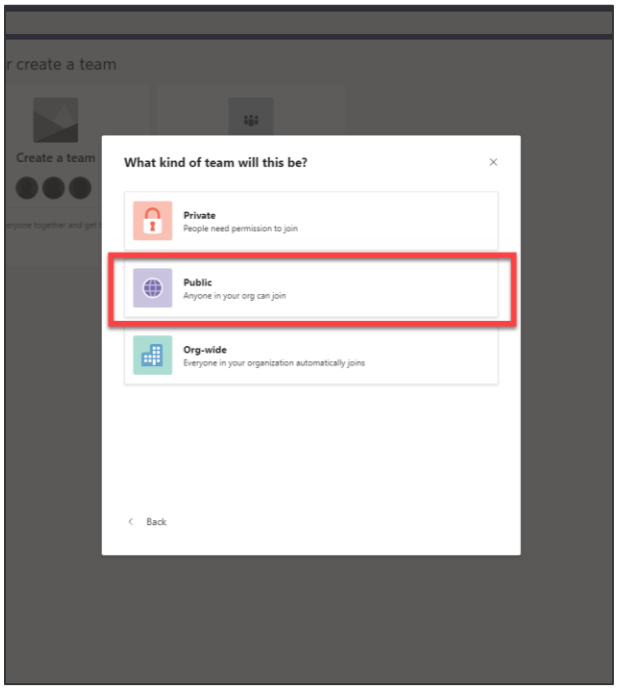
3. Click on the **Create team** button.



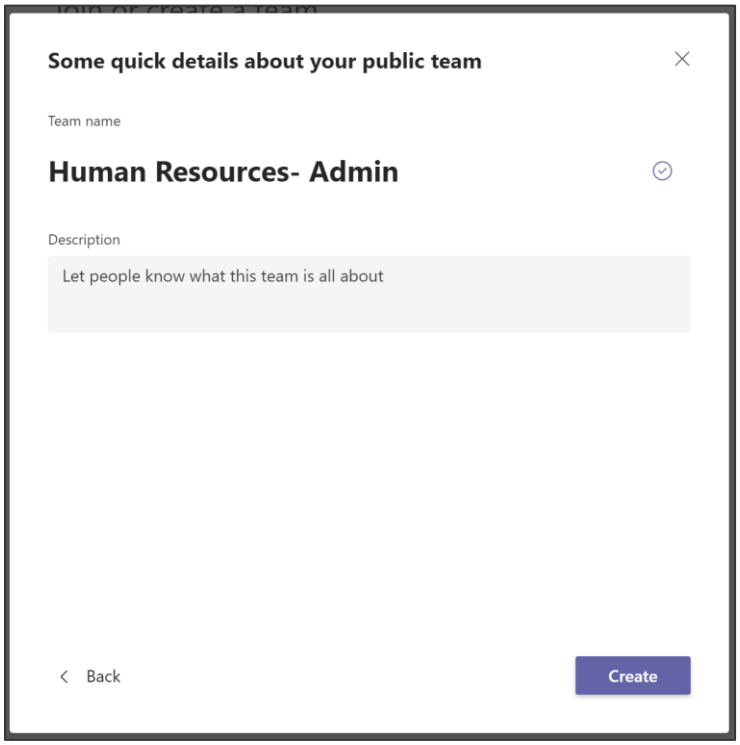
4. Select **From scratch.**



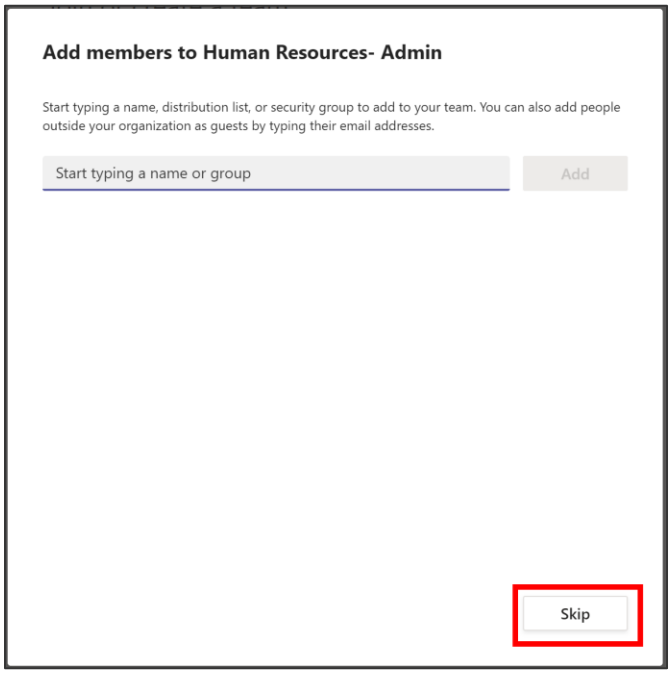
5. Select **Public**.



6. Give your team a name, such as **Human Resources- *<your name>*** and click **Create.** If you are completing these labs as part of a training group, you should add your name to the Team name so that you can identify which one is yours as there will be other people creating a Team too.



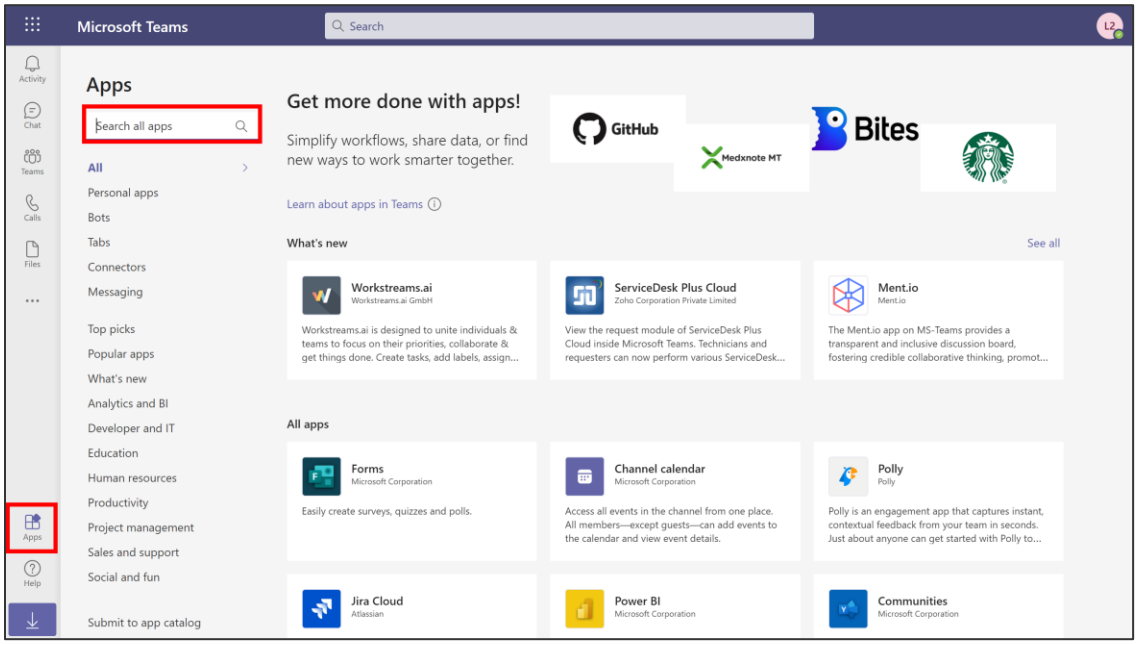
7. When prompted to add members, click **Skip**.



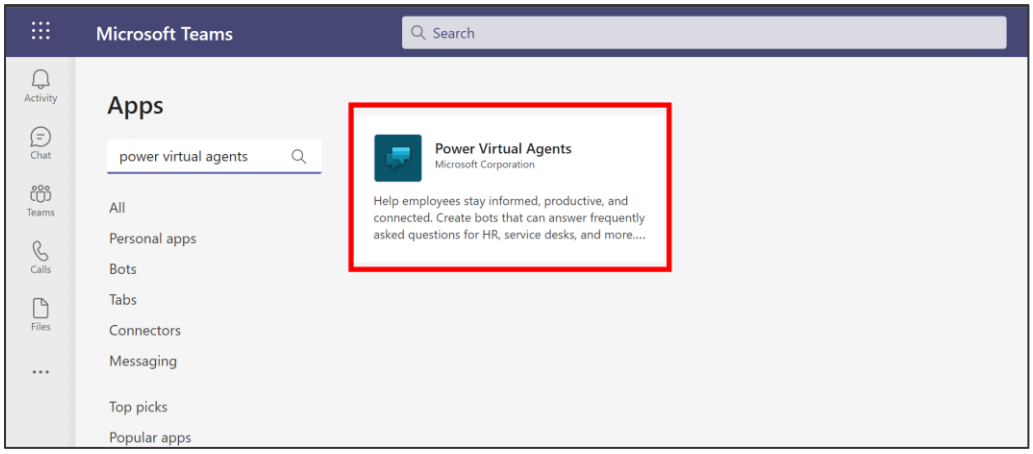
8. You will now see your new team created.

Task 2: Discover and add the Power Virtual Agents app to Teams

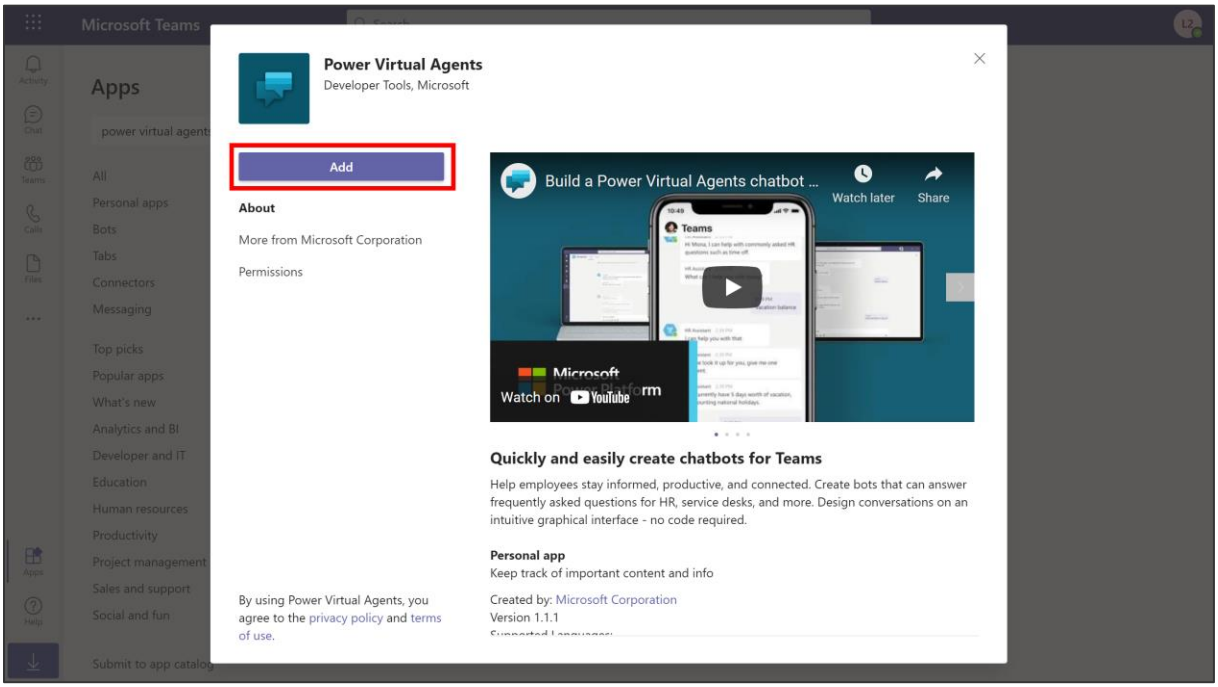
1. Click on the **Apps** icon on the left toolbar, and then search for Power Virtual Agents.



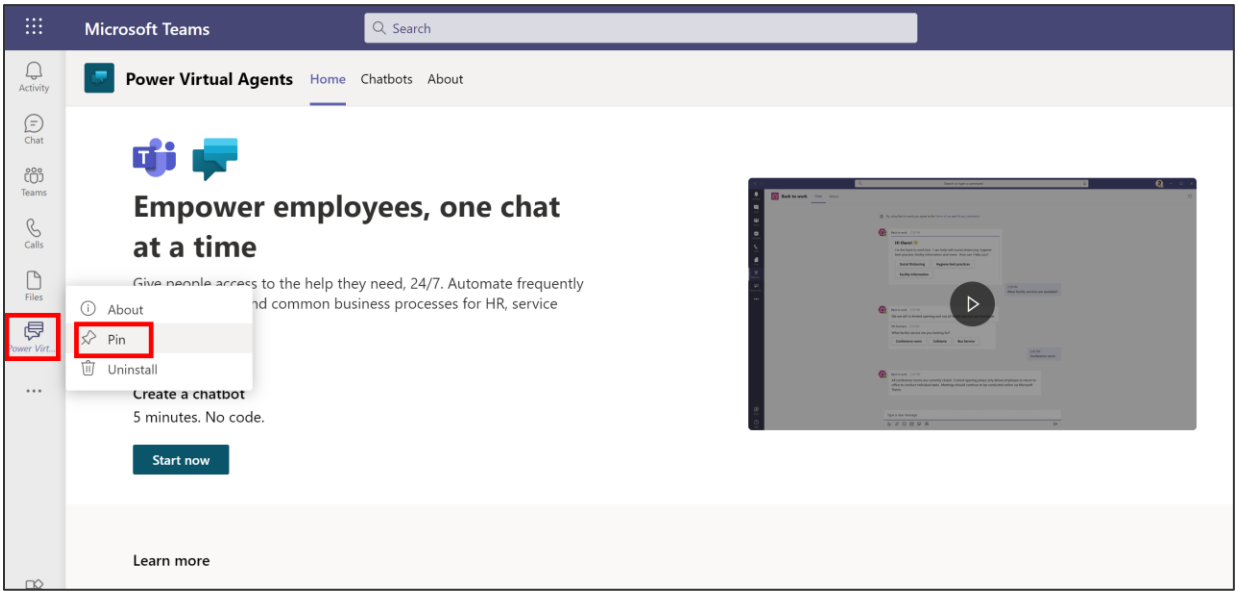
2. Click on the Power Virtual Agents App when you find it in the search results.



3. You will see a pop up with information about the Power Virtual Agents App for Microsoft Teams. Click on the **Add** button.

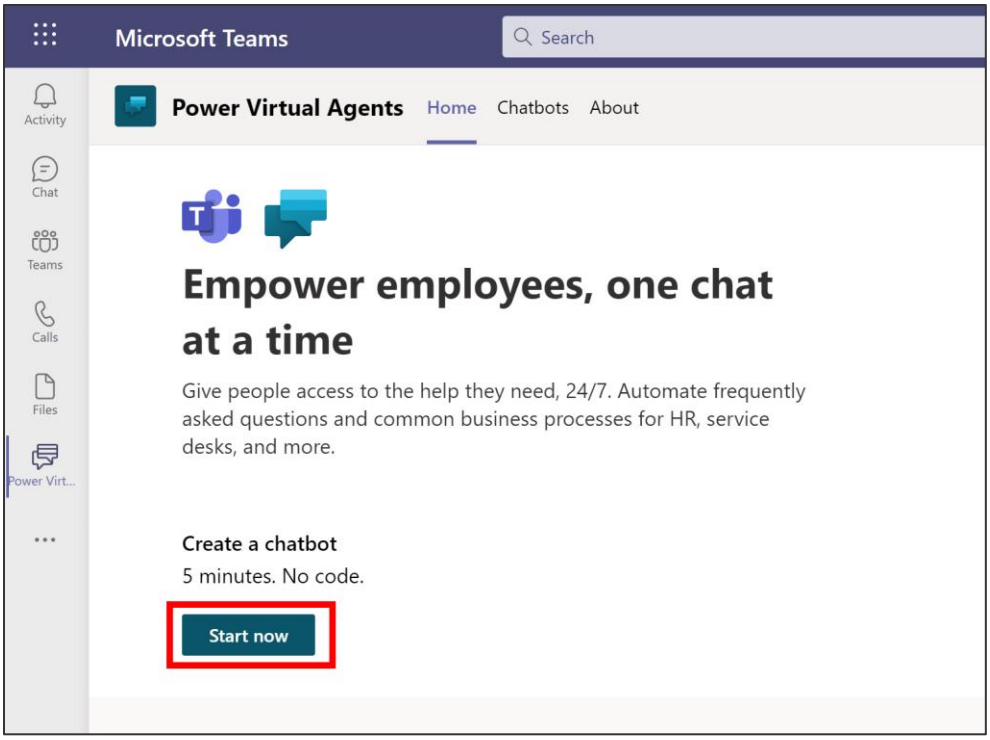


4. You will now see the Power Virtual Agents app in the left-hand navigation bar. Right click on that icon and select **Pin**. This pins the app to the navigation bar, making it easier to return to it when you need to.

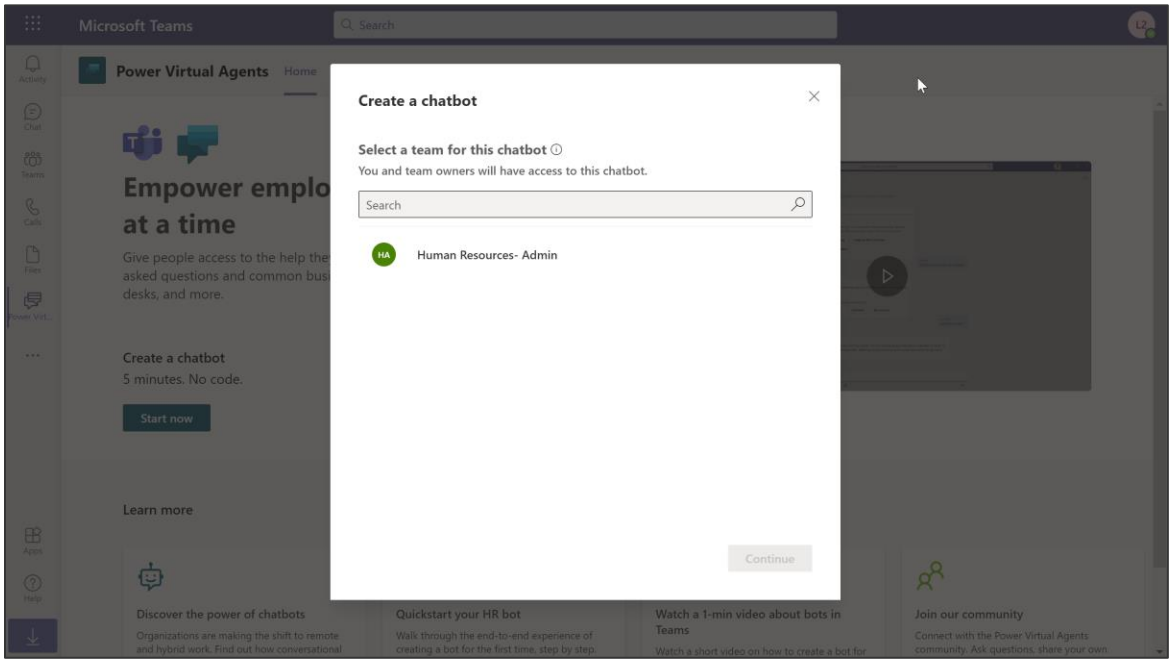


Task 3: Create a new chatbot

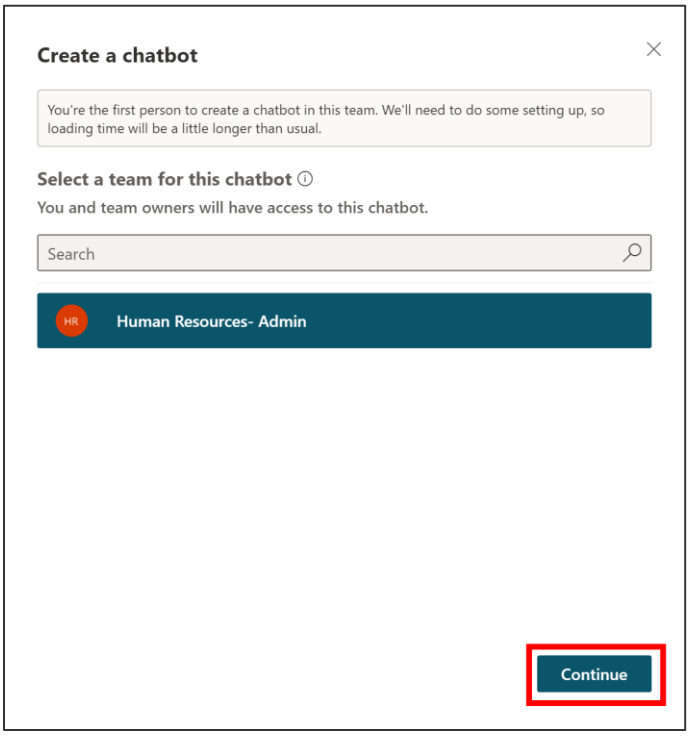
1. Click on the **Start now** button.



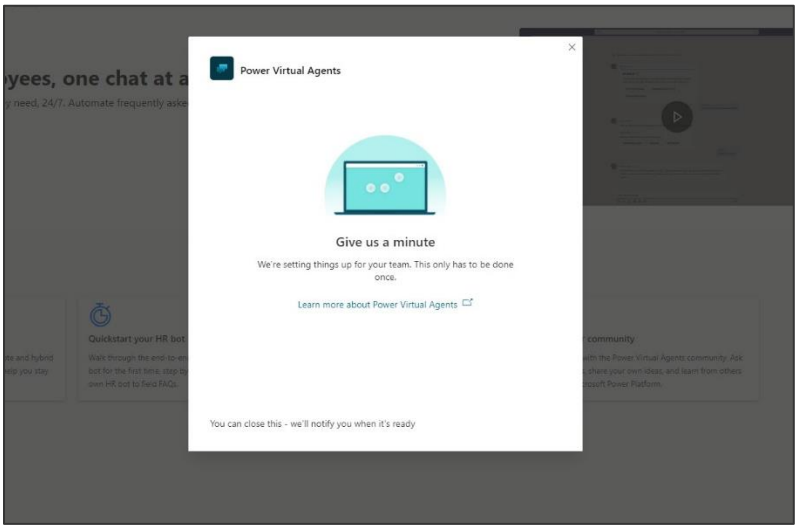
2. You will be asked which team you want your bot to join. When you are adding a bot as an app in Teams, you can think of it as adding a new virtual member of your team. Search for and select the team you created in the previous section.



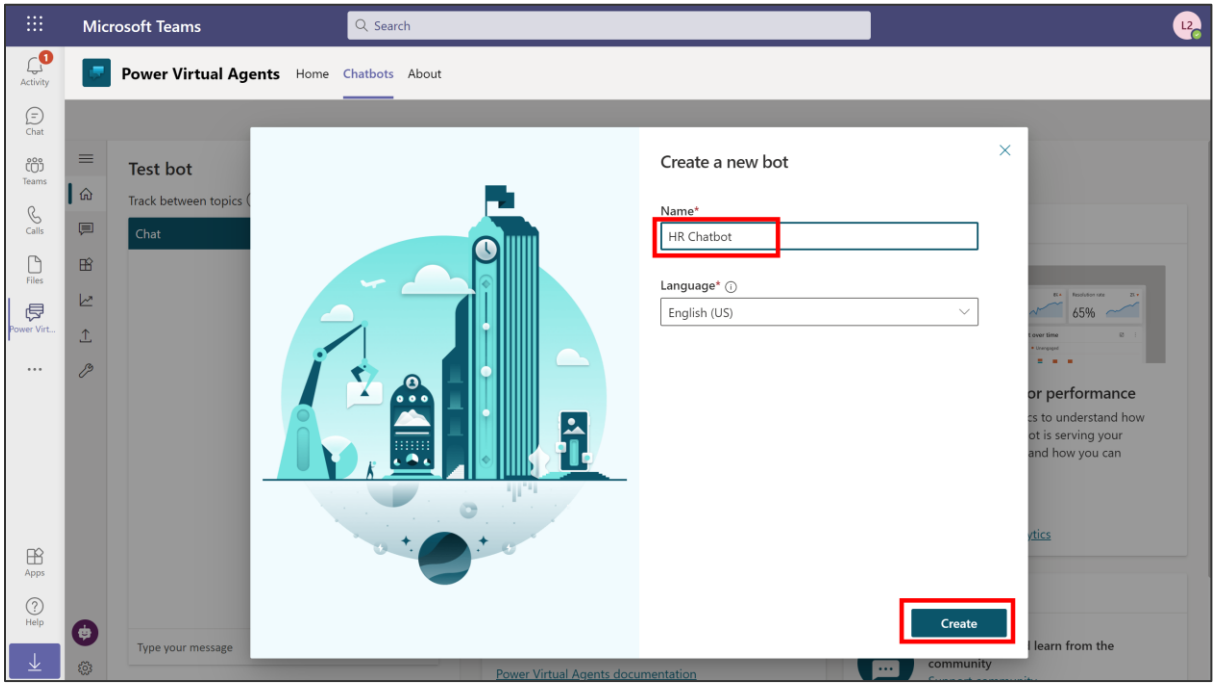
3. Once you have selected your team, click continue.



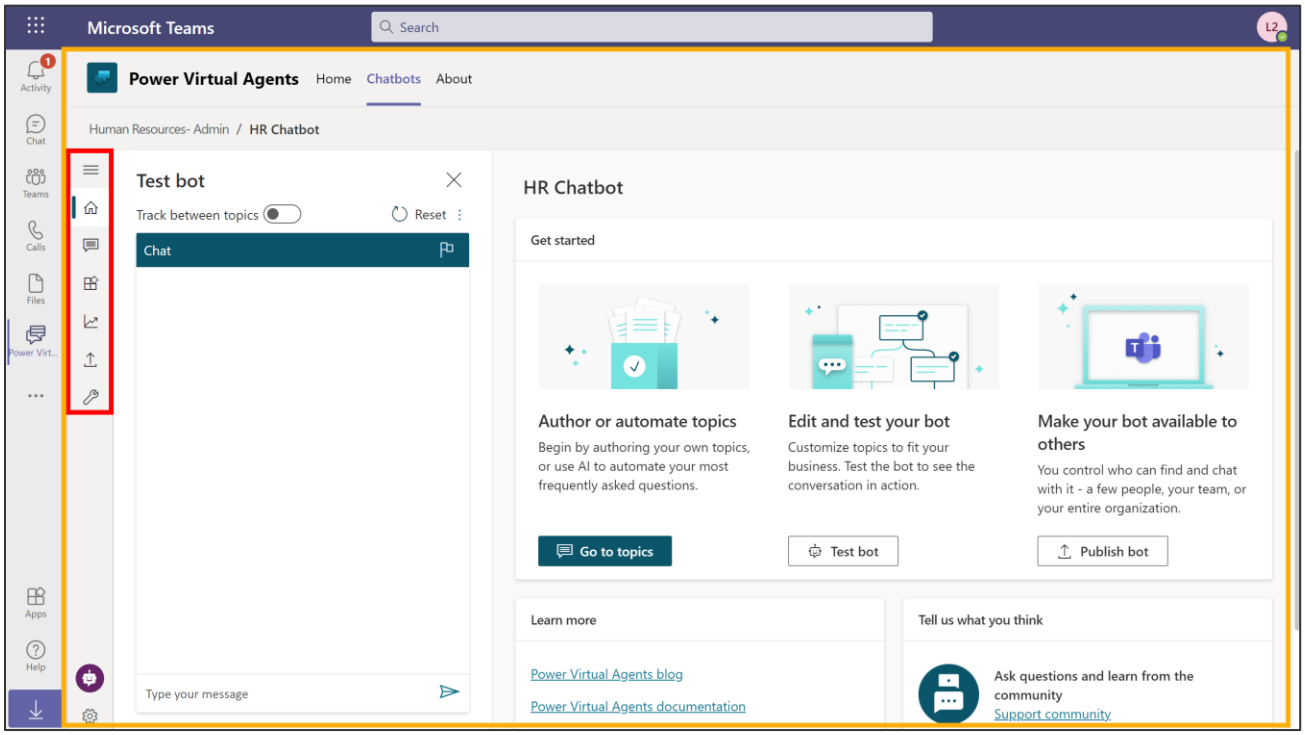
4. You will get a message advising that it takes some time to set this up for the first time. Wait for this to finish.



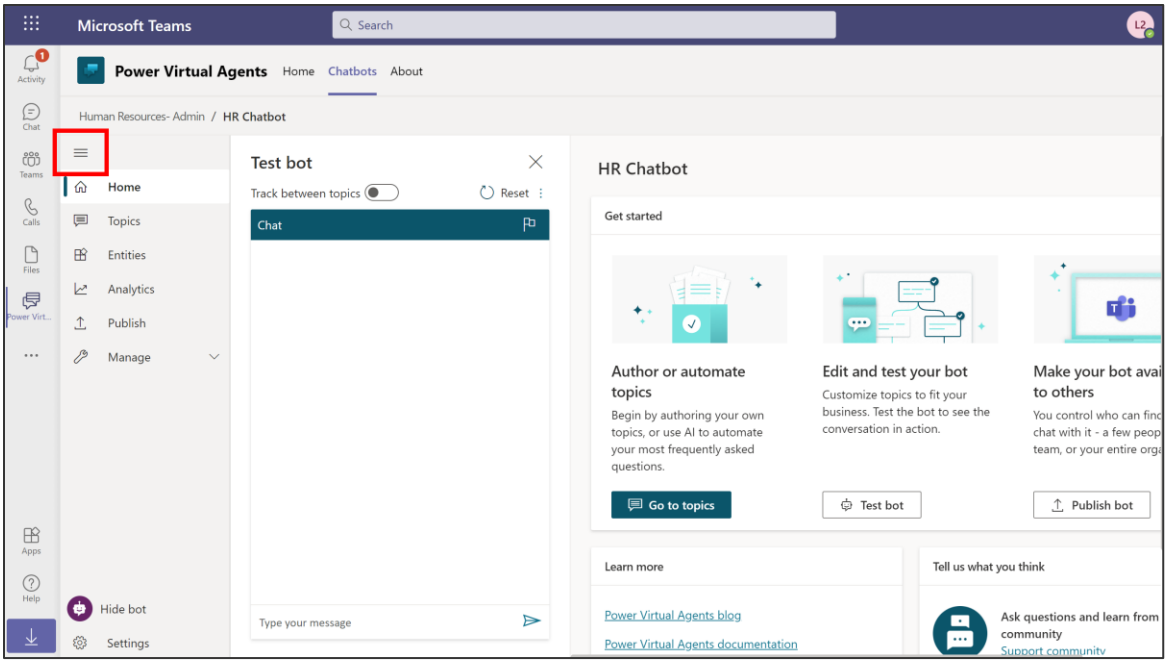
5. You will now be prompted to create a new bot. Give your bot a name (for example, **HR Chatbot** – or choose your own name if you prefer) and click **create**. Wait a minute or so until the bot has been provisioned.



6. Take a moment to orient yourself with the screen. You are now seeing the familiar Power Virtual Agents builder inside Microsoft Teams. You have a test bot pane on the left as normal. The navigation menu is collapsed down into icons. The experience of building your chatbot is the same as what you've done in previous labs, but you are now doing it entirely within Teams.



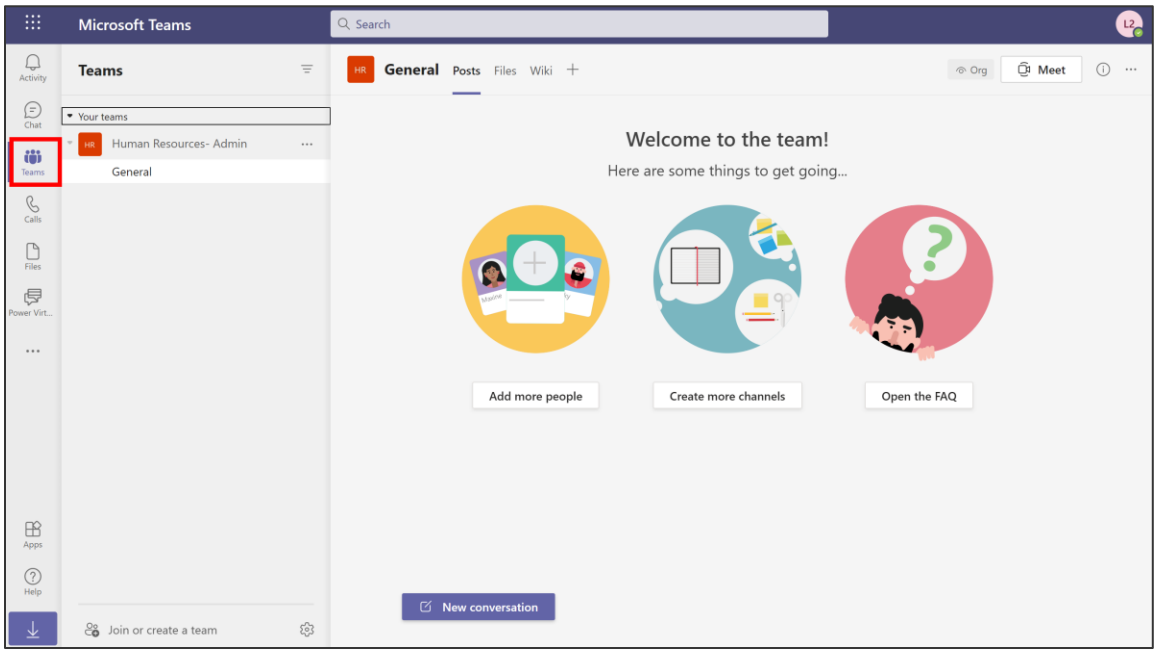
7. Click on the hamburger icon to expand (or collapse) the navigation menu.



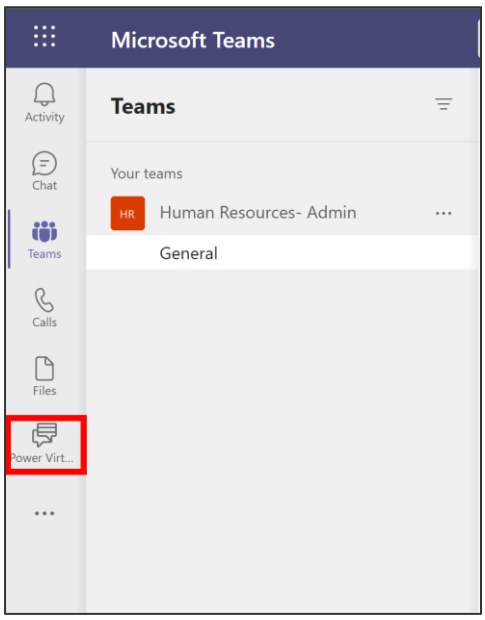
Task 3: Navigating between other parts of Teams and your existing chatbot

You can navigate away from building your chatbot to continue collaborating in Teams and come back to continue working on it at any time. Take note of this step – you will need to navigate back and forth later in the lab.

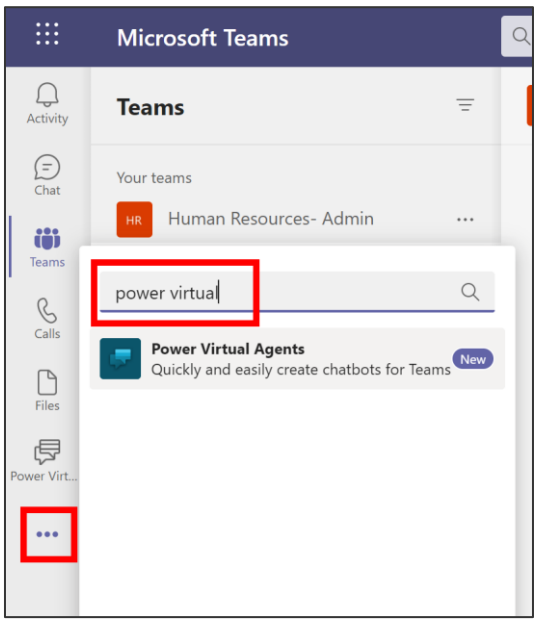
1. Click back on the main Teams icon in the left-hand navigation bar to return to your teams.



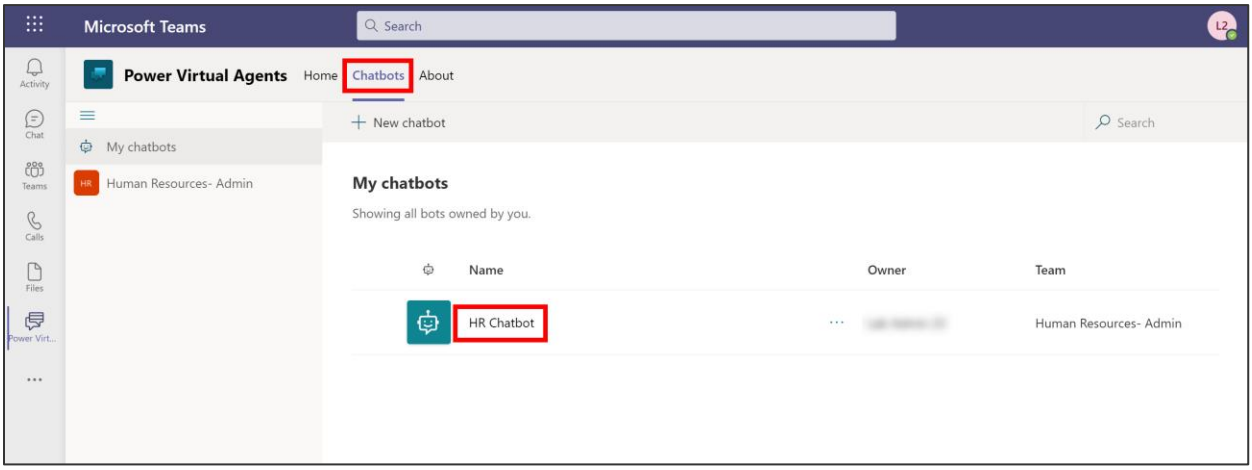
2. To return to building your chatbot, you need to return to the Power Virtual Agents app in Teams. If you pinned the icon to the navigation menu earlier, you will find it there and you can click on it. If not, you can click on the ••• icon at the bottom of that menu, and search for Power Virtual Agents and select it.



OR



3. Click on **Chatbots** in the menu at the top of your screen to see a list of all existing chatbots. Click on the name of your chatbot to open it for editing.



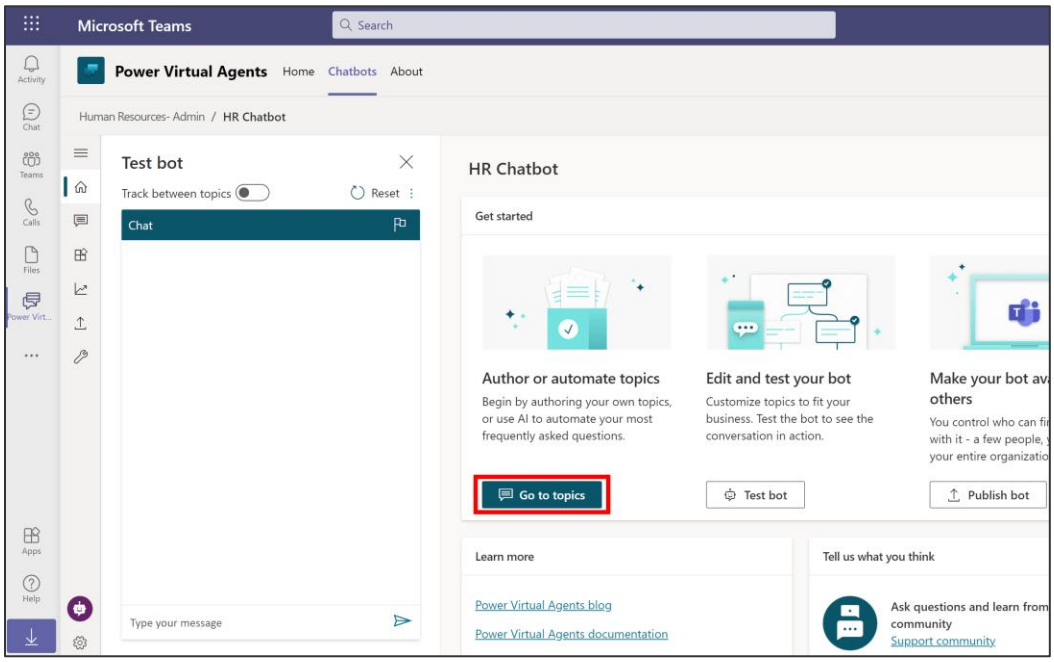
Exercise 2: Personalize the greeting with claim variables

There are two special user related variables available to help personalize your chatbot conversations, known as claim variables. These variables provide access to the display name and user ID of the user, without needing to build a flow or any API calls. They are bot variables, so they are available to use in any topic.

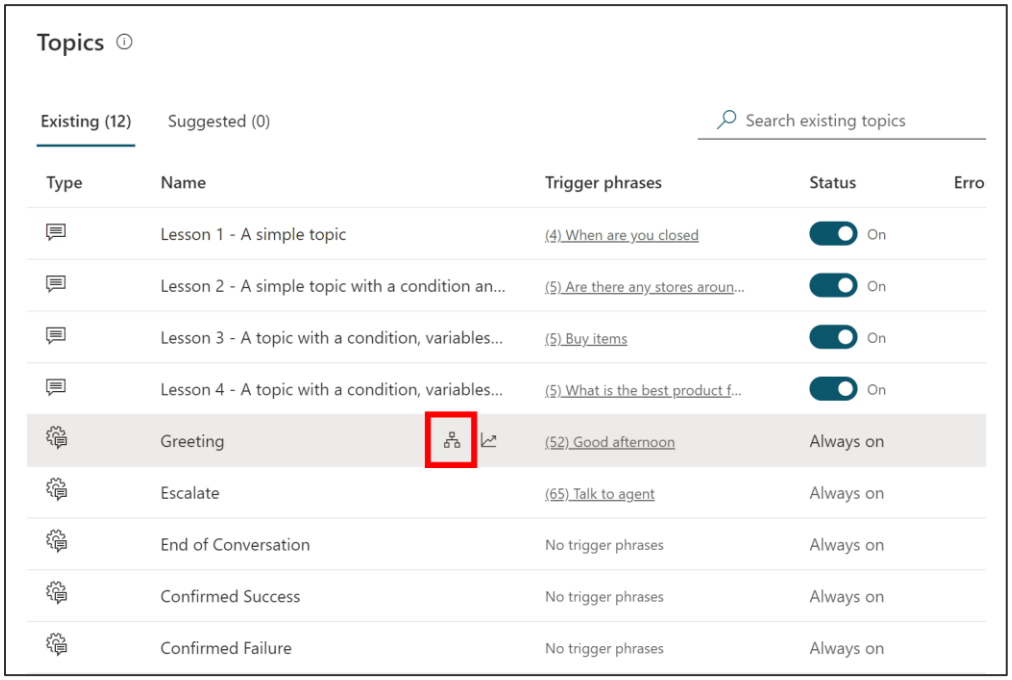
Task 1: Edit and personalize the greeting topic

In this task we will edit the greeting topic so that the chatbot greets the user as an internal chatbot ready to help the user with their HR questions. We will also personalize the greeting by having the bot greet the user by name when the conversation starts, using a claim variable.

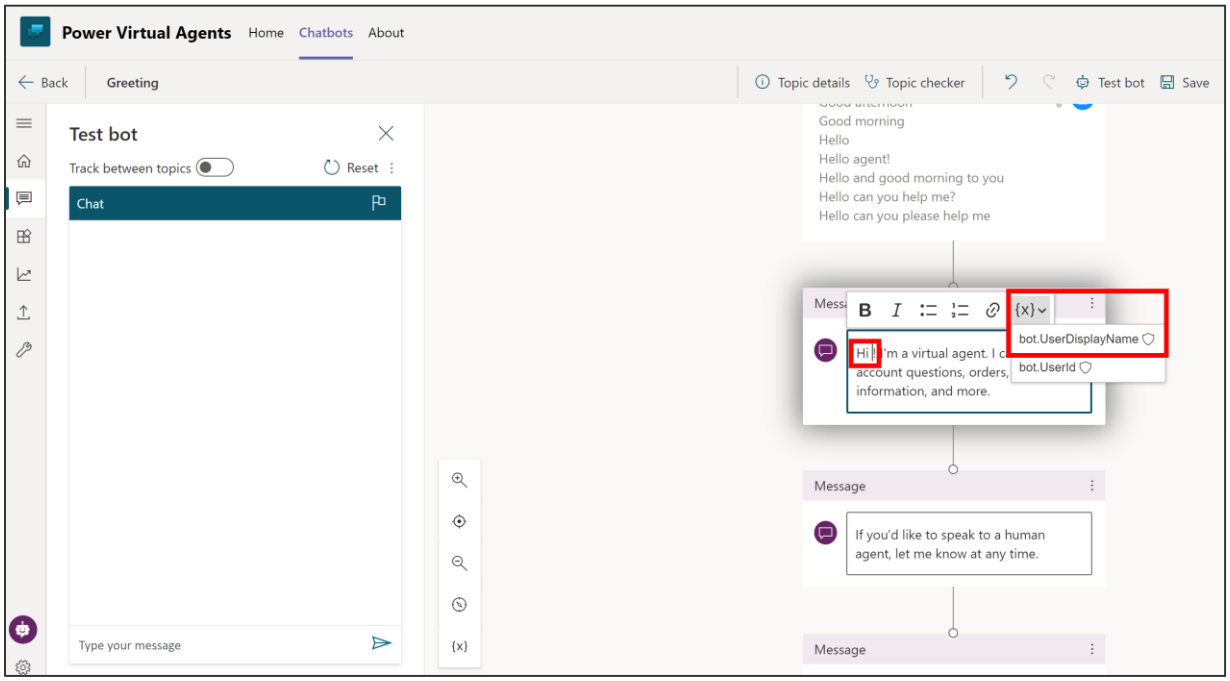
1. Click on **Go to Topics.**



2. Find the **Greeting** topic and hover your mouse over it. You will see icons appear to the right of the topic name. Click on the icon to open the topic in the authoring canvas.



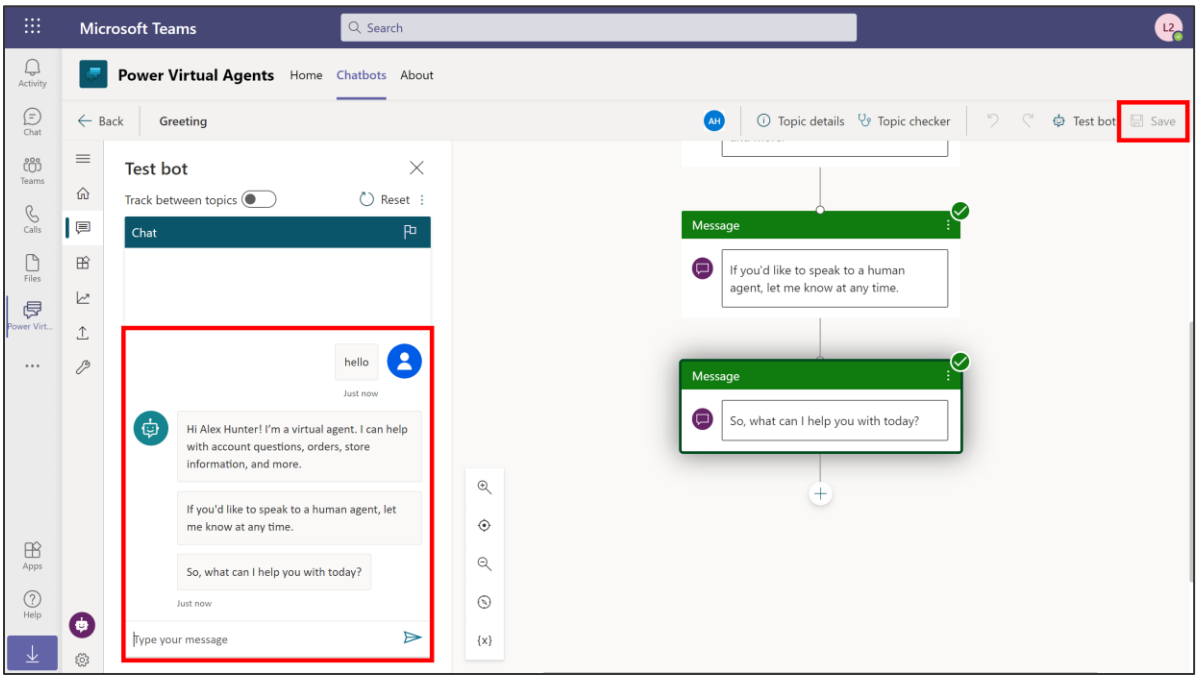
3. Let's personalize the greeting by adding a claim variable that will display the name of the user. Put your cursor between the word "Hi" and "!" and add a space. Click on the variable icon and select **bot.UserDisplayName**.



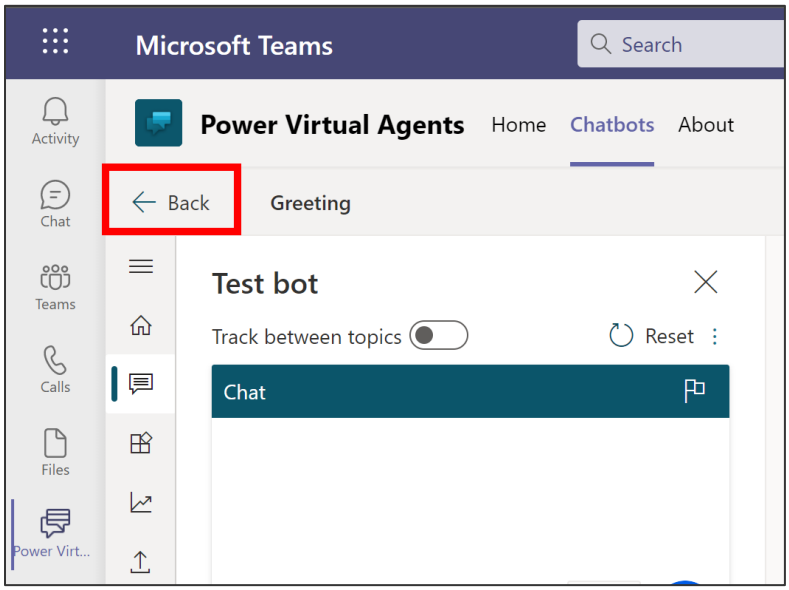
4. Now edit the rest of the message with the following text:

   I'm a virtual agent. I can help you with questions related to HR policies and time off.

5. Click **Save** (wait for the save to complete) and then test your bot by typing **hello** in the test bot pane. You should see your chatbot use your new greeting, including your name.



6. Click **Back** to return to your list of topics.



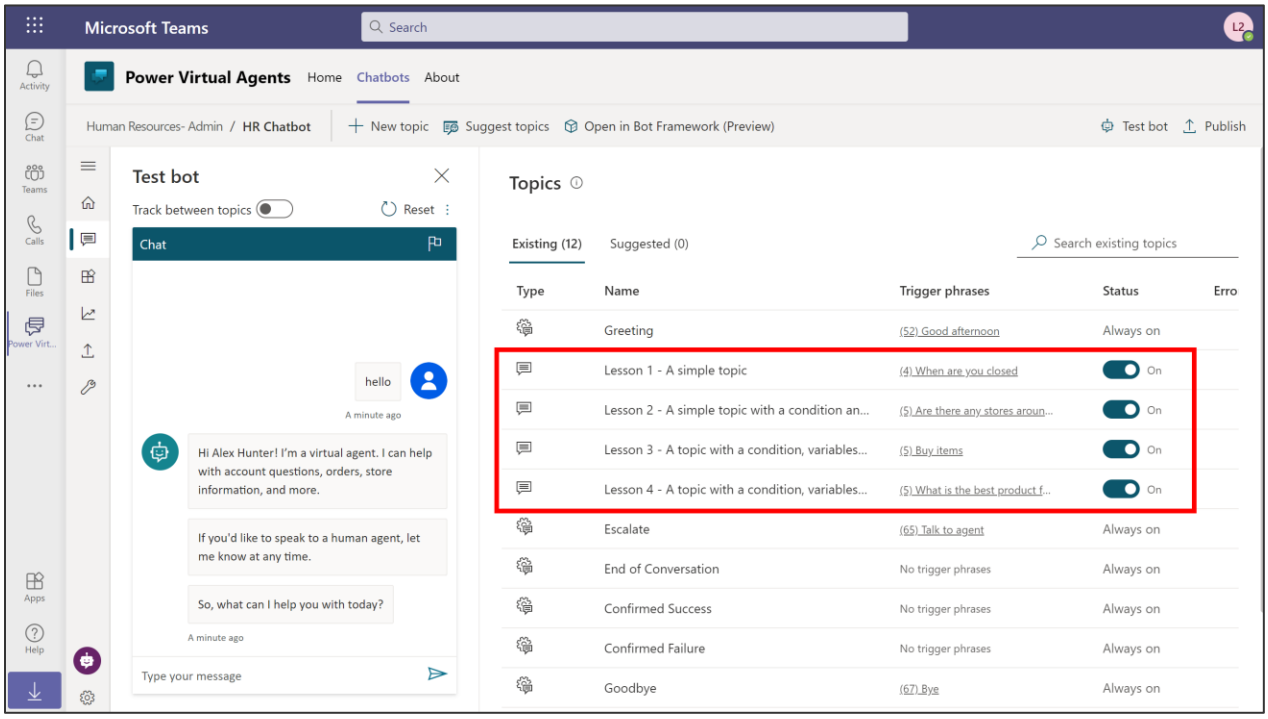
Exercise 3: Create a topic

In this task we will create a topic for the bot, to answer questions from employees who have questions about time off.

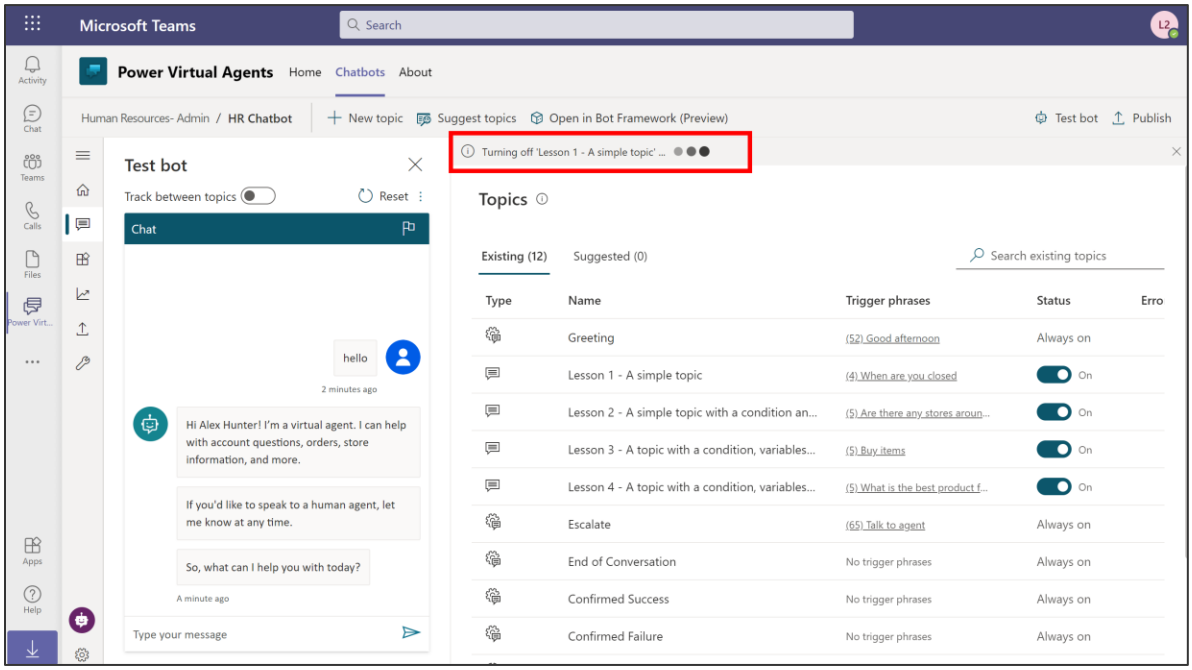
Task 1: Switch off the lesson topics

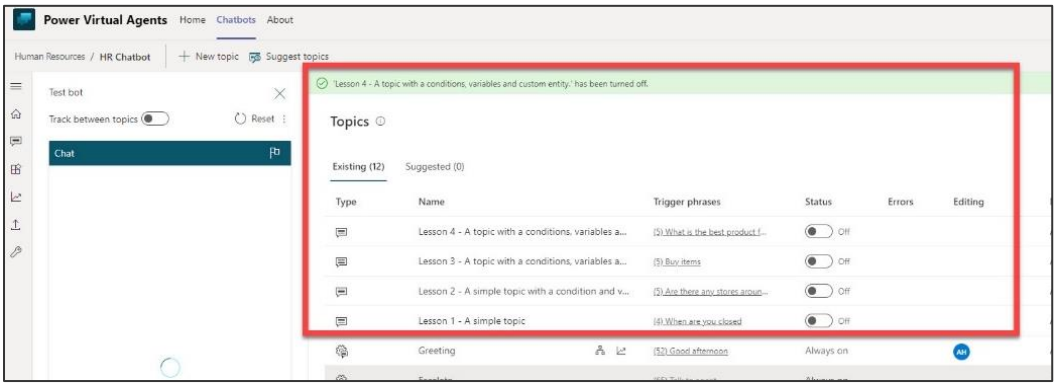
Let's start by switching off the lesson topics, which are not needed as part of this chatbot.

1. In the list of existing topics, you will see topics named Lesson 1, Lesson 2, Lesson 3 and Lesson 4. Switch the **Status** toggle for each of these to the **off** position.



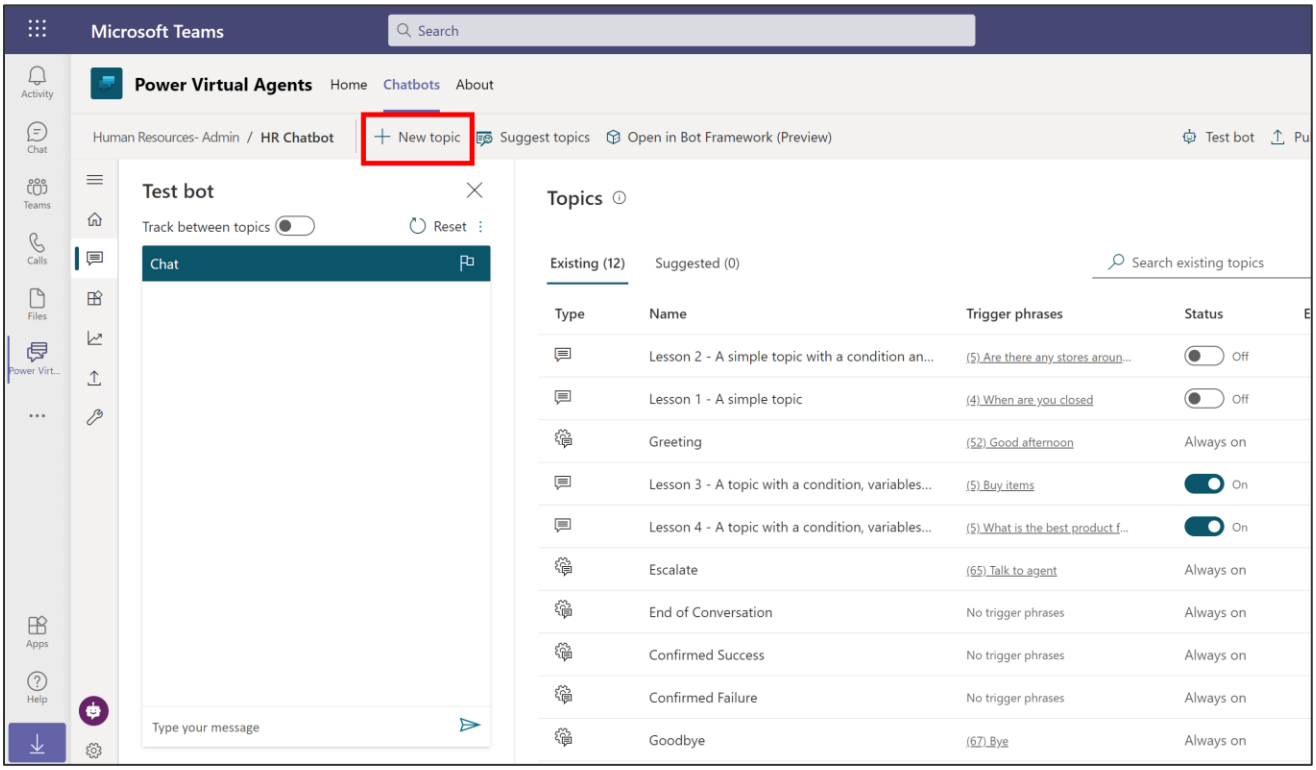
2. You will need to wait a few seconds each time while the topic is turned off. You'll see a progress message and then a confirmation message at the top of the topics list.





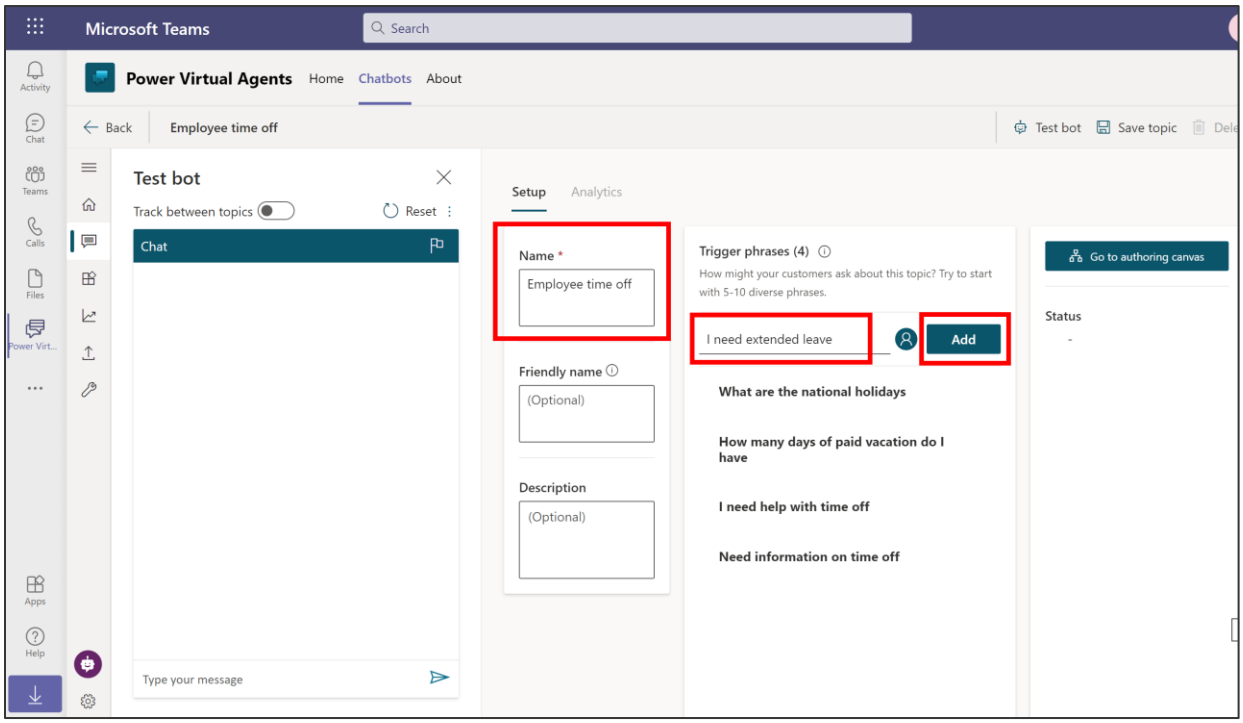
Task 2: Create a new topic for questions about time off

1. Create a new topic by clicking on **+New topic**.

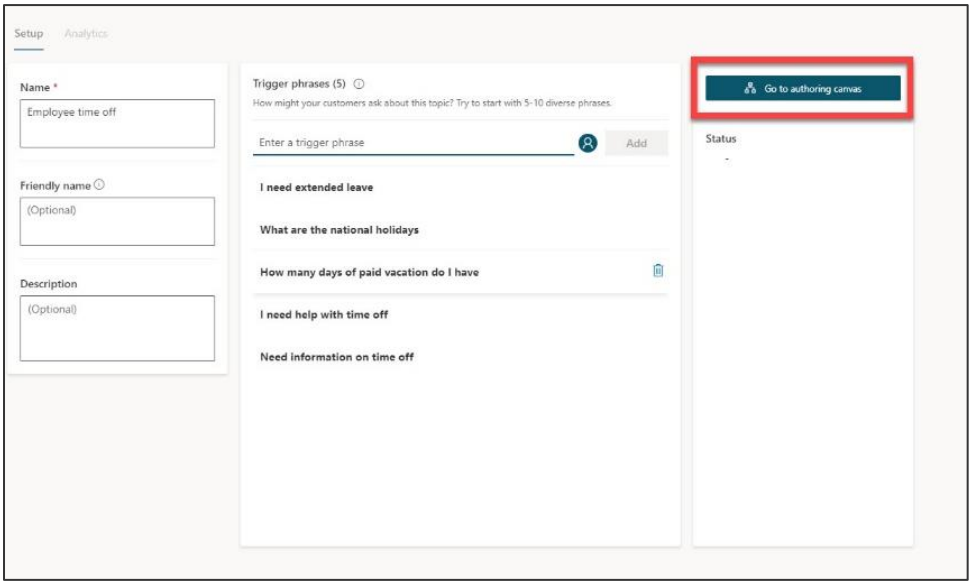


2. Give the topic a name by typing: **Employee time off** in the Name box. Then add the following trigger phrases by typing them in and clicking the Add button after each one, until they all appear in the list

   Need information on time off
   I need help with time off
   How many days of paid vacation do I have
   What are the national holidays
   I need extended leave



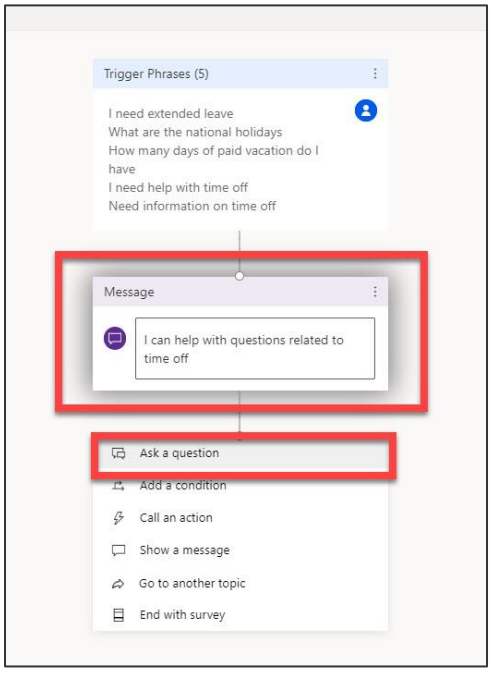
3. When you have added all the trigger phrases, click on the **Go to authoring canvas button.** This will save your topic and take you to the authoring canvas.



4. Add the following text into the message box:

   I can help with questions related to time off.

   Then click the **Add node** button underneath the message box and select: **Ask a question**

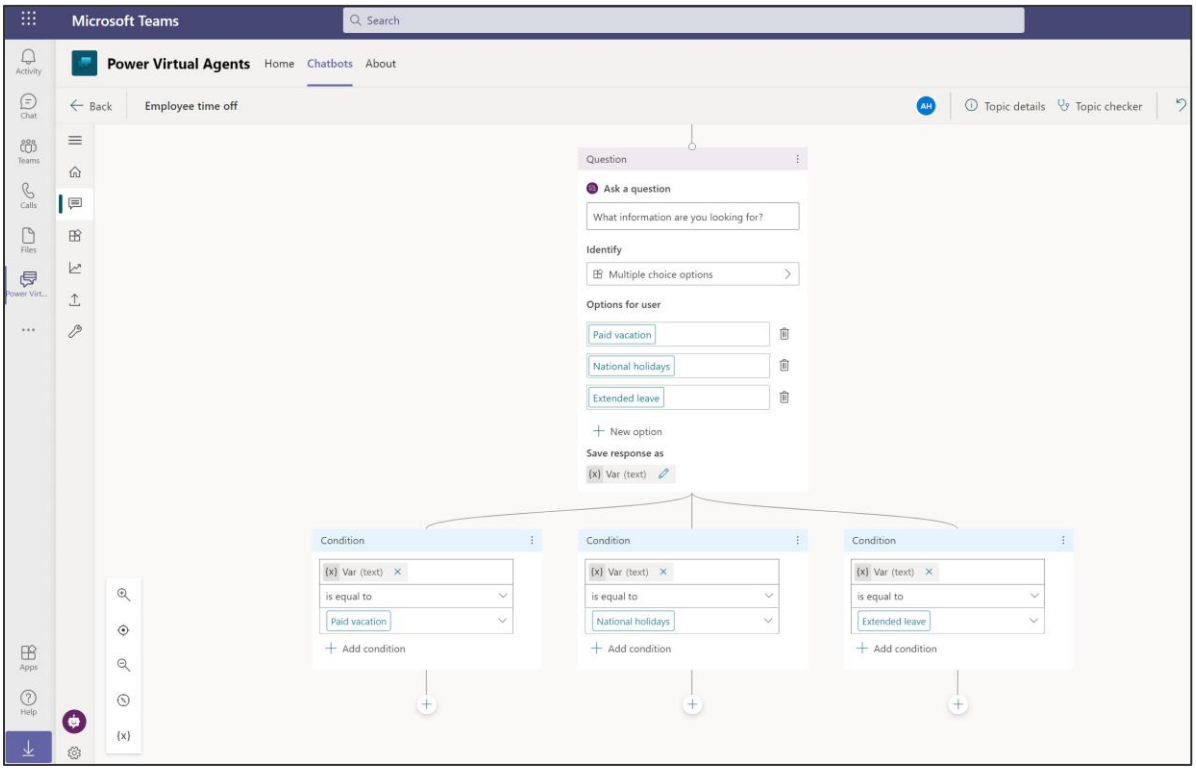


5. Note that the chatbot building experience here is the same as what you built in the previous labs in the standalone Power Virtual Agents web app. In the question box, enter the following text

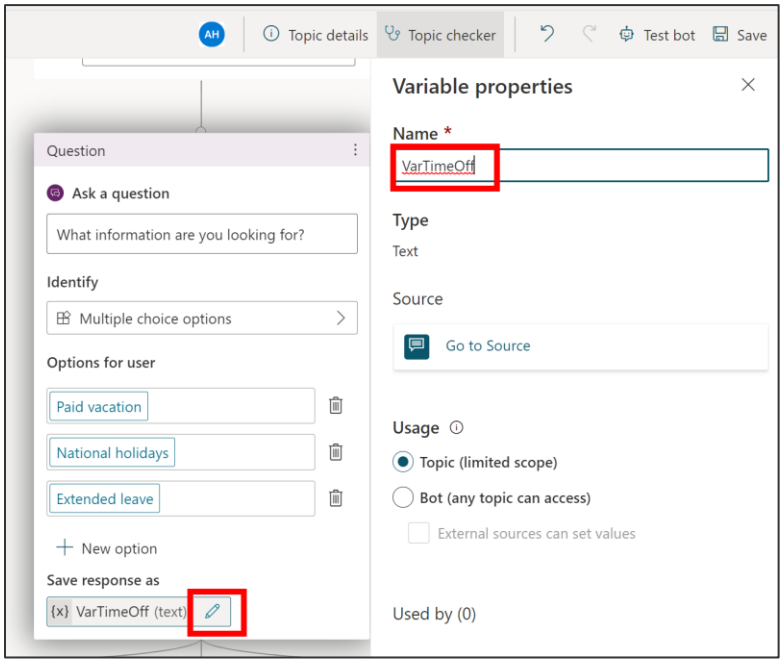
   What information are you looking for?

   Then add the following as **Multiple choice options** (the conditional branching will be automatically created as you add each new option)

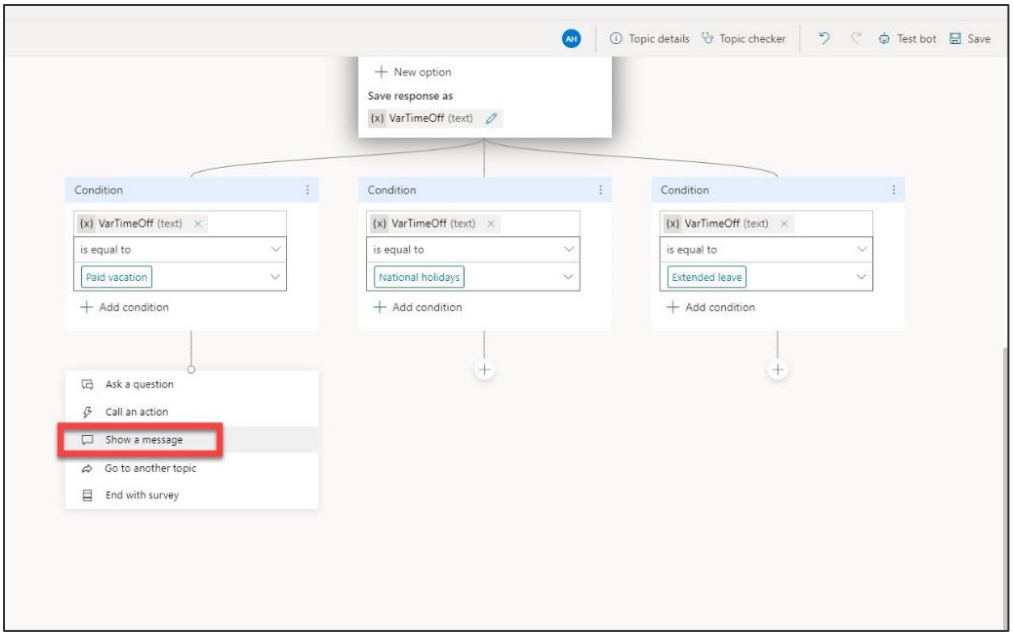
   Paid vacation
   National holidays
   Extended leave



6. Click on the edit icon next to the name of the variable, change the name to **VarTimeOff** and then close the variable pane.



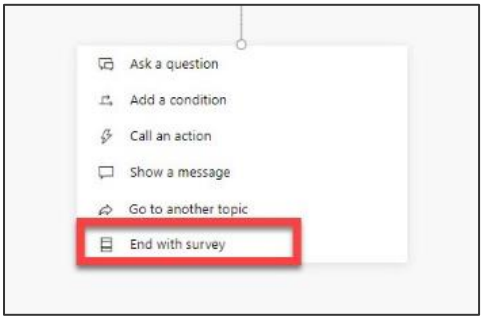
7. Under the first conditional node (Paid vacation) click on the **Add node** button and select **Show a message**:

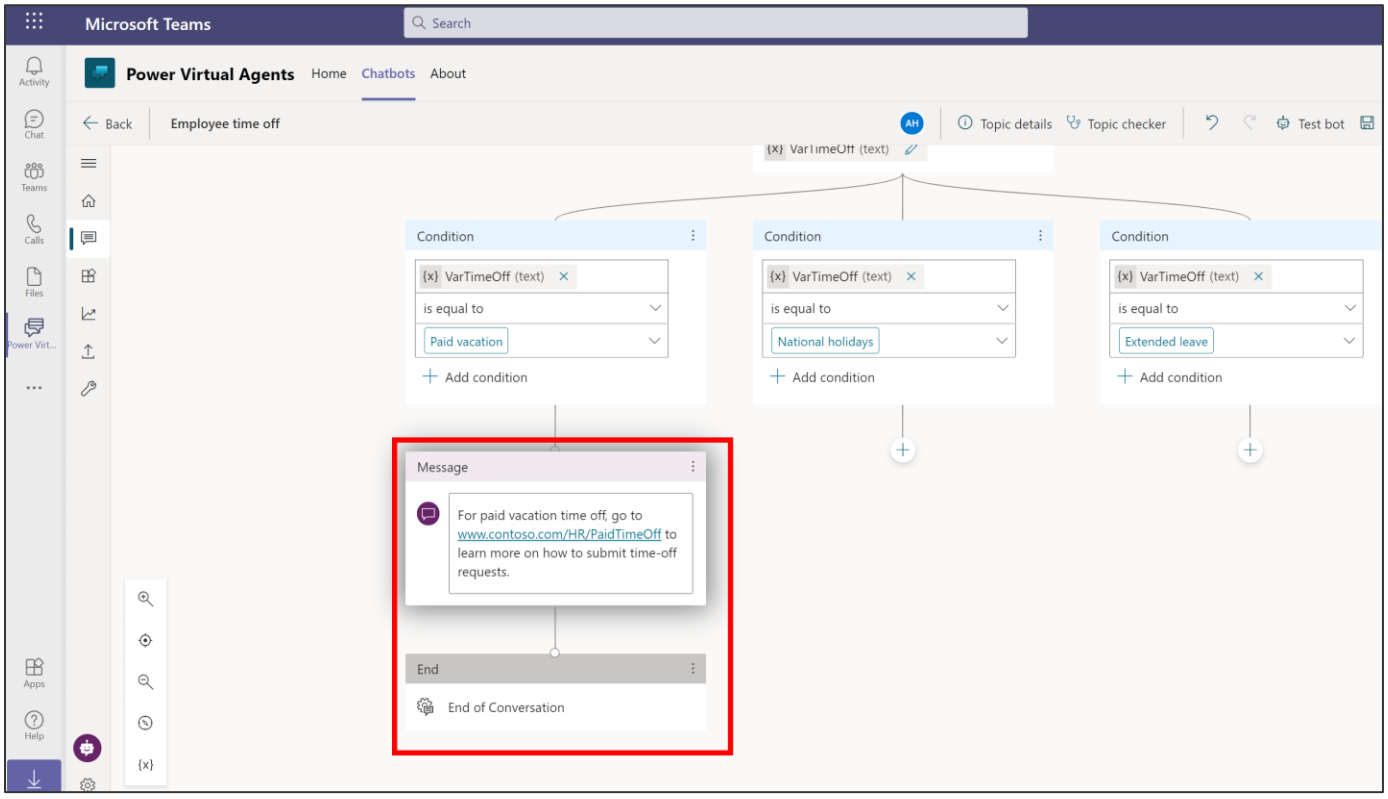


8. Add the following text to the message box:

   For paid vacation time off, go to *www.contoso.com/HR/PaidTimeOff* to learn more on how to submit time-off requests.

9. Then add a node underneath the message to end the conversation with a survey.

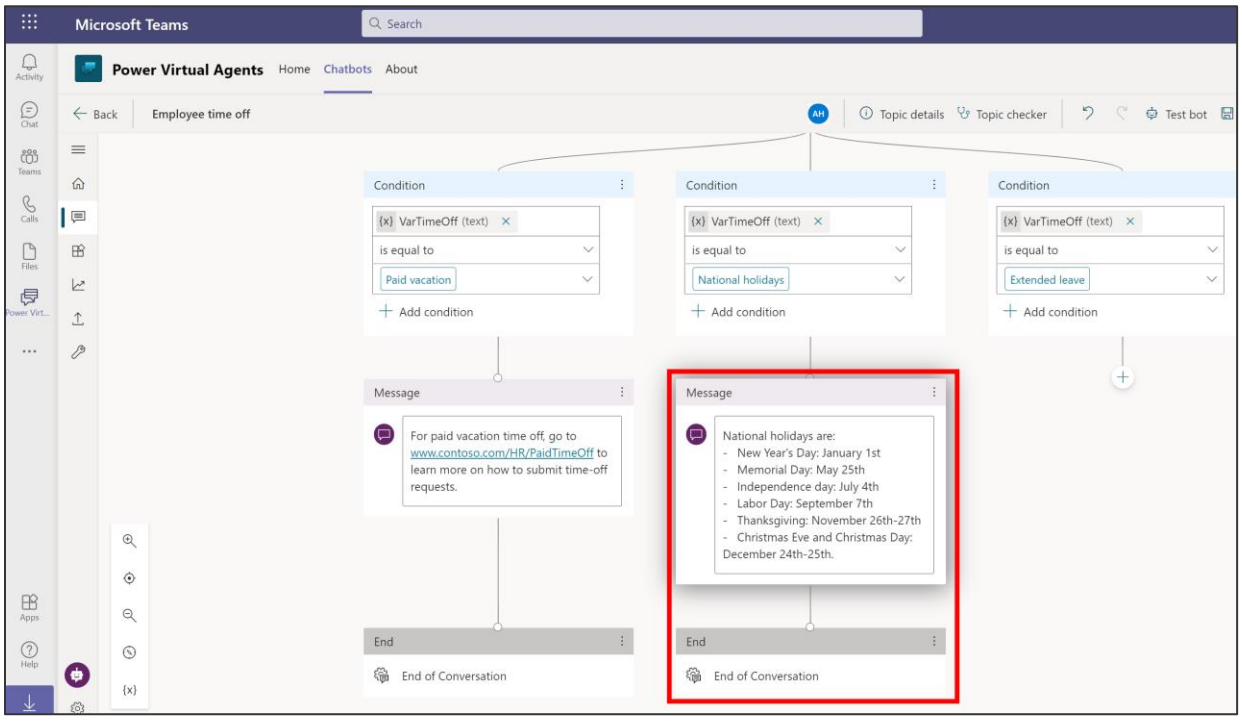




10. Repeat this for the remaining nodes. Under the National holidays node, add this message (or you can use holiday dates from your own country or region). Then add a node to end the conversation with a survey.

```
National holidays are:

- New Year's Day: January 1st
- Memorial Day: May 25th
- Independence day: July 4th
- Labor Day: September 7th
- Thanksgiving: November 26th-27th
- Christmas Eve and Christmas Day: December 24th-25th.
```

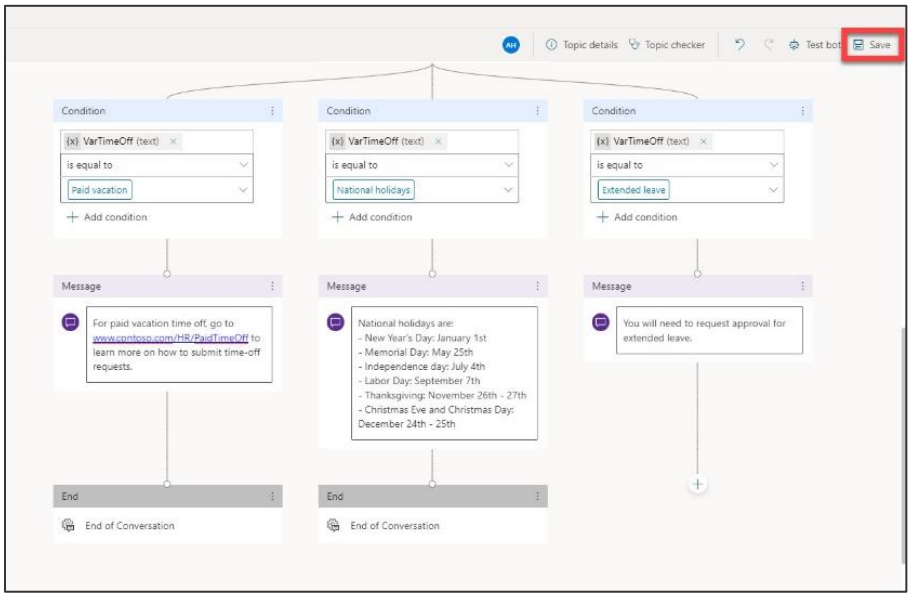


11. For the Extended leave node, add a message with the following text:

    You will need to request approval for extended leave.

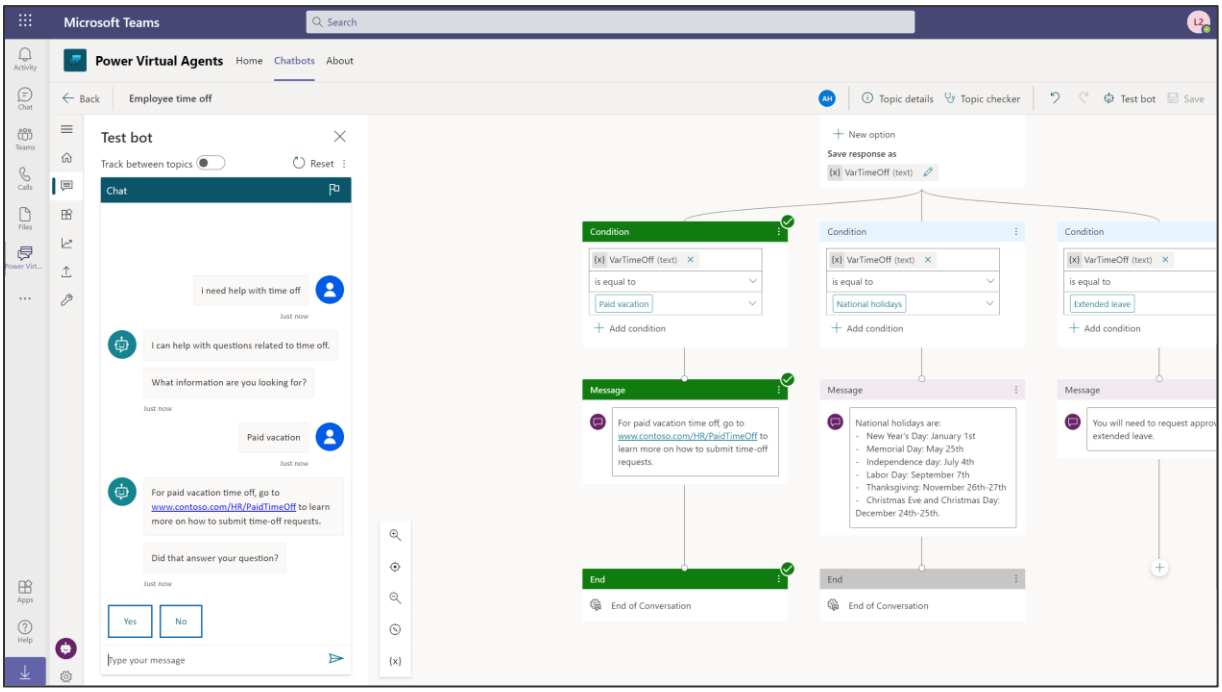
    Do not add an end of conversation node here; we will be coming back to work with this part of the conversation in the next exercise.

12. Click **Save** to save your topic.



Task 3: Test your chatbot

1. Test your chatbot in the Test bot pane by typing one of the trigger phrases and going through the conversation.



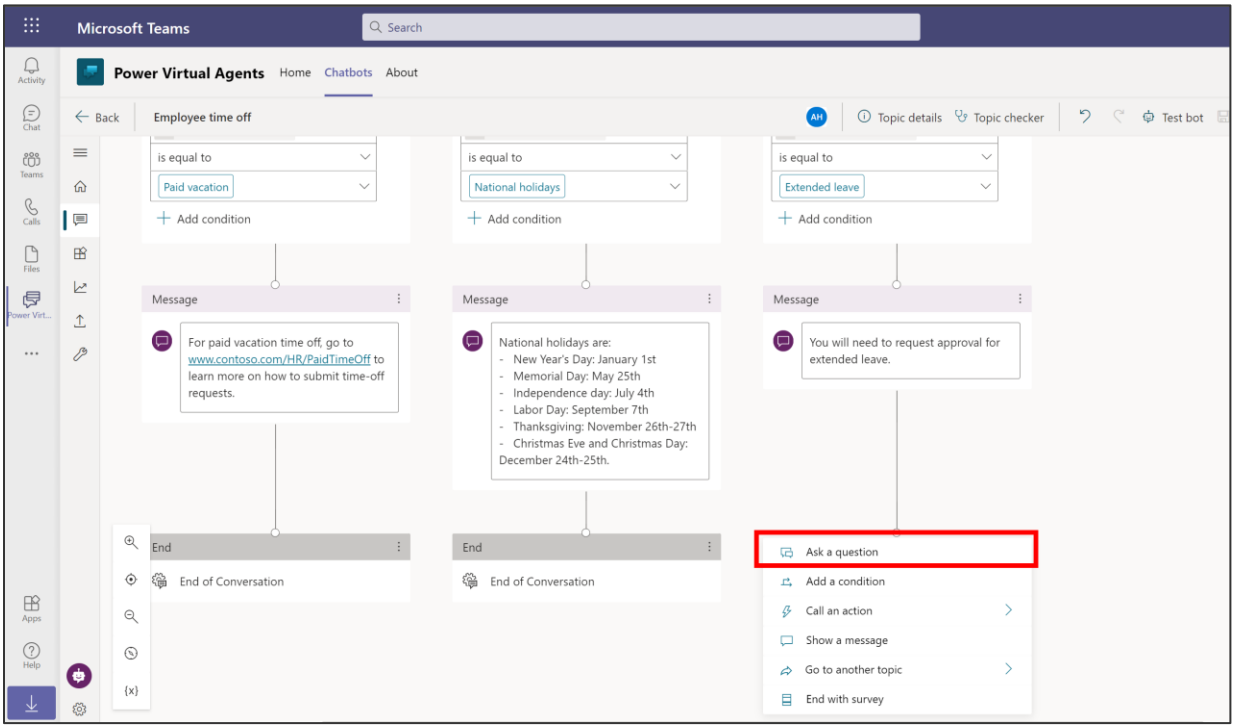
2. Congratulations! You have built your first bot using the Power Virtual Agents app for Microsoft Teams. In the next exercises we will add an action by calling a flow and then publish your chatbot so you can see it working in Teams.

Exercise 4: Create a flow using the embedded flow experience

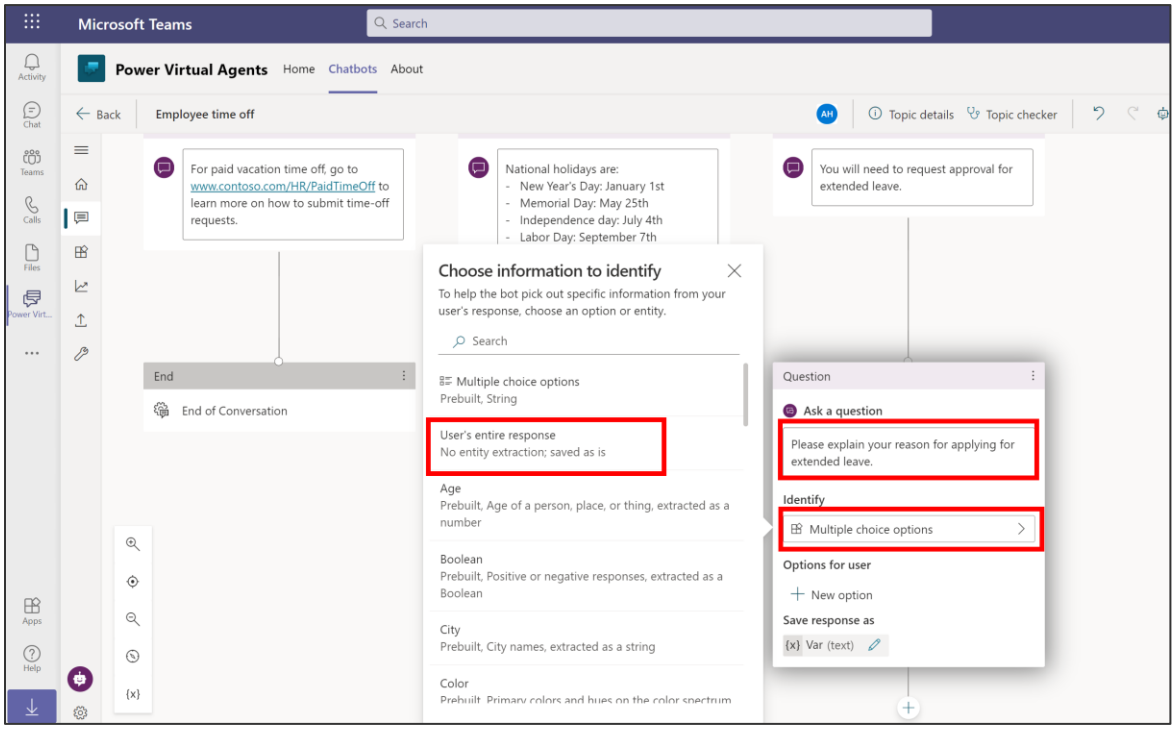
In this part of the scenario, we will design the chatbot to send a notification to the HR team requesting approval when the user asks for extended leave. To do this we will be using the embedded flow experience inside the Power Virtual Agents app in Teams

Task 1: Edit your topic

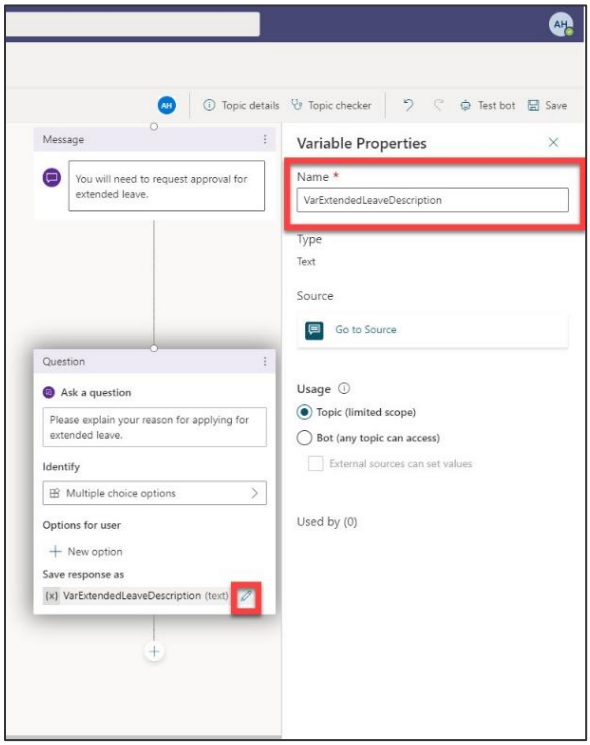
1. In the **Employee time off** topic you created in the previous exercise, go to the node about Extended leave and under the message, add a new node to **Ask a question**.



2. In the **Ask a question** section, type: Please explain your reason for applying for extended leave. Then in the Identify section, select **User's entire response**.



3. Edit the variable properties to rename the variable to **VarExtendedLeaveDescription**.

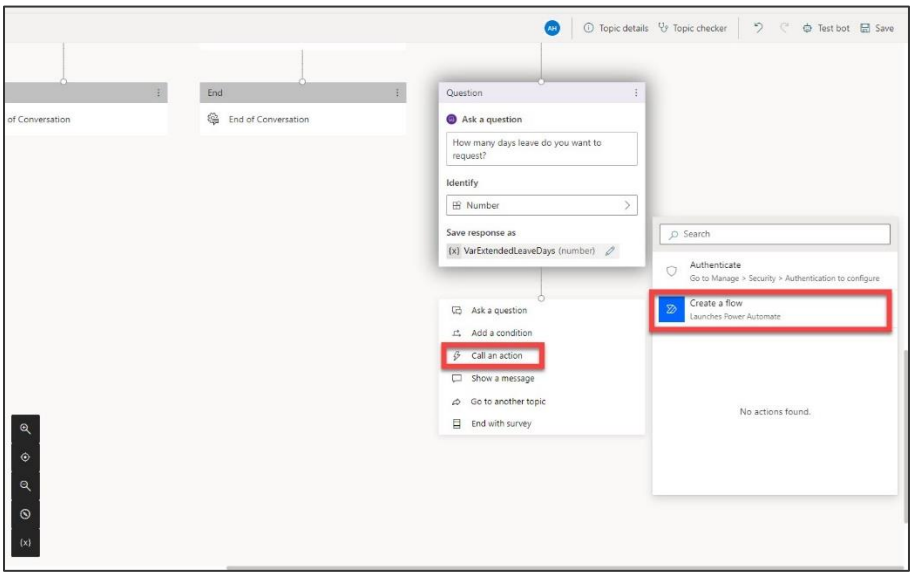


4. Save your chat bot by clicking on the **Save** button.

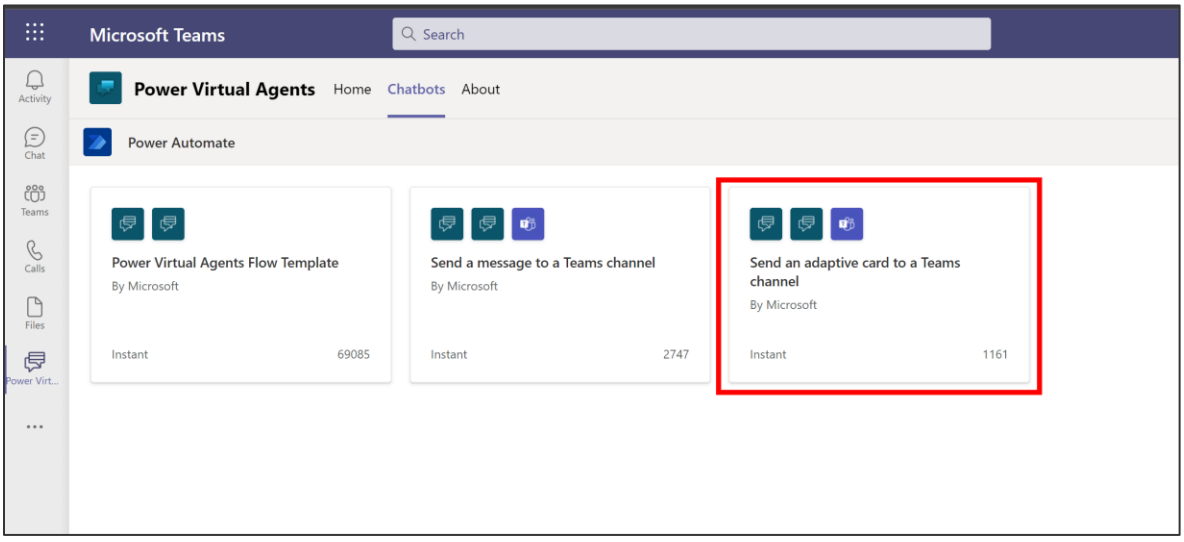
Task 2: Create a flow to send a notification

Power Virtual Agents in Teams comes with a built-in experience for Power Automate, with templates to make it easy for you to get your chatbot to call an action.

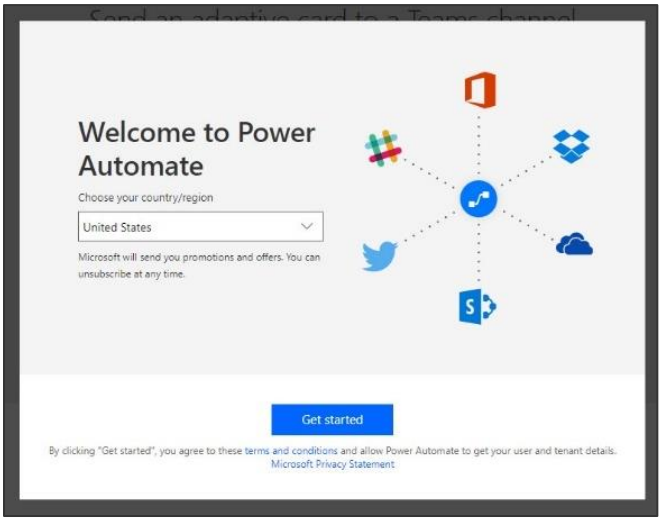
1. Under the question node you just created, add a node and select **Call an action**. Click on Create a flow. This will launch Power Automate inside Microsoft Teams



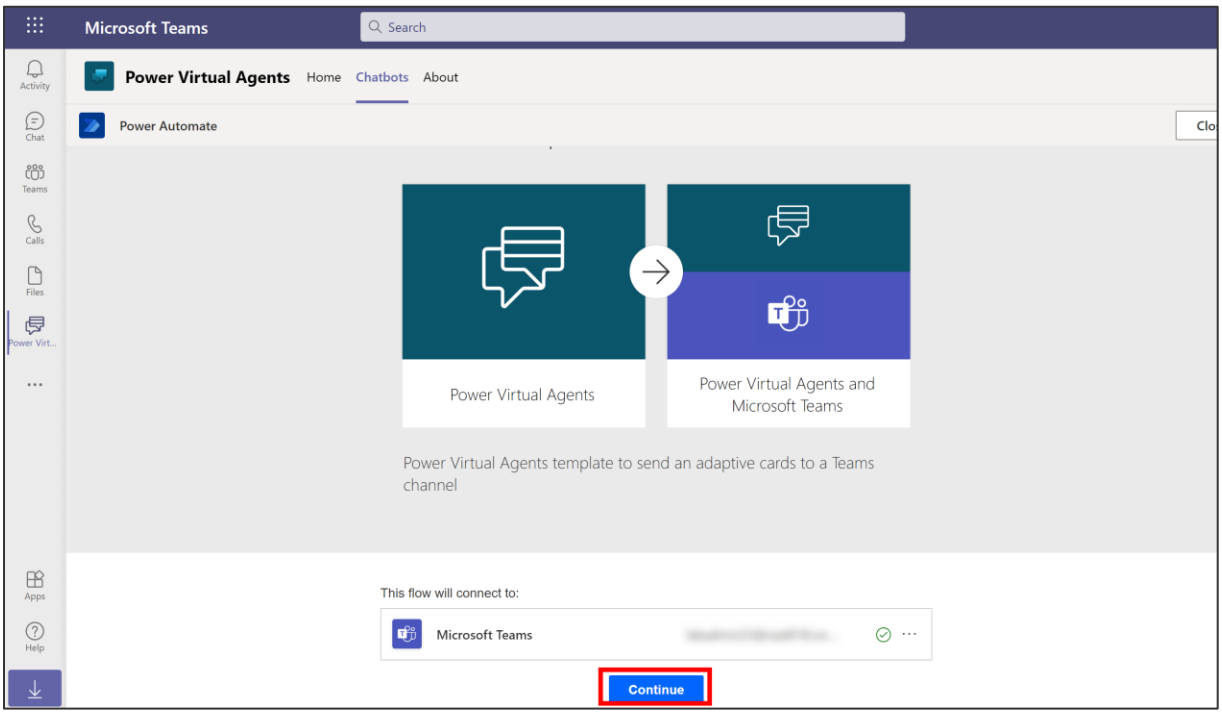
2. We are going to send a notification in the form of an adaptive card. Adaptive cards allow you to display blocks of information with a nice user interface, without needing to use complex code. Choose the template called **Send an adaptive card to a Teams channel.**



3. If this is your first time using Power Automate on this tenant, may see a welcome message. If you see this message, choose your country/region and click **Get started**. This will only appear the first time, you won't see this again.

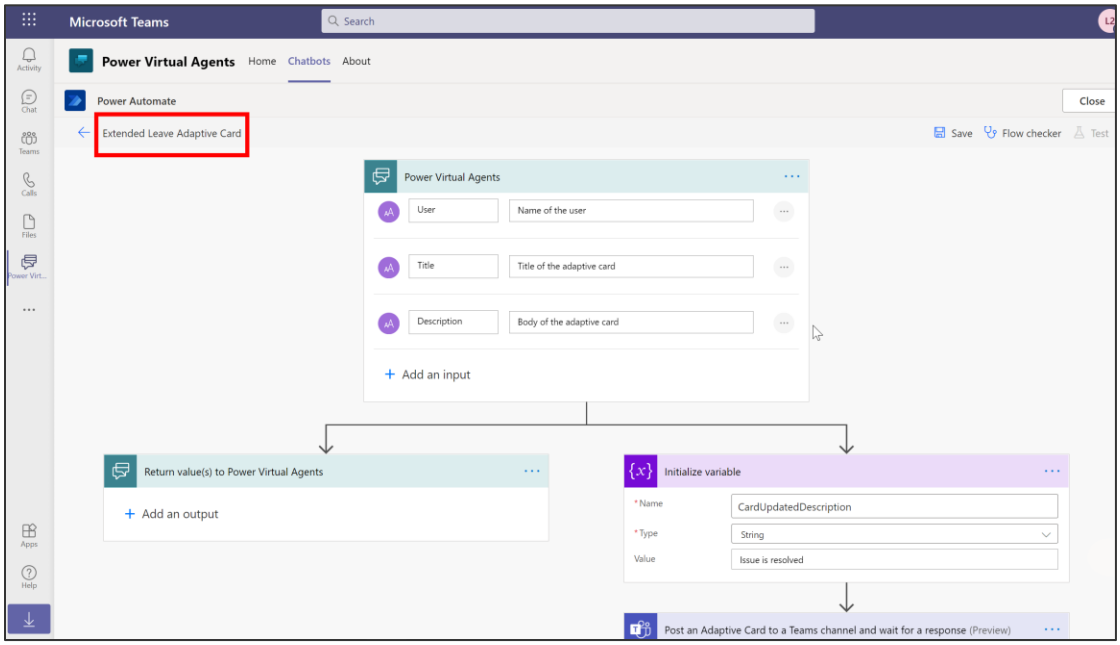


4. You will be prompted to approve the connection to Teams. This is because you are creating a flow that will post an Adaptive Card to Teams. Click **Continue**.

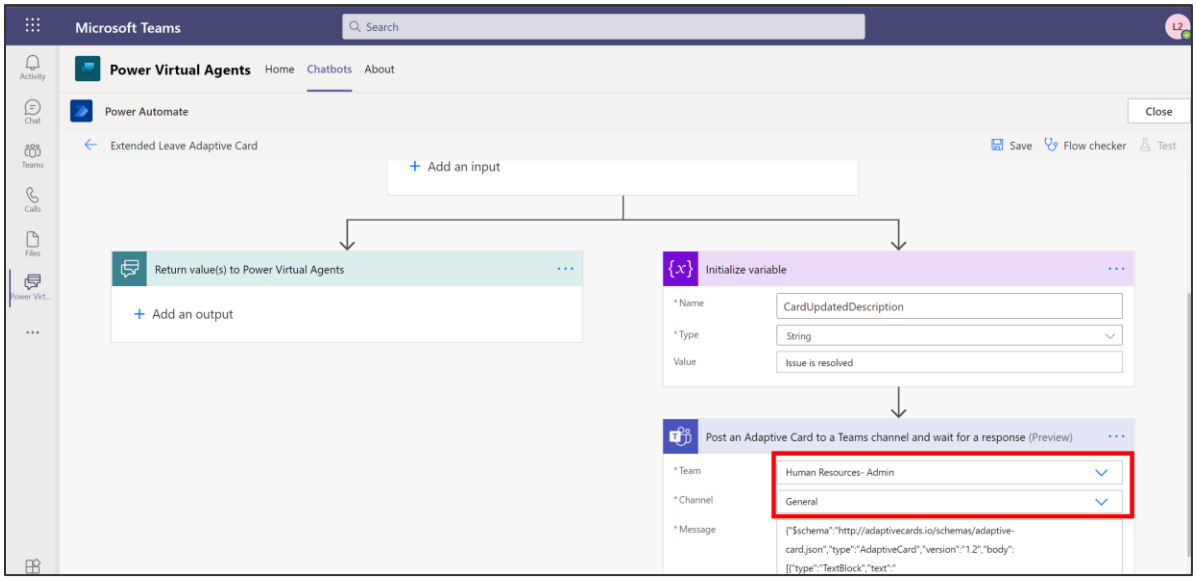


5. You will now see the template open in Power Automate inside Teams. The flow template takes three inputs from the bot: All these inputs will come from the conversation in Power Virtual Agents, and will fill the adaptive card contents as follows:
   - User – Name of the user. This will come from the claim bot variable for the User Name
   - Title – Title of the adaptive card. This is the heading on the card. In this case, we will get this from the type of time off selected, which will be "Extended Leave"
   - Description – Body of the adaptive card. This will be the reason the user has entered about why they want to take extended leave

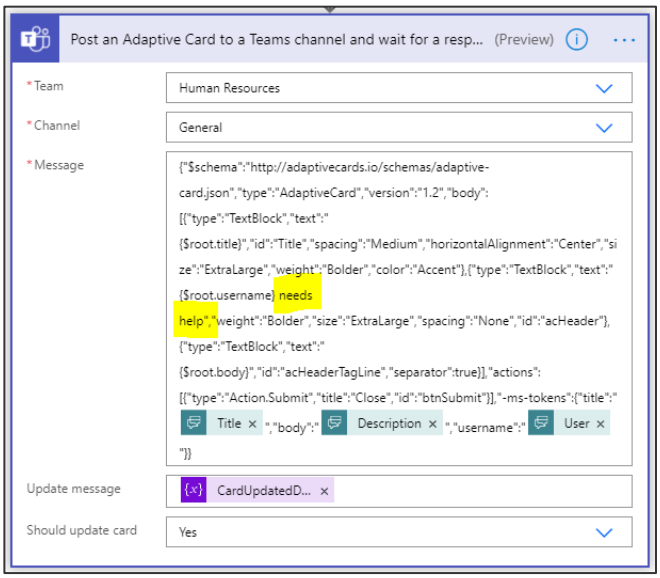
6. Edit the name of your flow so you can easily recognize it: **Extended Leave Adaptive Card**.

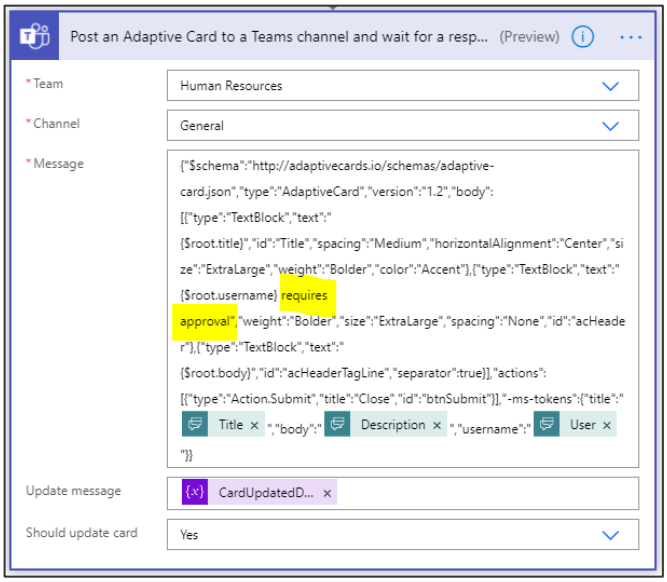


7. The adaptive card is essentially pre-built for you, so you don't need to do much here. Scroll down to the **Post an Adaptive Card to a Teams channel** action. Select the Team and Channel where you want to post the adaptive card.

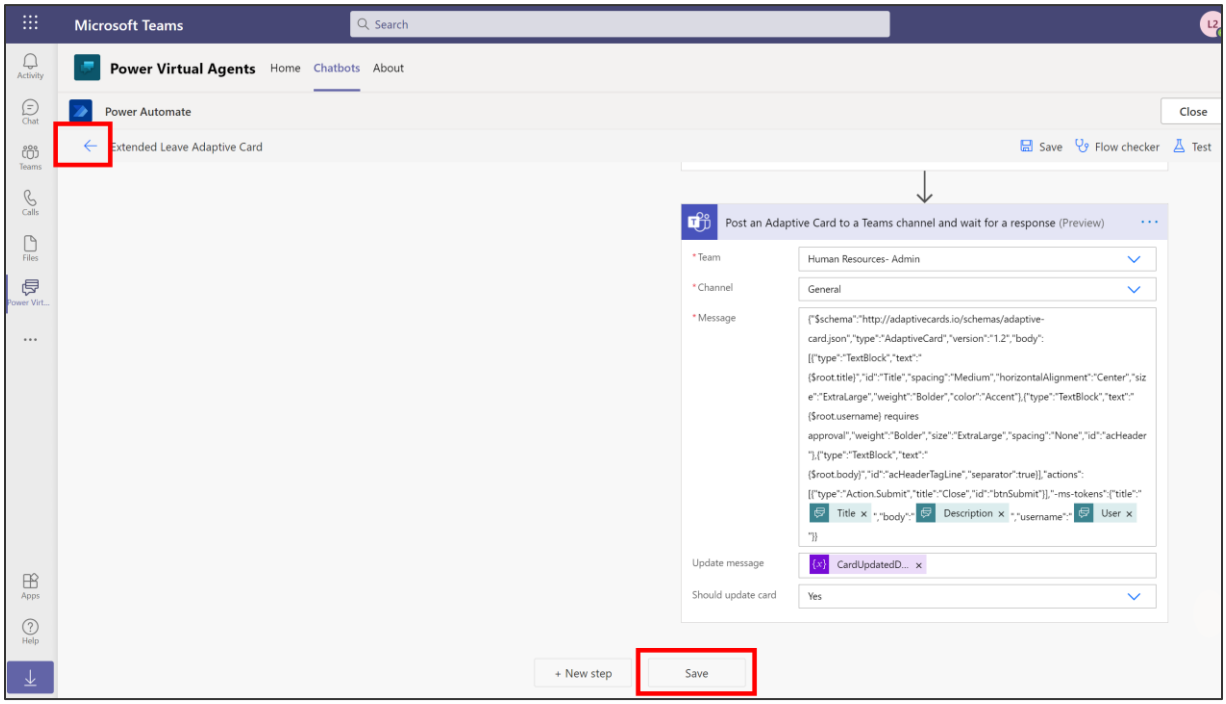


8. The content of the card itself is in JSON. You can edit this to change the display and content of the card. For this exercise we will leave the card as it comes in the template, with one change to fit our scenario. Change the phrase "**needs help**" to "**requires approval**"



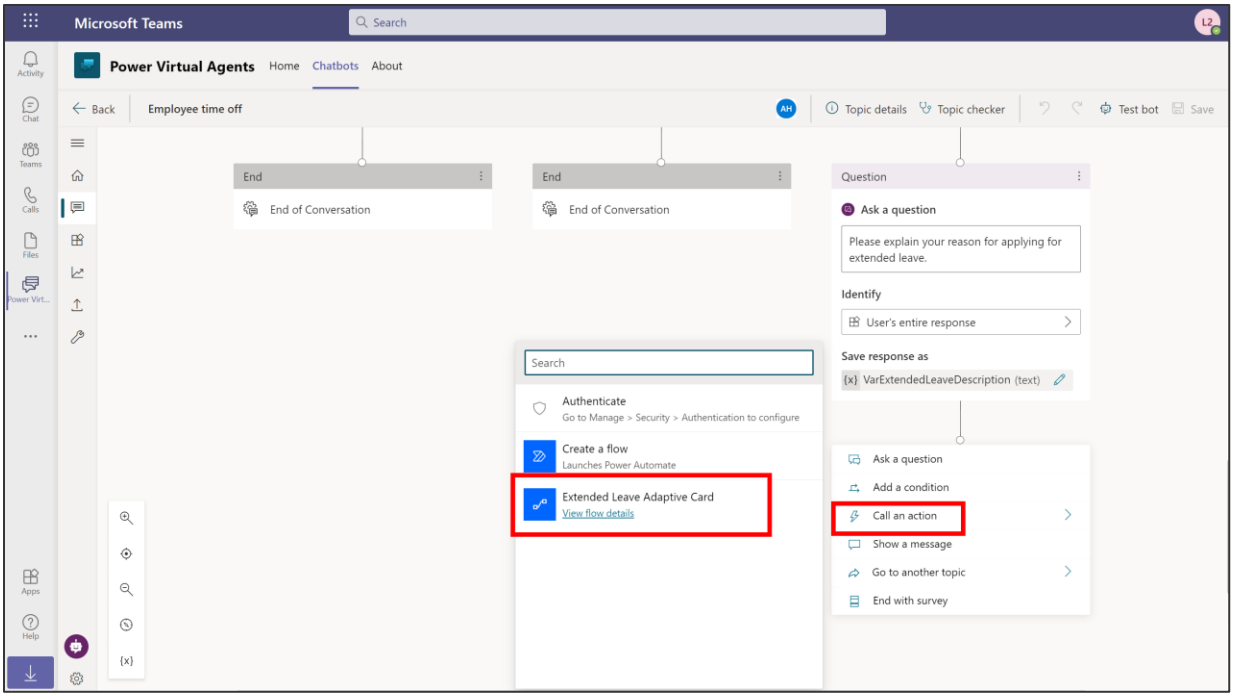


9. Save your flow. When it has finished saving, click on the back arrow next to the flow name to return to your chatbot authoring canvas.

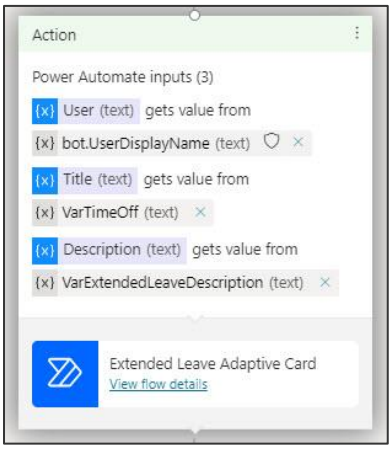


Task 3: Connect your flow to your chatbot

1. Scroll back down to the conversation node you created for extended leave, add a node, select **Call an action**, and select the flow you just created in the previous task.



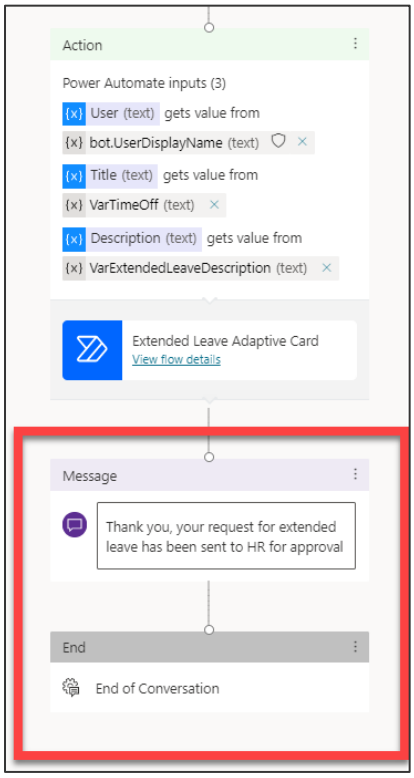
2. Now you need to map the variables you created in Power Virtual Agents to the inputs from the flow. Select your variables from the dropdowns as follows
   - User (text) gets value from: **bot.UserDisplayName**
   - Title (text) gets value from: **varTimeOff**
   - Description (text) gets value from: **VarExtendedLeaveDescription**



3. Add a confirmation message so that the user can see that their request has been sent to HR. Add a node underneath and select **Show a message**. Type the following in the message box.

   Thank you, your request for extended leave has been sent to HR for approval

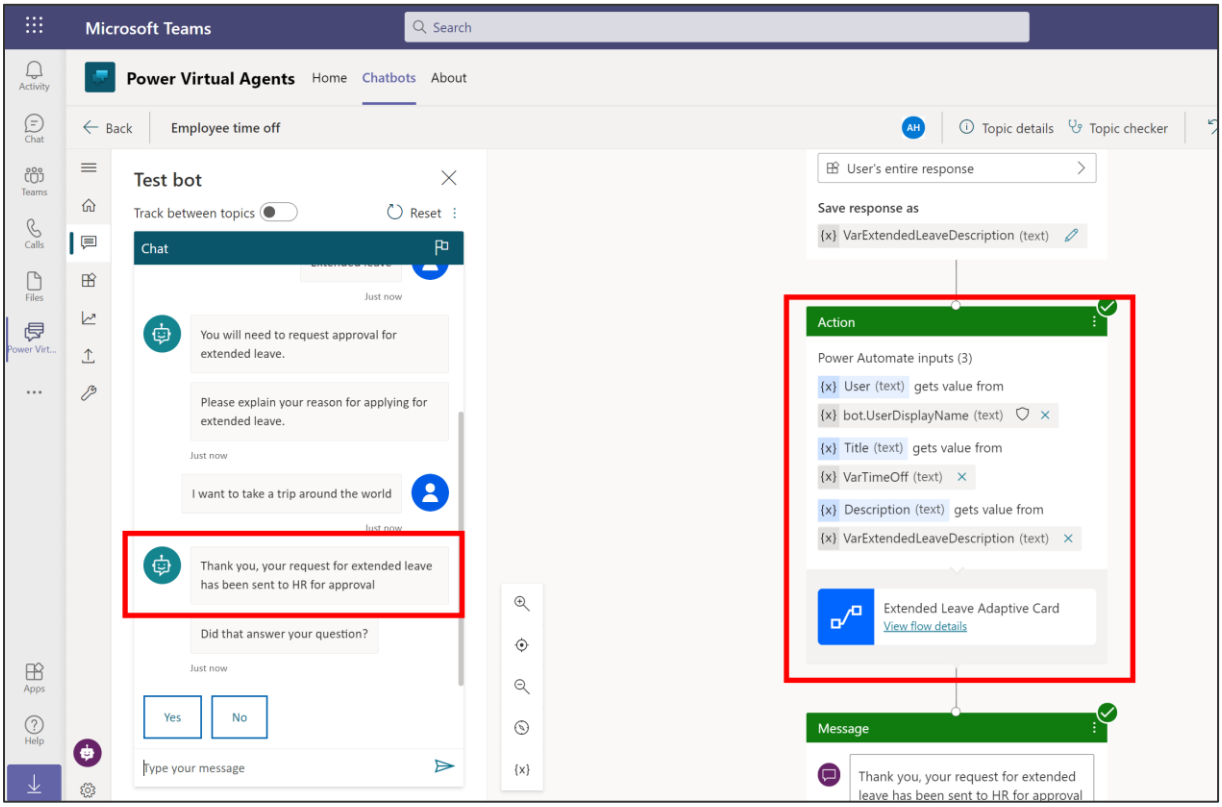
   Add another node underneath to end the conversation with a survey.



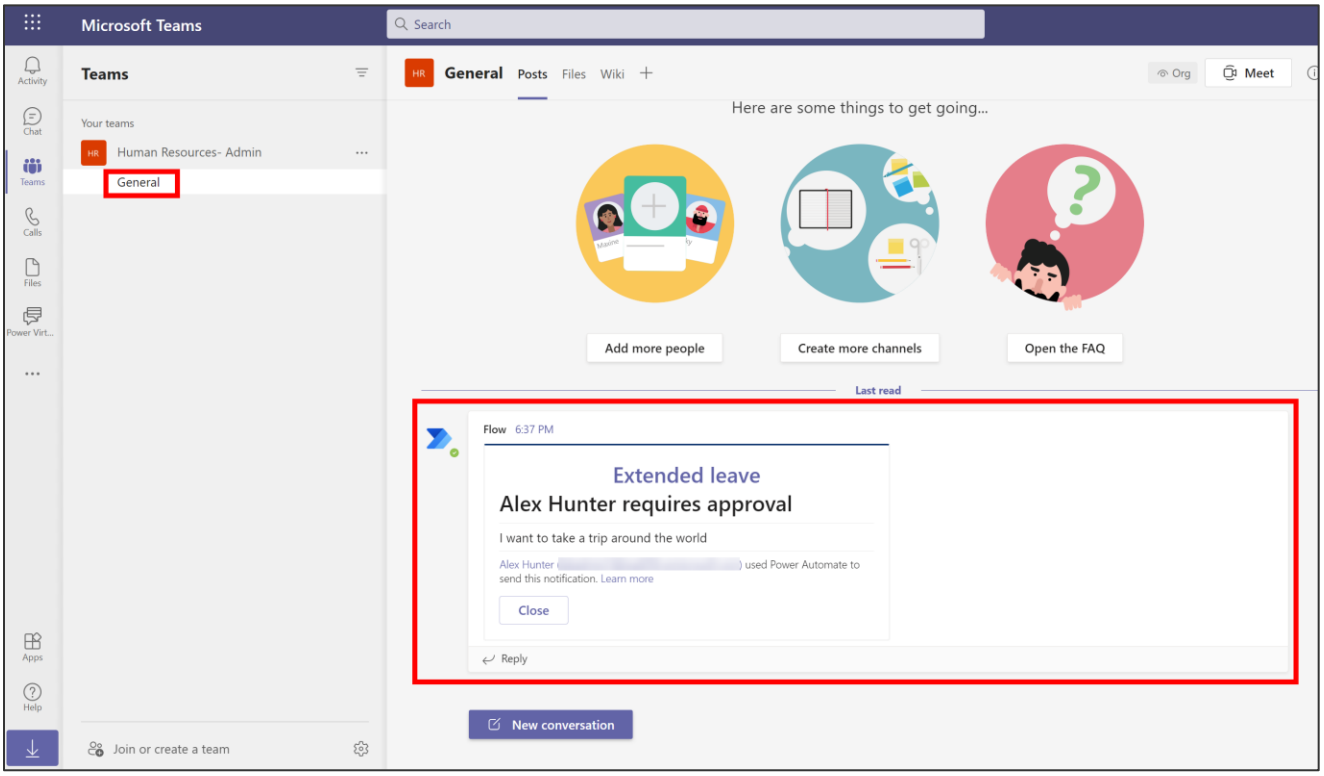
4. Save your bot by clicking on the **Save** icon.

Task 4: Test your bot

1. Type one of your trigger phrases in the test bot pane and select **Extended leave** when prompted. Enter a reason for applying for extended leave. You should see the confirmation message appear and see that your action step has been successful in the authoring canvas.



2. Now let's check that the adaptive card has been posted. Click on the Teams icon in the left-hand navigation bar, and go to the team and channel you selected in your flow. You should see your adaptive card in the posts of that channel, with Extended leave as the heading, the username displayed, and the reason entered in the chatbot conversation.

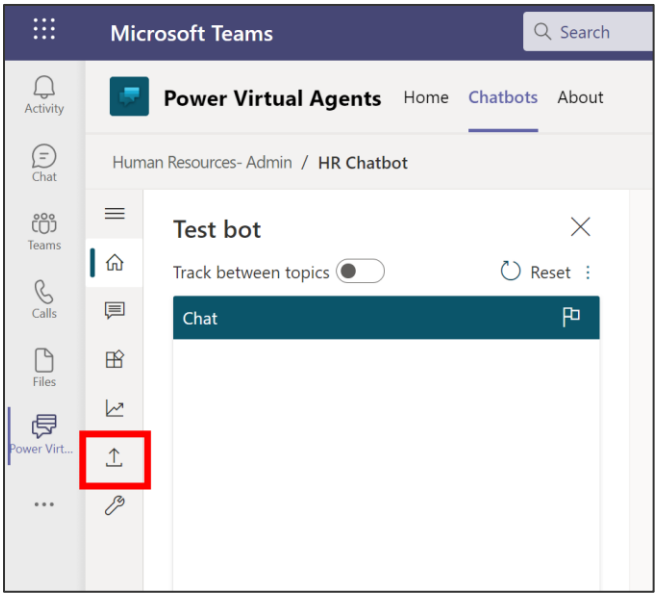


3. You have now finished building your bot. In the next exercise we will publish and share it and use it in Teams chat.

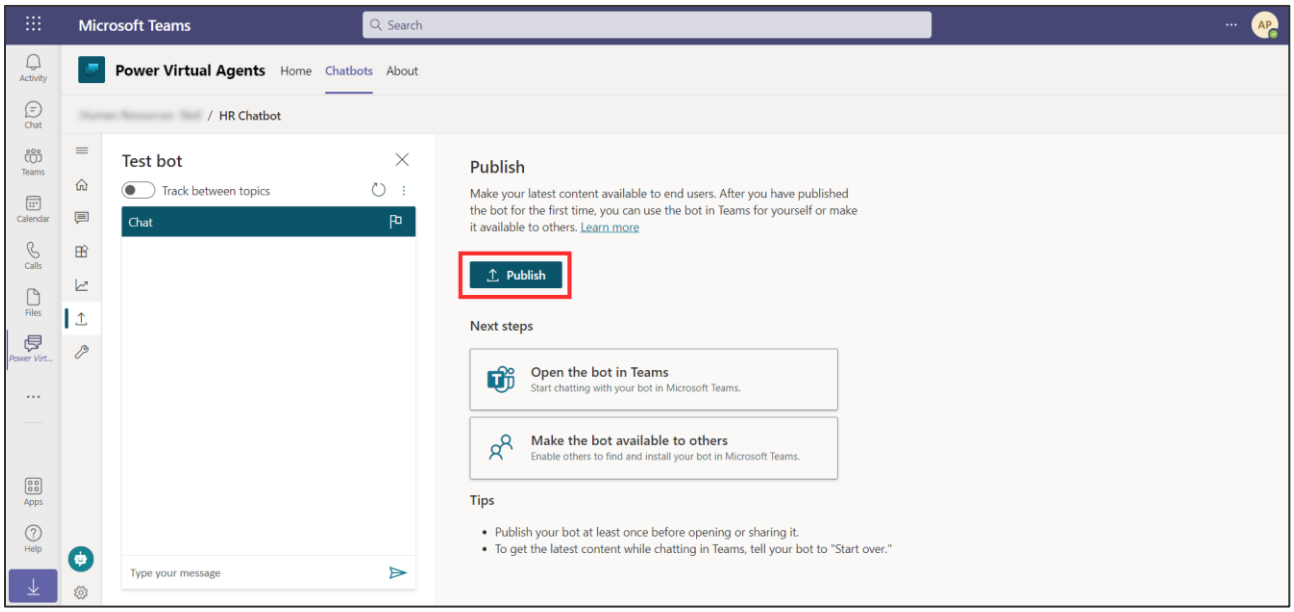
Exercise 5: Publishing and sharing your chatbot

Task 1: Publish your bot and open it in Teams

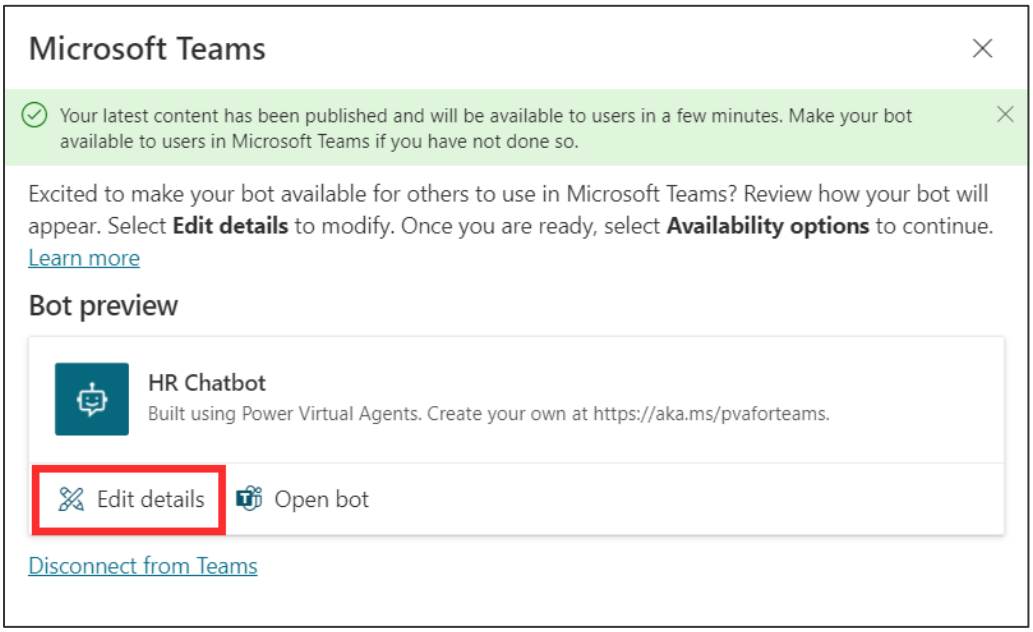
1. Now that you have finished editing and testing your bot, you are ready to publish it and test or use it yourself in Teams. Return to your Power Virtual Agents app via the left-hand navigation bar and open your chatbot for editing. Click on the Publish icon in the left-hand Power Virtual Agents navigation menu.



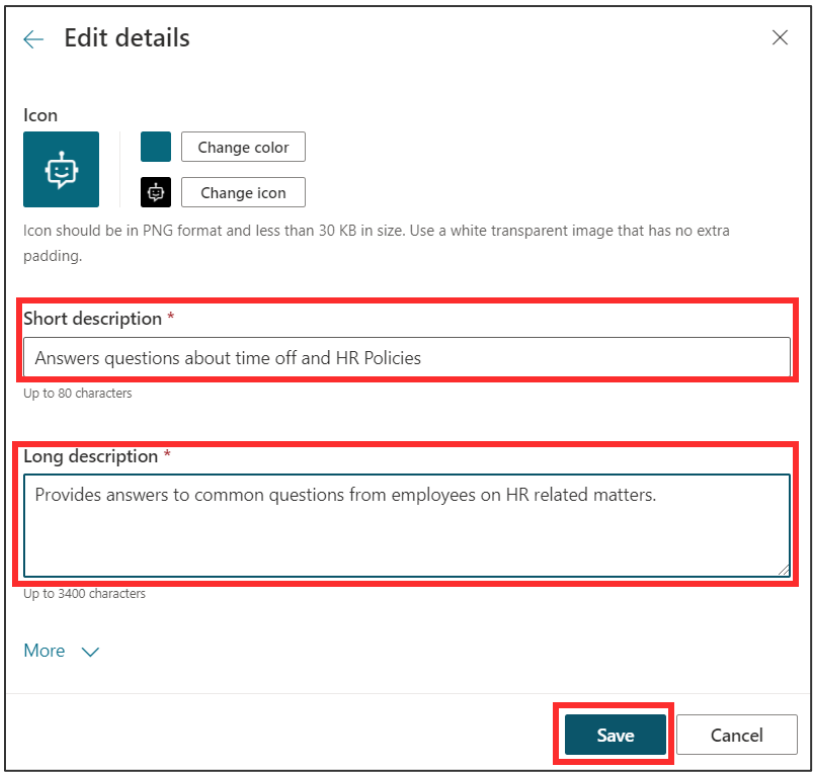
2. Click on the **Publish** button (and then confirm by clicking on the Publish button in the pop up prompt asking if you want to Publish latest content).



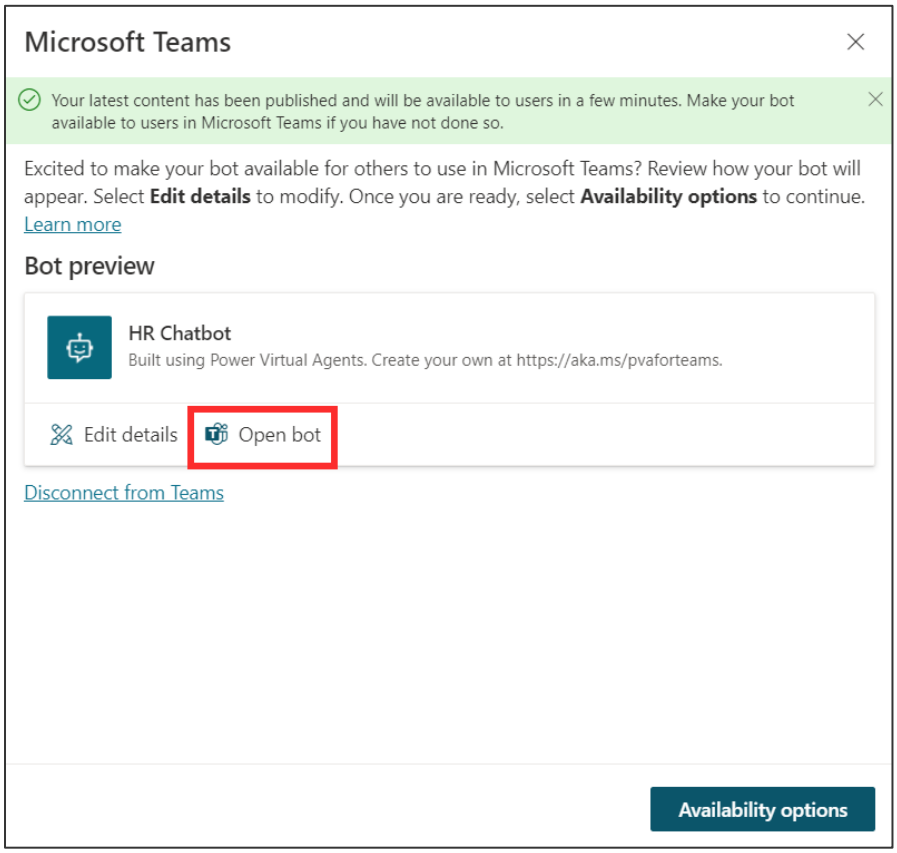
3. When your bot is published, you will see a confirmation message. Click on **Edit details**.



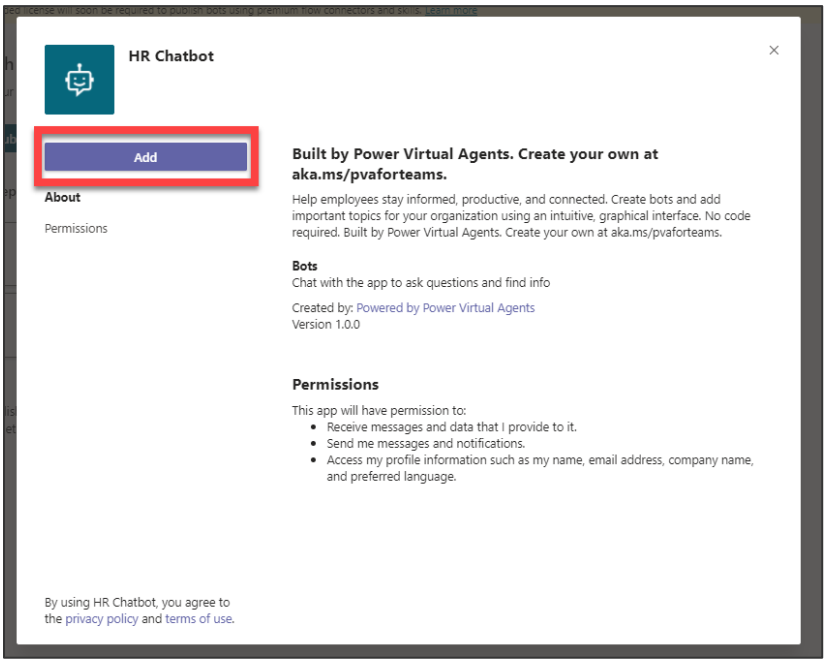
4. Fill in the **Short description** and **Long description** to describe what your chatbot does, and then click **Save**. Note there are also options here to change the color and icon. Click the back arrow next to Edit details.



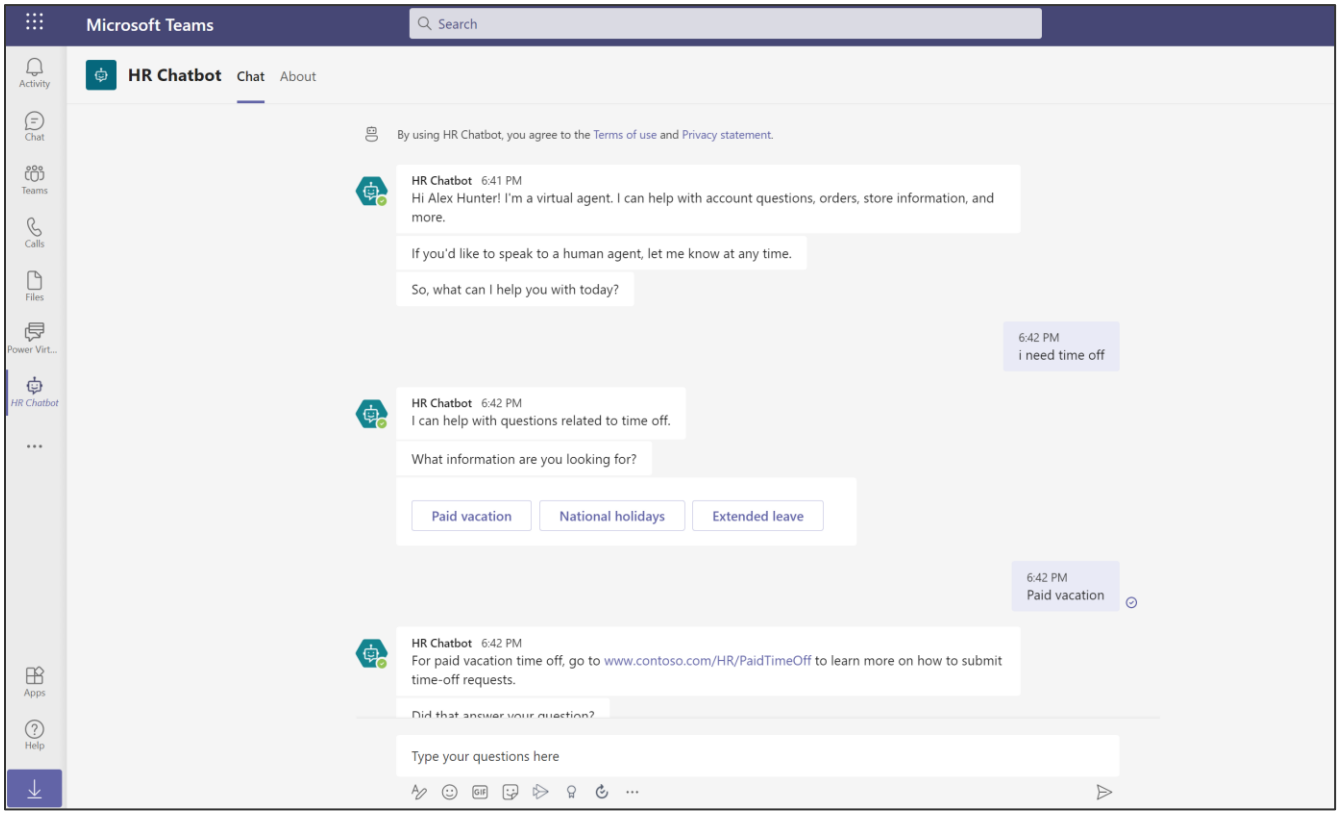
5. Click **Open bot** to open the bot in the Teams chat.



6. Click on **Add** to add the bot you just made to the Teams chat. At this stage you will be the only one who can see and use it. This is a useful step to do a final test before sharing with others.



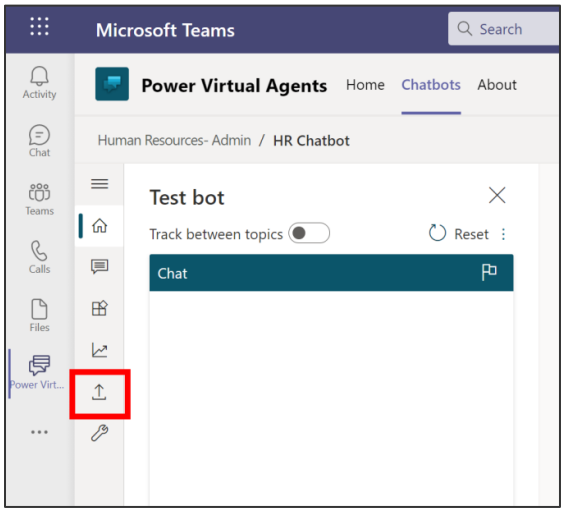
7. Your bot will start the conversation (note it will address you by your logged in username). Test the conversation with the bot in the Teams chat.



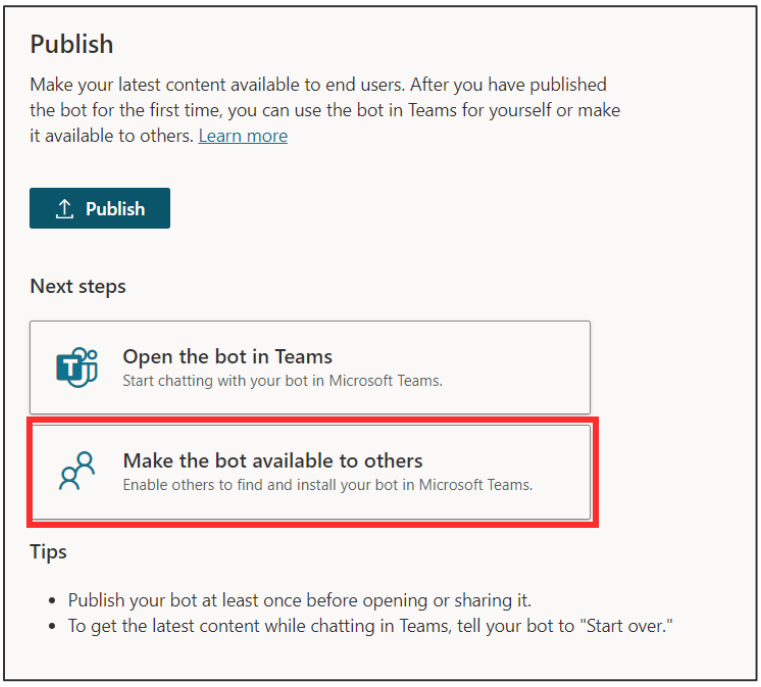
8. Now let's share the bot with others. Return to your chatbot via the left-hand navigation menu.

Task 2: Share your chatbot with other members of your team

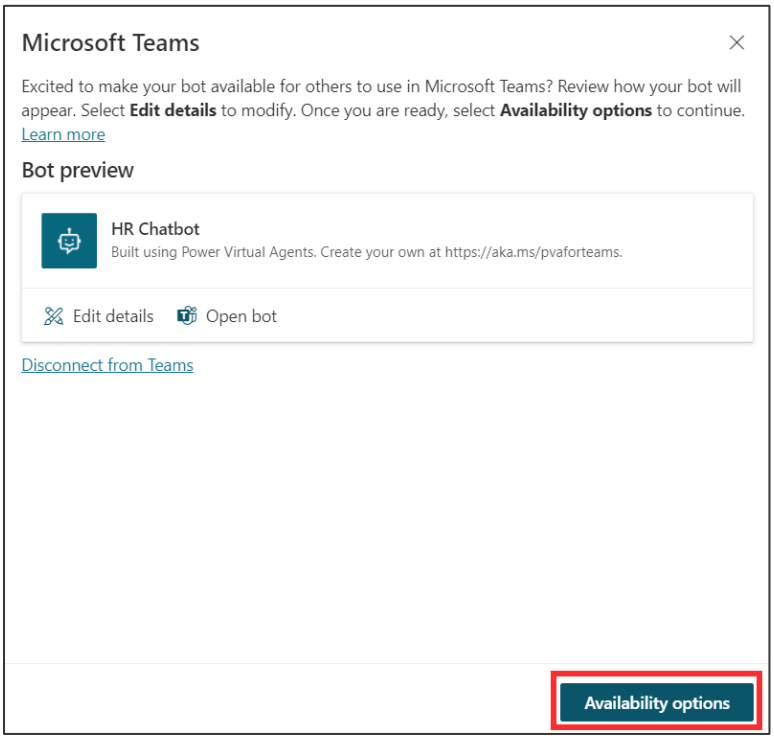
1. In this task you will share your bot with the other members of your team, so that they can discover and use it in Teams. Click on the publish icon on the Power Virtual Agents navigation bar.



2. You don't need to publish again (unless you have made changes). Click on **Make the bot available to others**.



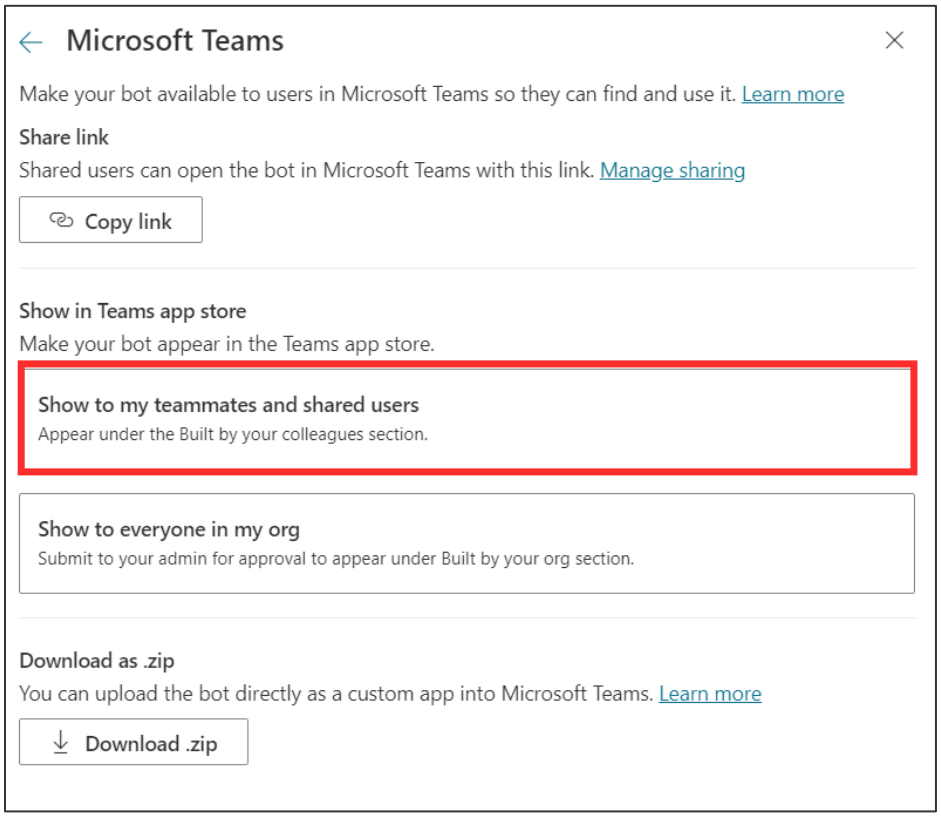
3. Click on **Availability options**.



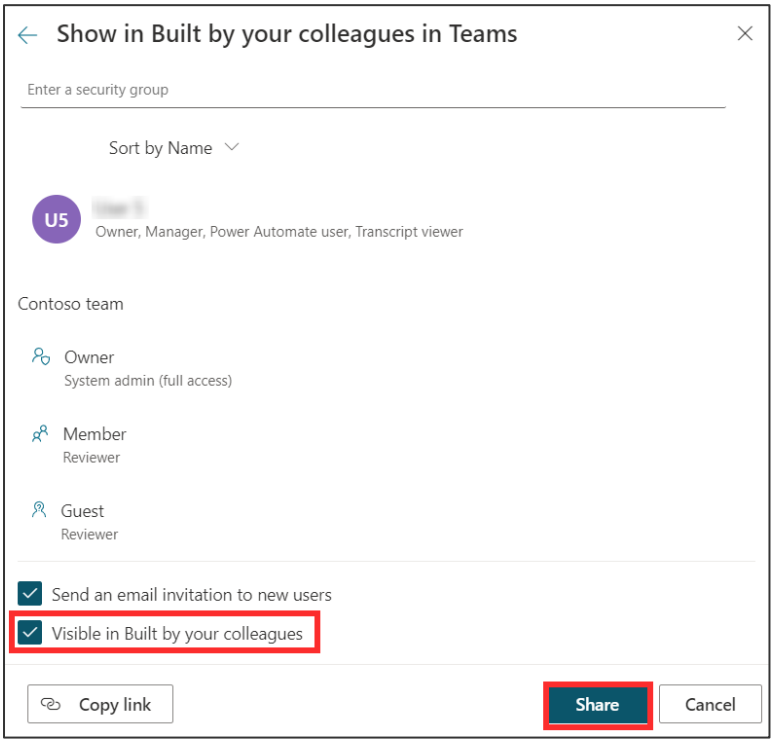
Take note of the four options here:

- **Share link:** You can specify the security groups in your organization who should have access to the bot. Members of the security group will be provided with a link to install and use the bot.
- **Show in Teams app store**
    i. **Show to my teammates and shared users:** You can share the bot with other members of your team as well as members of the specified security groups (covered in this task).
    ii. **Show to everyone in my org:** This will submit the bot for admin approval (we will cover this in the next task).
- **Download as .zip:** Download a .zip file of the bot and upload it as a custom app into Teams.

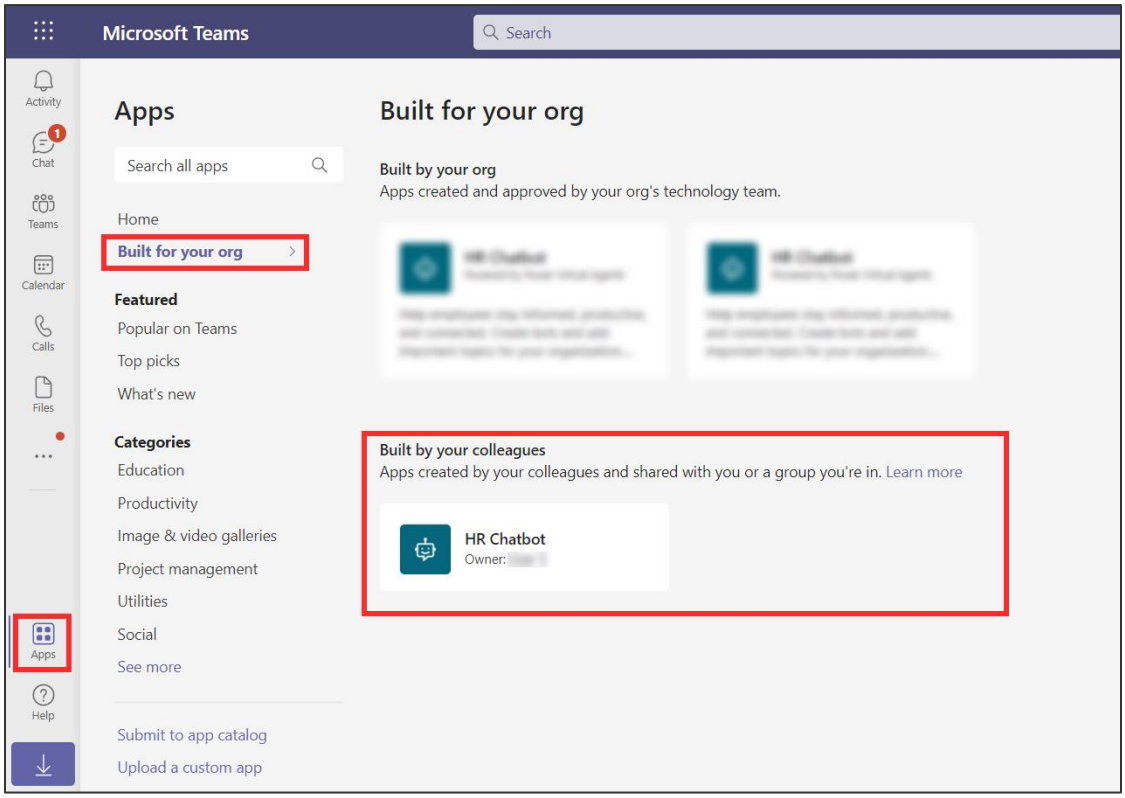
4. Click on **Show to my teammates and shared users**.



5. Ensure that the **Visible in Built by your colleagues** checkbox is selected and click **Share**.



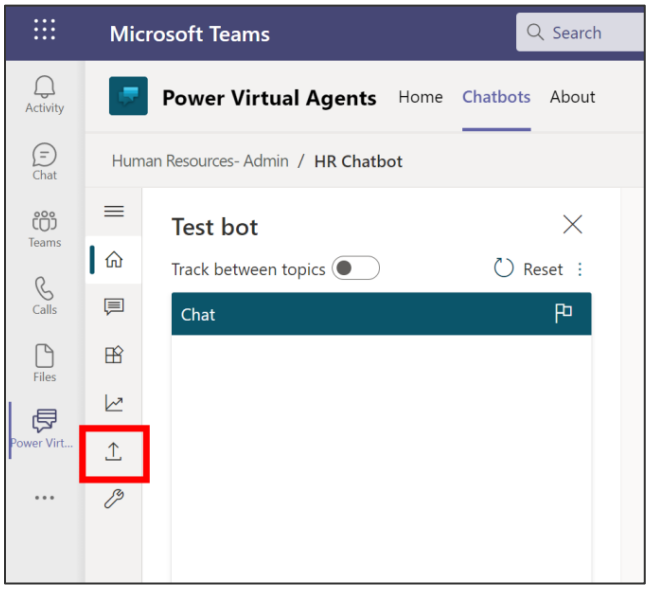
6. Other members of your team (as well as members of specified security groups) will now be able to discover and add your chatbot from the Teams app store, by viewing apps created for your organization.



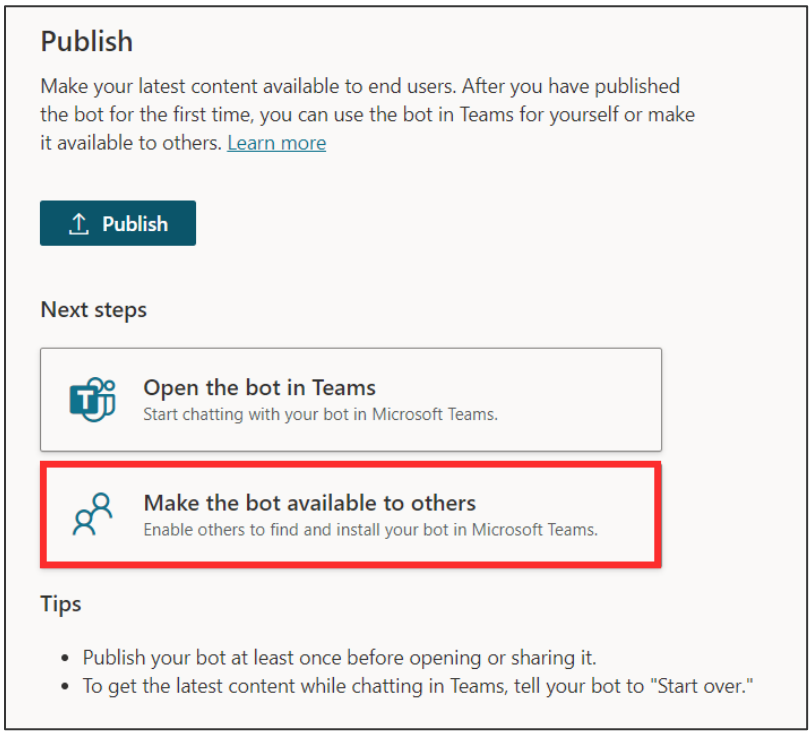
7. In the next exercise we will cover how you can share your chatbot with the whole organization.

Task 3: Share your chatbot with your organization

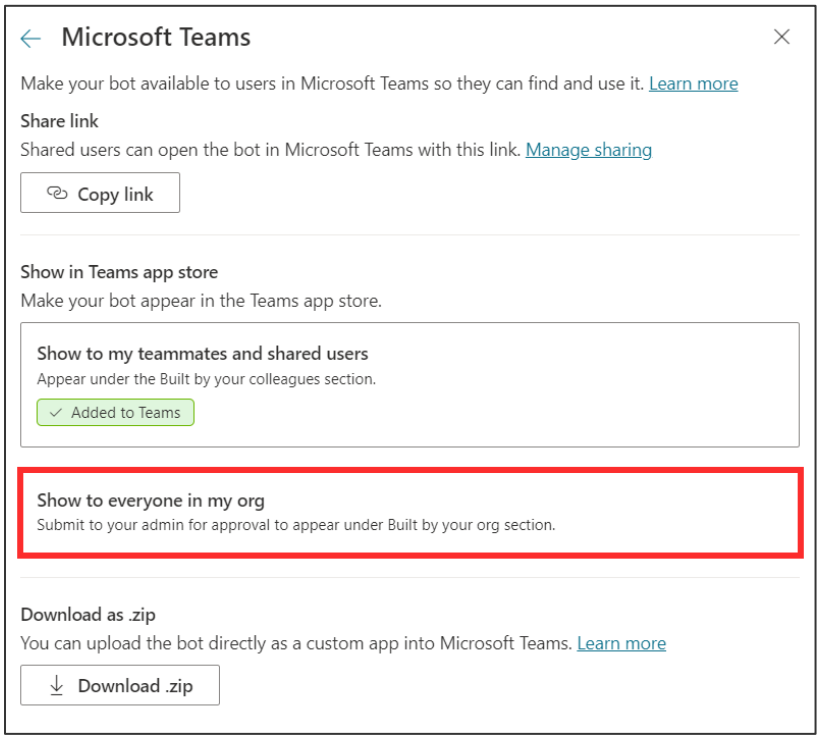
1. In this task we will submit the chatbot for admin approval to share with the whole organization. Click on the publish icon on the Power Virtual Agents navigation bar.



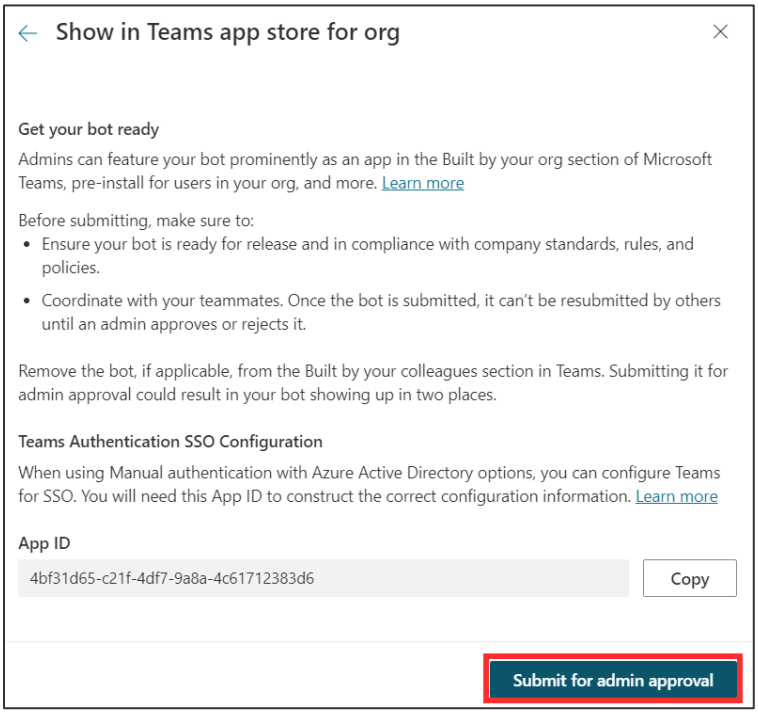
2. You don't need to publish again (unless you have made changes). Click on **Make the bot available to others**.



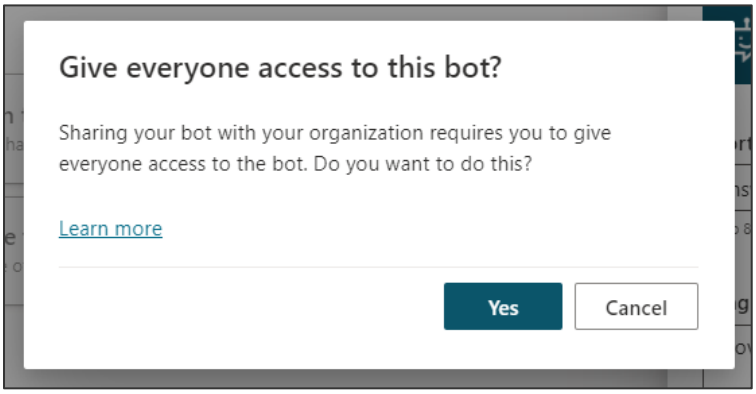
3. Click on **Availability options** then **Show to everyone in my org**.



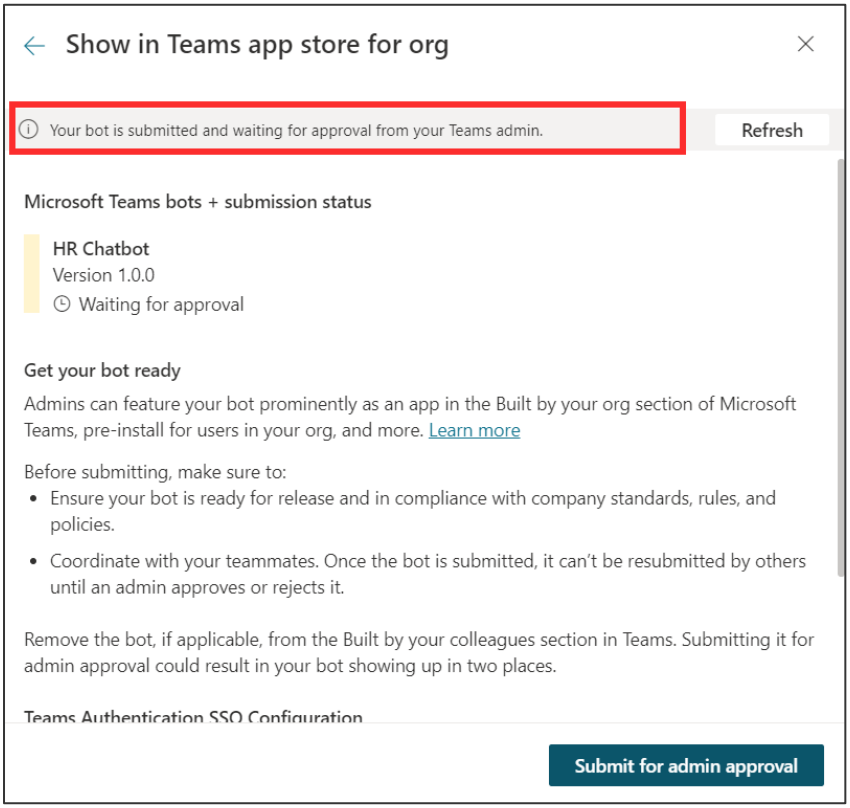
4. Read the message to understand how this works (in a real-world situation this is what you should have done before you submit for approval). Then click on **Submit for admin approval**.



5. Confirm that you want to give everyone in your organization access to the bot by clicking **Yes**.



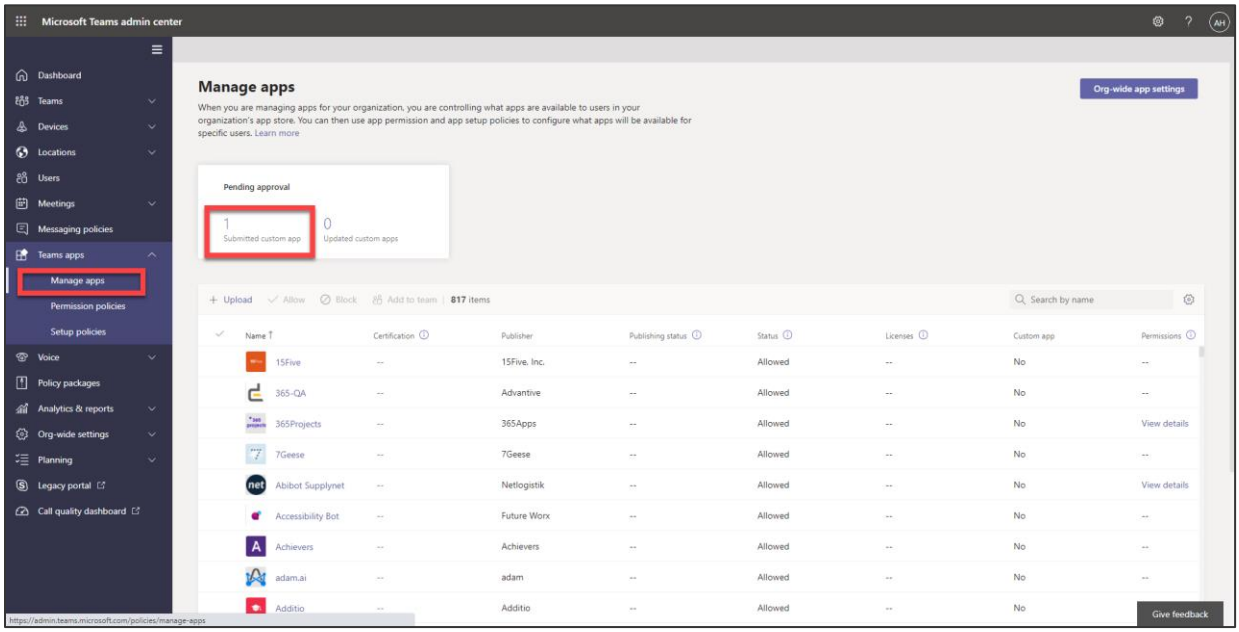
6. When your bot has been submitted, you will get a submission status message.



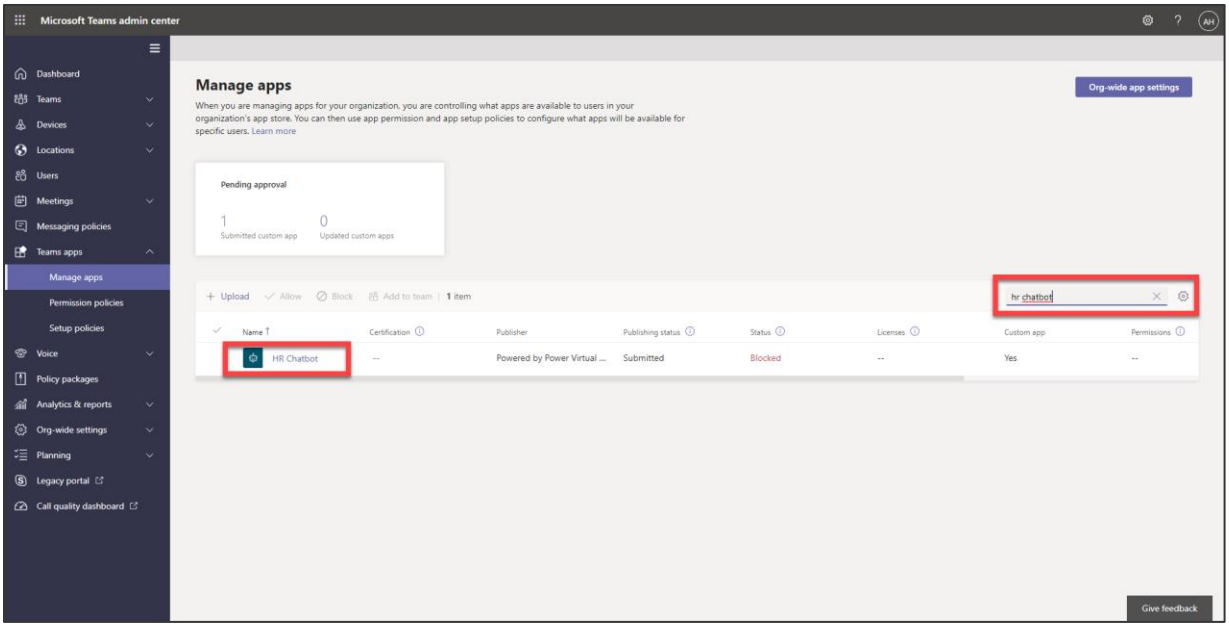
Task 4: Approve the chatbot as admin

If you have the admin login for your tenant, you can play the role of the admin and approve your bot. If you are completing the training with an instructor who provided you with login details for the labs, they can approve the bot on your behalf. Let the instructor know once you have submitted the bot for admin approval.

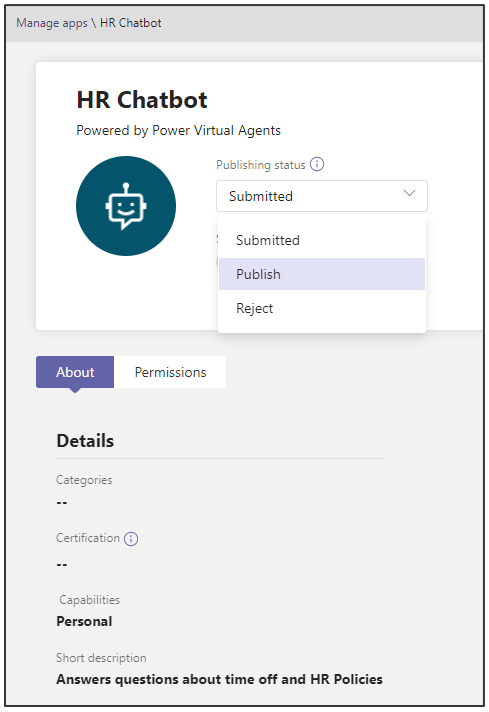
1. Open a new browser tab and navigate to the Microsoft Teams admin center: https://admin.teams.microsoft.com/dashboard
   Go to Teams apps – Manage apps in the left hand navigation menu.
   You will see that there is 1 Submitted custom app pending approval.



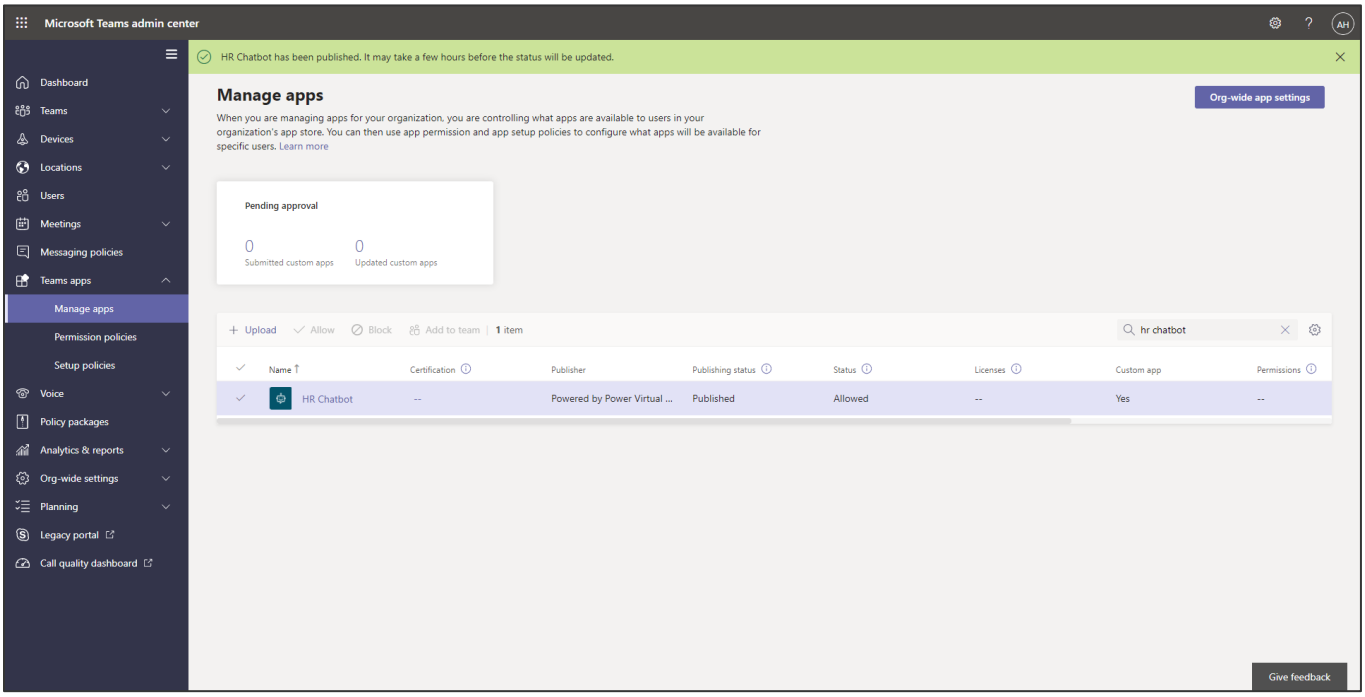
2. Search for the name of the chatbot you submitted and then click to open it.



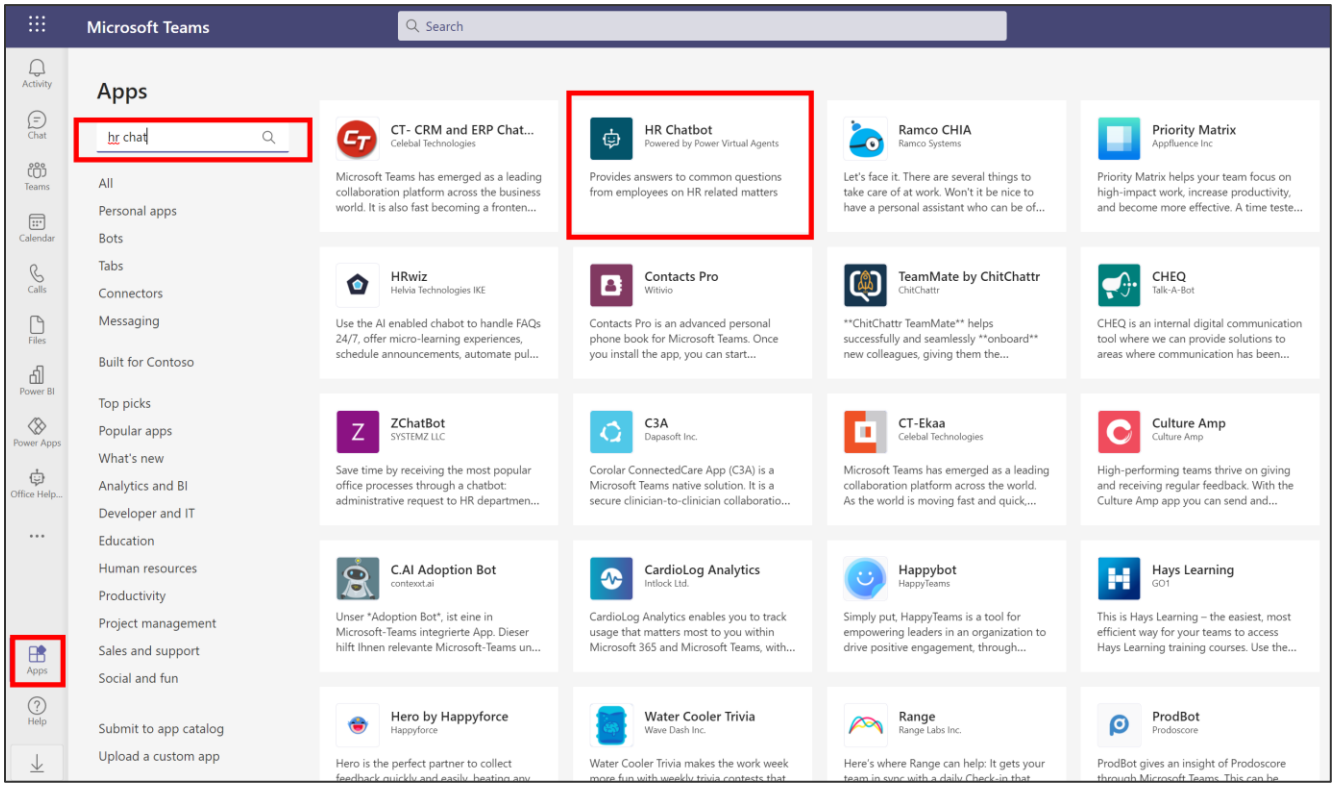
3. Change the Publishing status to Publish, and then confirm in the pop up message that appears.



4. You will now see a confirmation screen showing that your chatbot has been published.



5. Your chatbot will now be available in the main section of the Teams app store for your organization, for all employees to use.



Exercise 6: Connect your chatbot to Dataverse for Teams

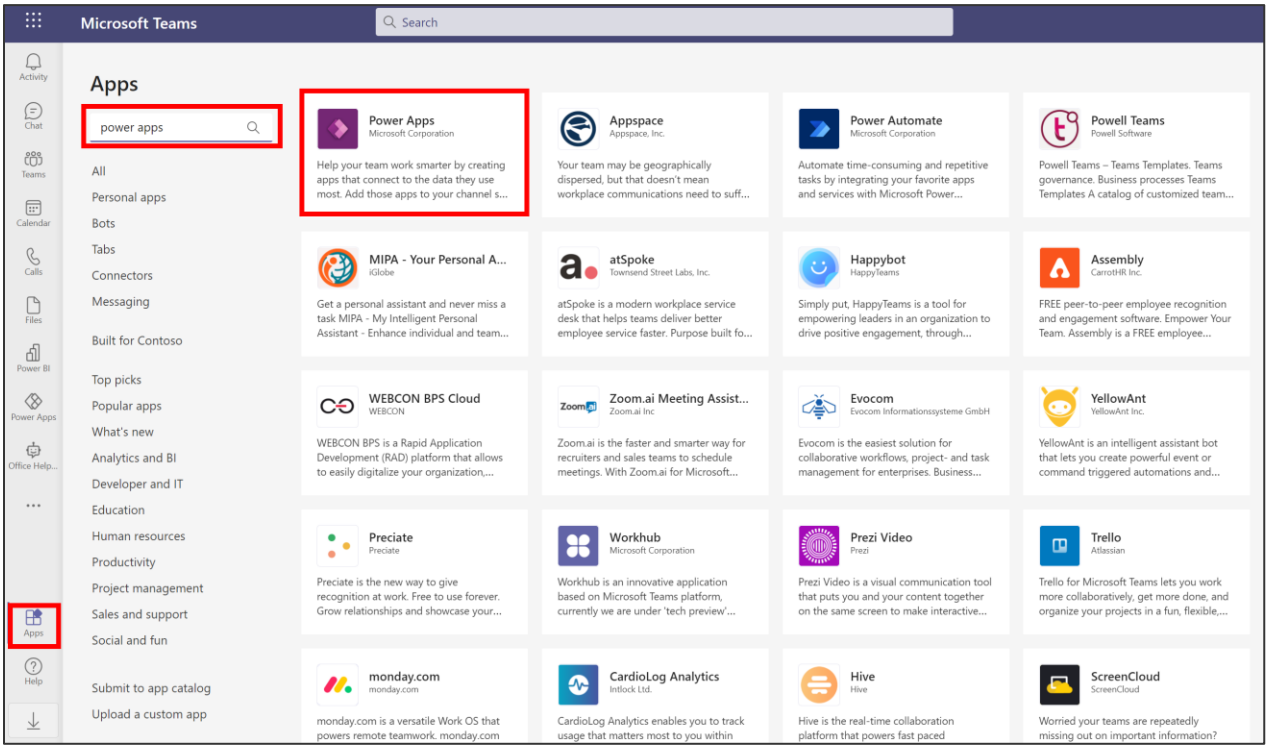
Microsoft Dataverse for Teams provides Teams users the ability to easily build connected custom apps, chatbots and flows. It is a built-in data platform for Teams, where users can build their own relational data models in a no-code experience. It contains the core data capabilities from the same platform behind Microsoft Power Platform and Dynamics 365. With Dataverse for Teams, you can create a relational database with up to 1 million rows. It is the ideal data source for any Power Platform solutions you are building within Teams.

In this exercise, you will be creating a Dataverse for Teams table to store the extended leave requests. Power Apps will then be used to create an app where employees can submit, view and edit their requests. The chatbot will also be connected to this data table to give employees the option to submit their leave requests via conversation with the chatbot.

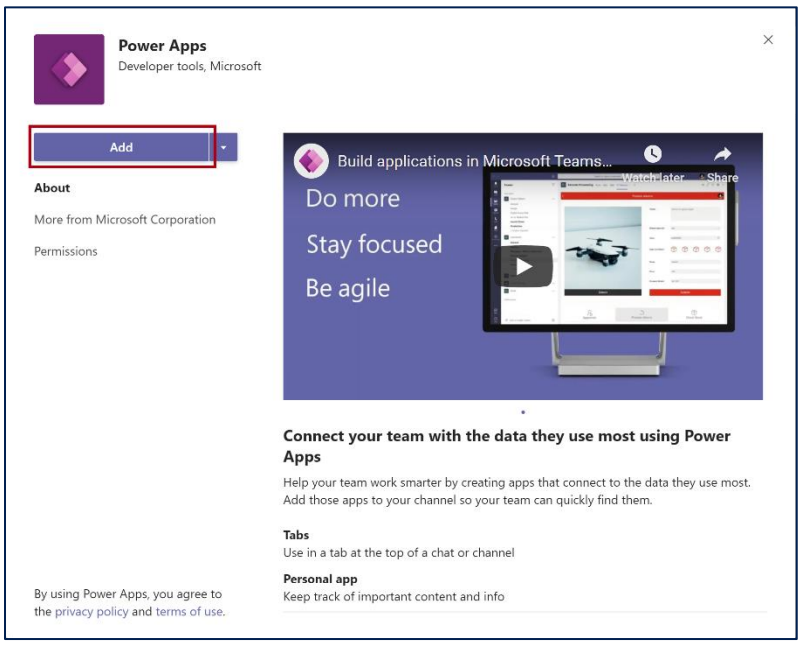
Task 1: Discover and add the Power Apps app to Teams

In this task, you will pin the Power Apps app to your Teams toolbar for easier access.

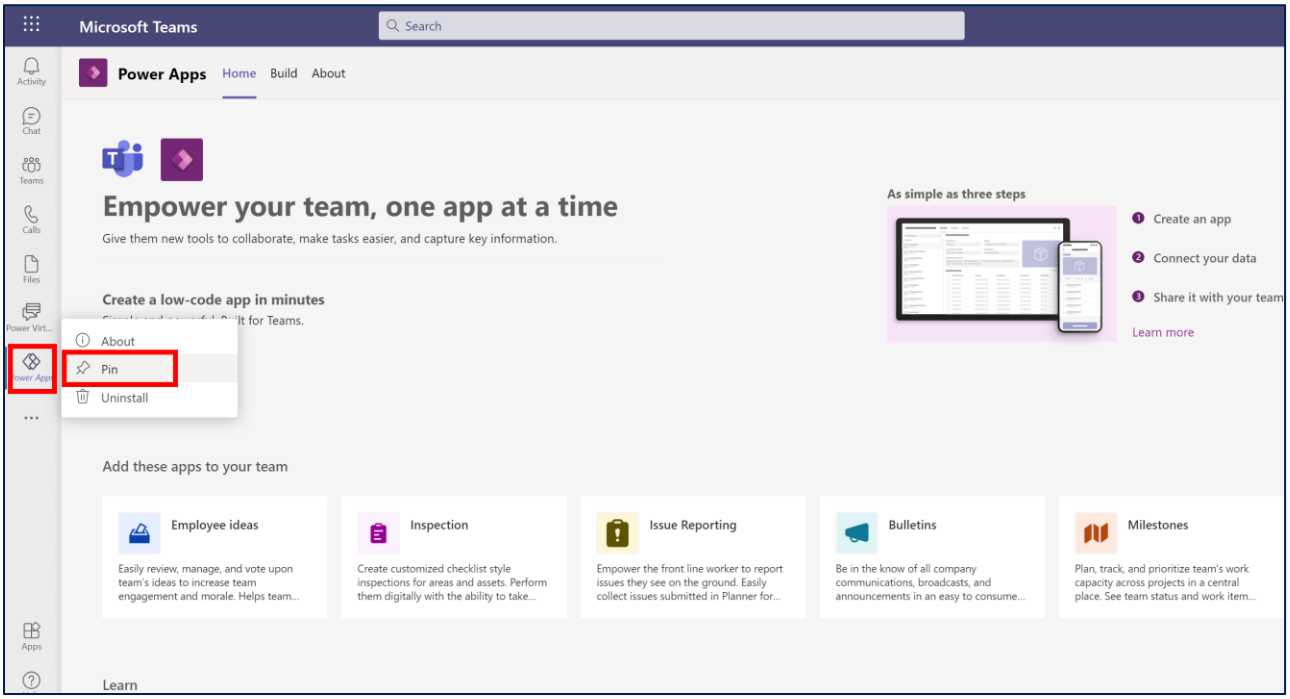
1. Click on the **Apps** icon on the left toolbar, and then search for Power Apps. Click on the **Power Apps** app when you find it in the search results.



2. You will see a pop up with information about the Power Apps app for Microsoft Teams. Click on the **Add** button.



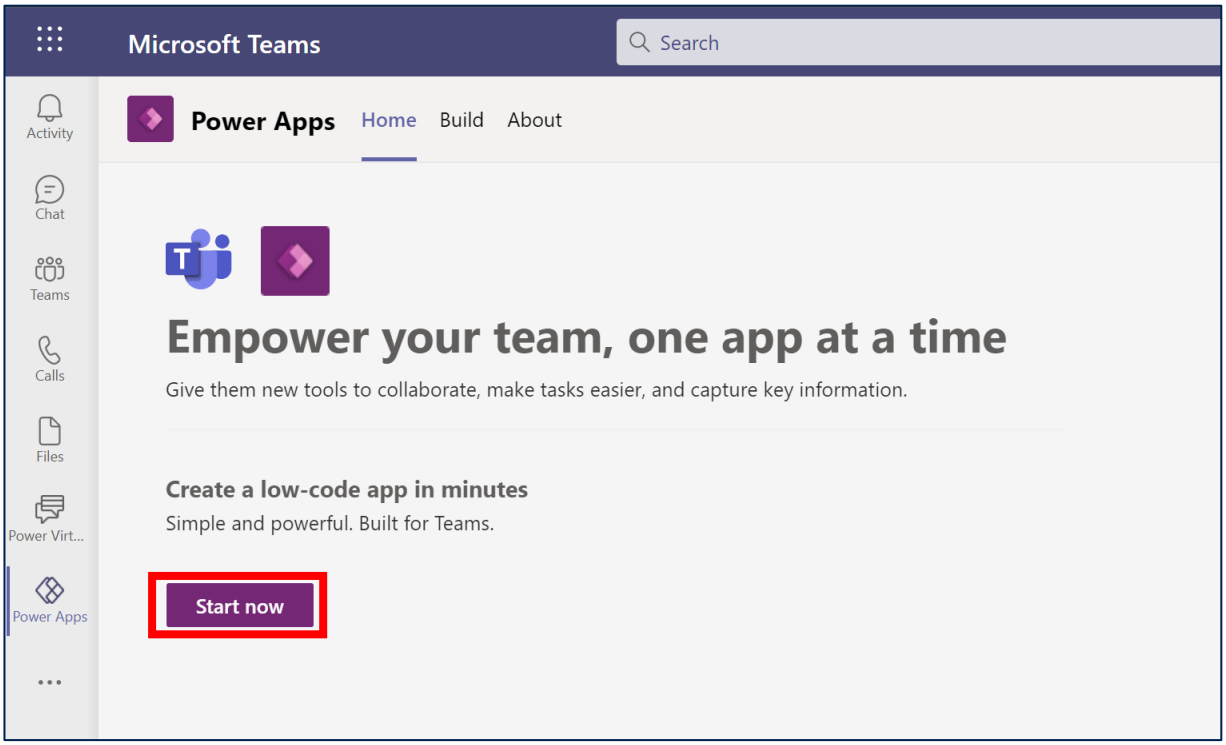
3. You will now see the Power Apps app in the left-hand navigation bar. Right click on that icon and select **Pin**. This pins the app to the navigation bar, making it easier to return to it when you need to.



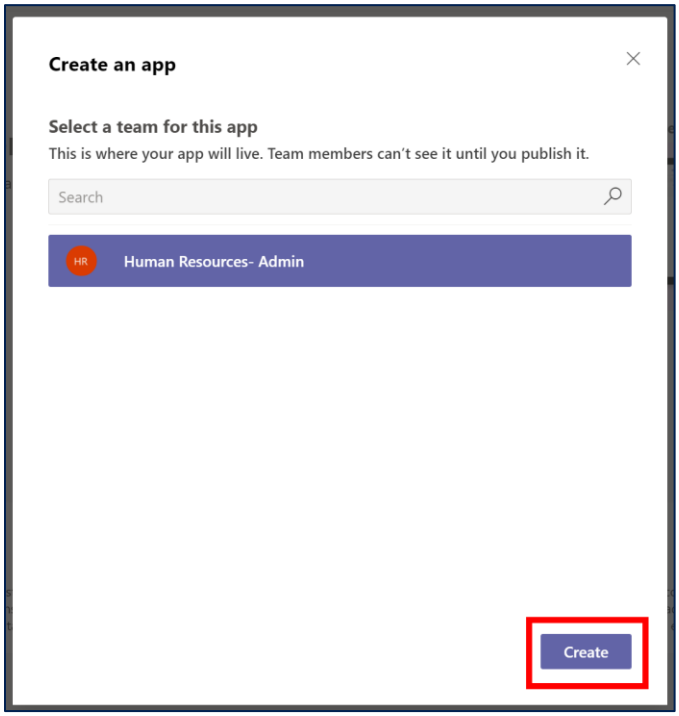
Task 2: Create a new app

One way to get started creating your data model in Dataverse for Teams is to begin by creating a new Power App. By starting this way, your app will automatically contain a template for easily viewing, editing, deleting and submitting new data. In this lab, we will just be creating a single table for leave requests. However, you can use Dataverse for Teams to build a relational database with many tables, holding up to around 1 million rows of data.

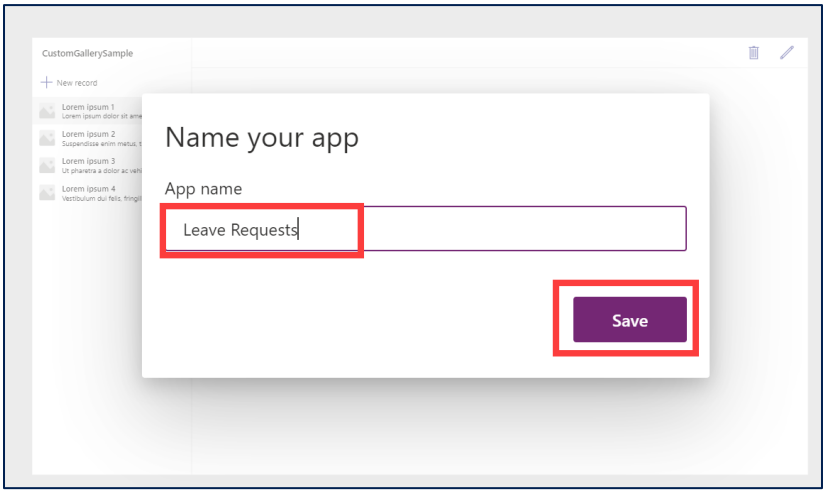
1. In the Power Apps app for Teams, click on **Start now**.



2. In the **Select a team** dropdown, select the team where you have built your bot, then click **create**. It may take a few minutes for the app be prepared. You will get a notification in Teams once complete.

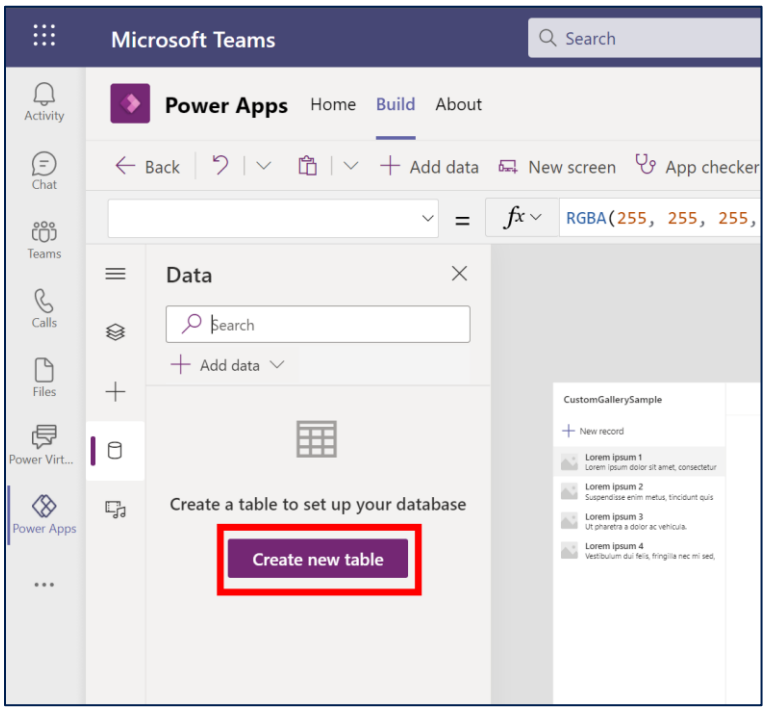


3. Once the app is ready, you will be taken to the editing canvas for the app. Enter the name of the app as **Leave Requests**, then click **Save.**

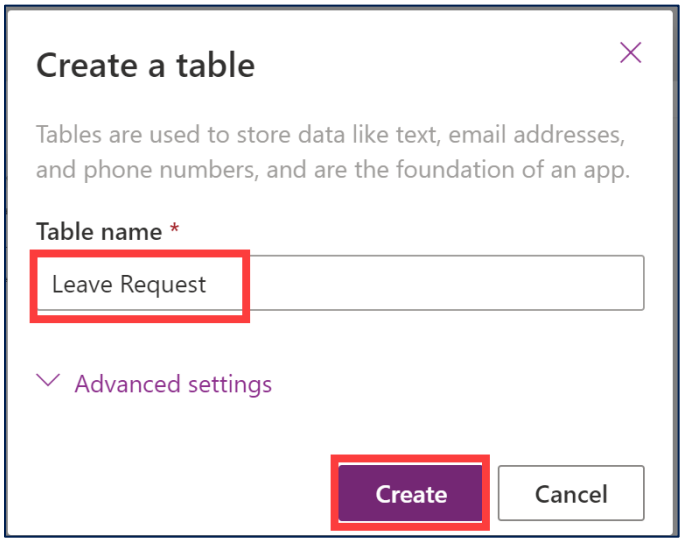


Task 3: Create a table in Dataverse for Teams

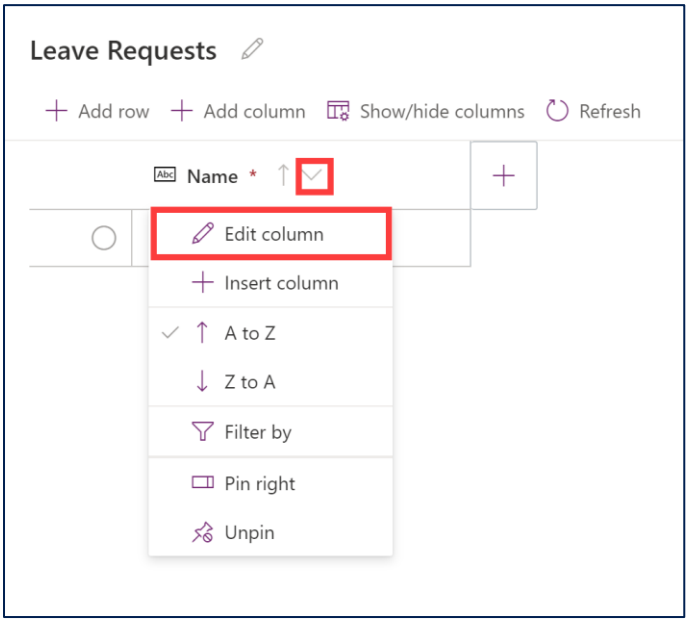
1. From the editing canvas of your app, click on **Create new table.** Ensure the cylinder/data icon is selected from the left side of the screen.



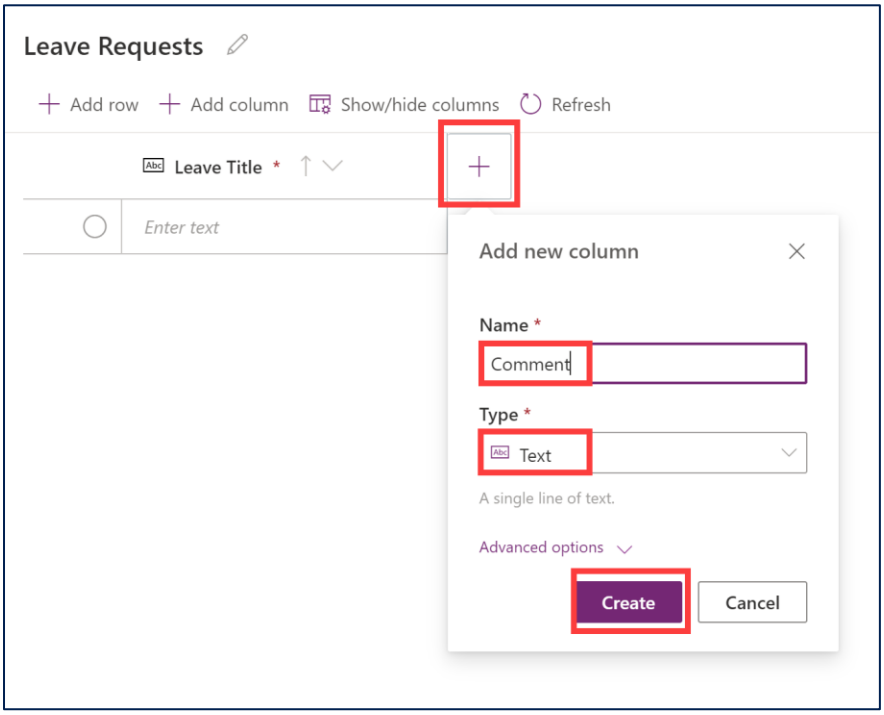
2. Name the table **Leave Request**, then click **Create**.



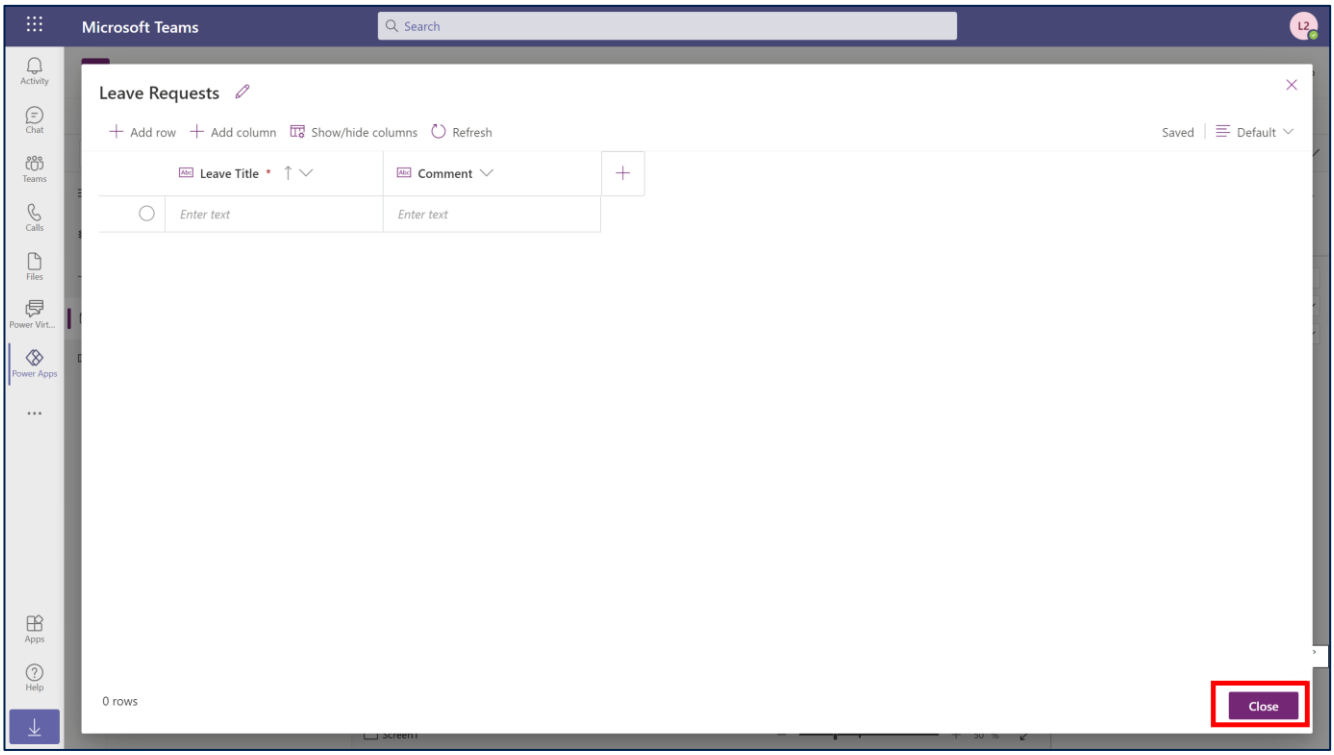
3. You will now create the columns for your table and assign a data type to each. In the Leave Requests table, click on the Name column header, then click **Edit Column**. Rename the column to **Leave Title**.



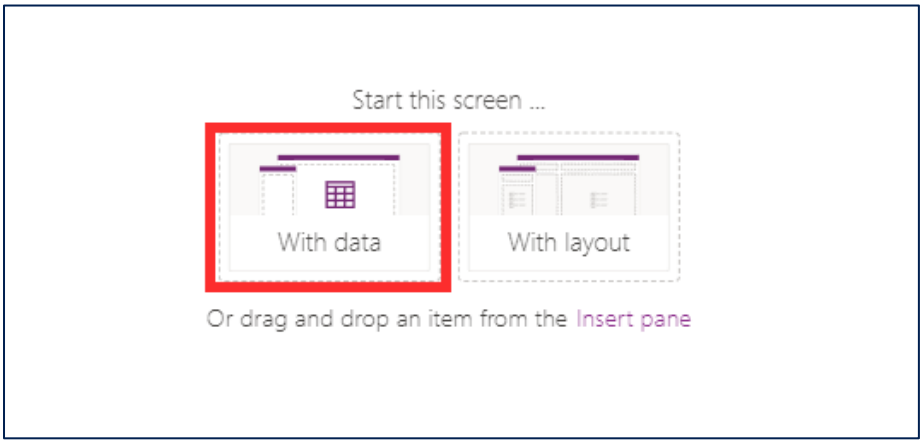
4. Click on the  icon to add a new column. Enter **Comment** as the column Name, and select **Text** as the Type. Click **Create**.



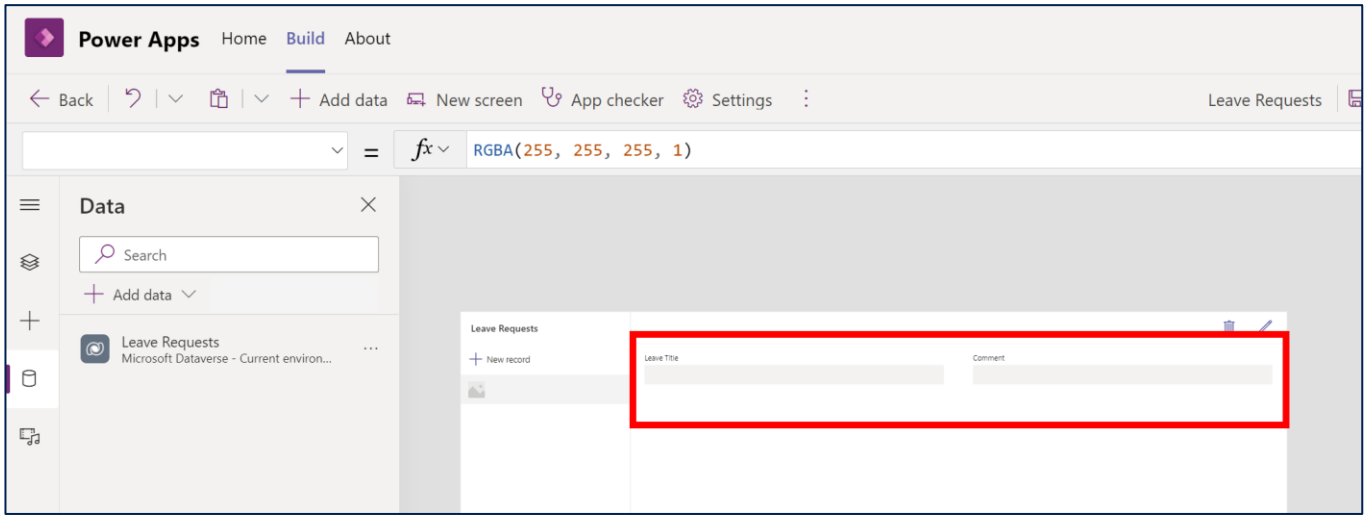
5. You should now have 2 columns in your Leave Requests table. Click **Close** to return to the app.



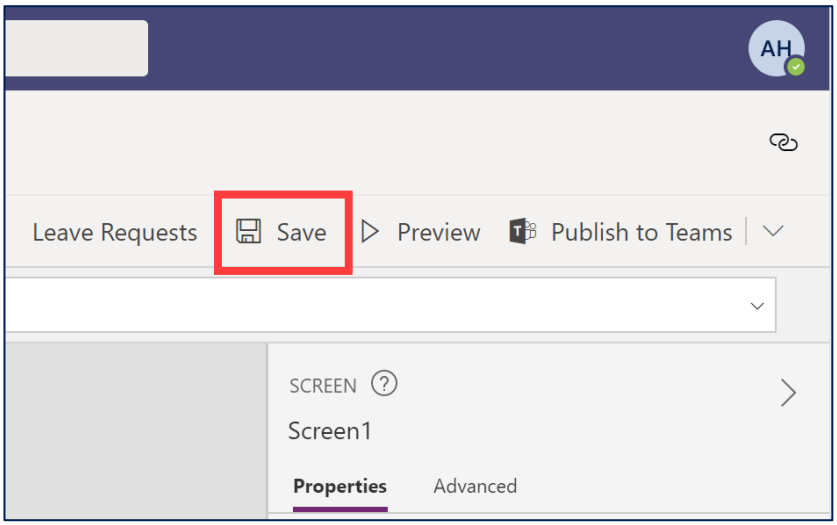
6. Click on **With data** from the app canvas.



6. You should notice that a form with the columns created in your Leave Requests table has been added to your app canvas.



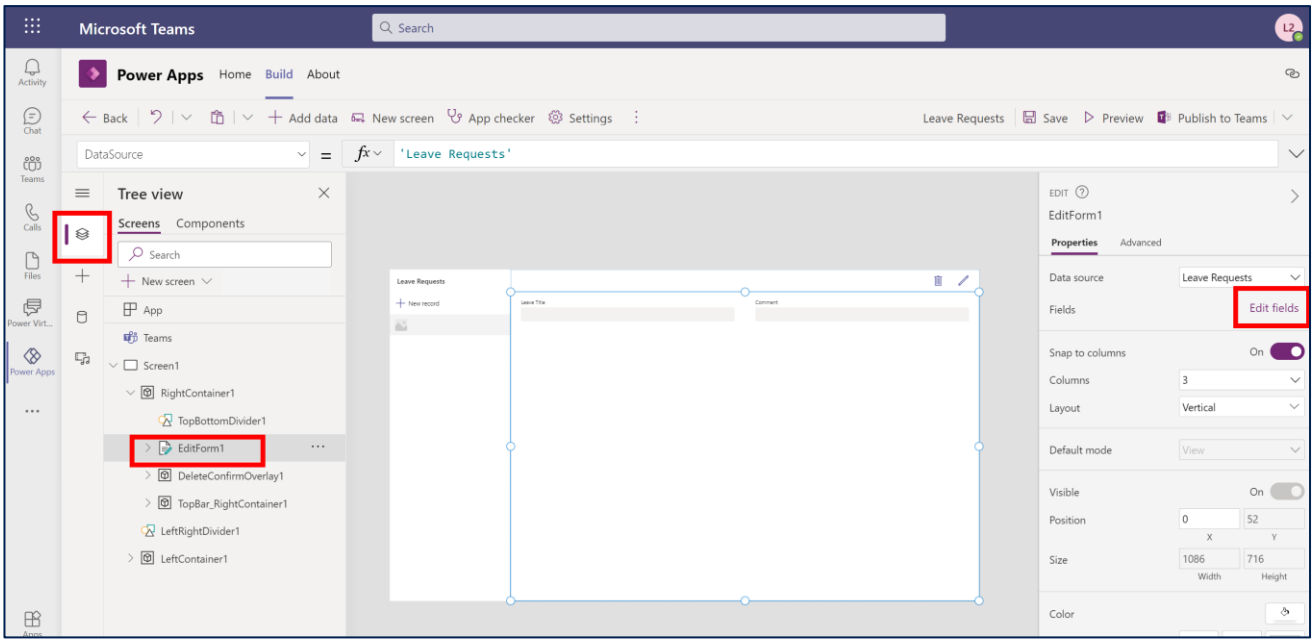
7. Click the **Save** button to save the app.



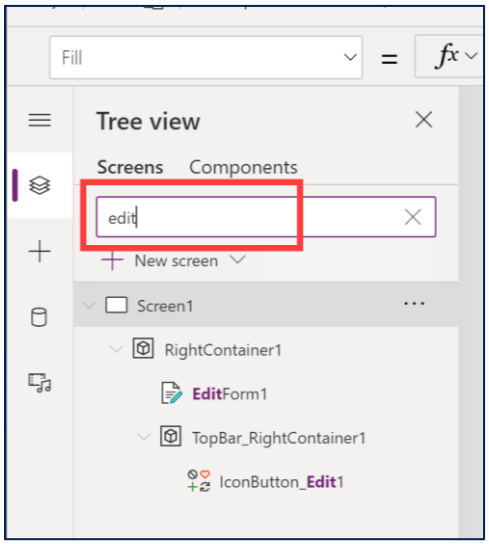
Task 4: Configure the app form

Now that the table has been created, you can now configure and customize the app that employees will use to submit their leave requests.

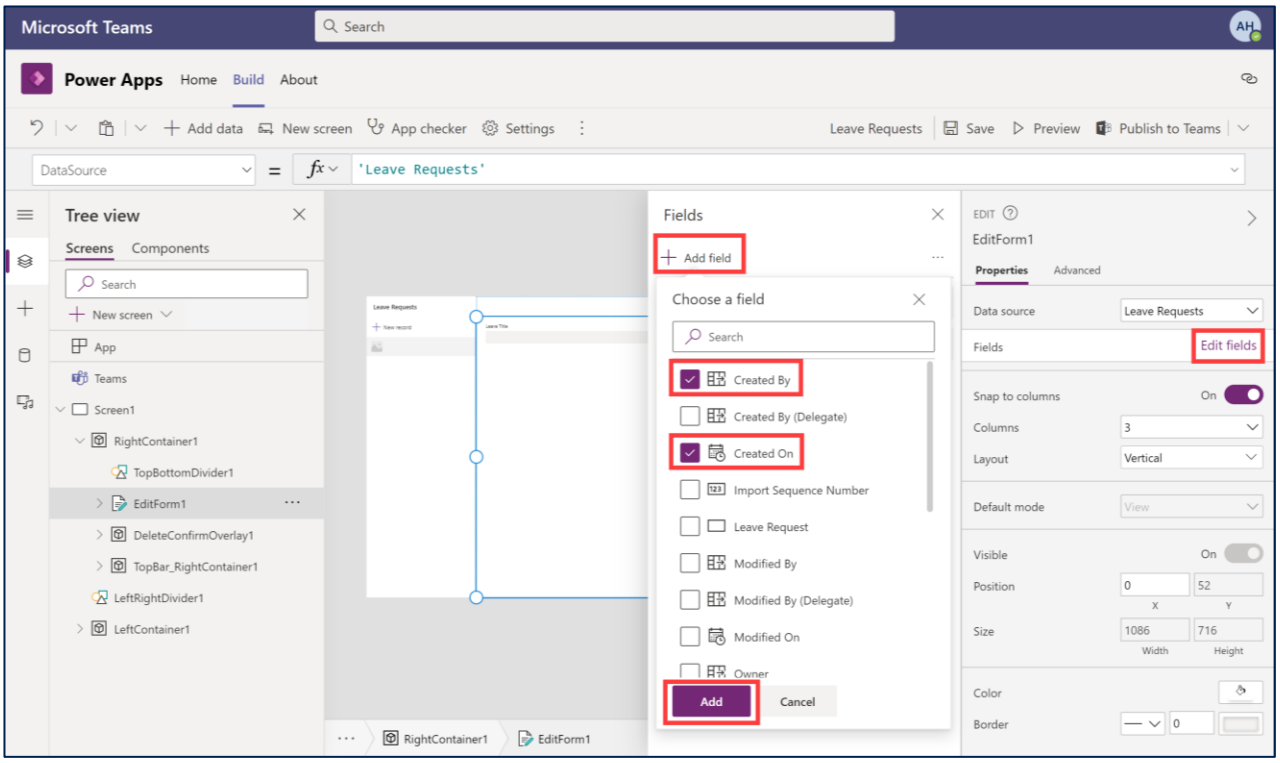
1. From your app editing canvas, click on the tree view icon on the left side of the screen. Within the tree view underneath RightContainer1, click on **EditForm1**. Then from the properties pane on the right side of the screen, click on **Edit Fields**.



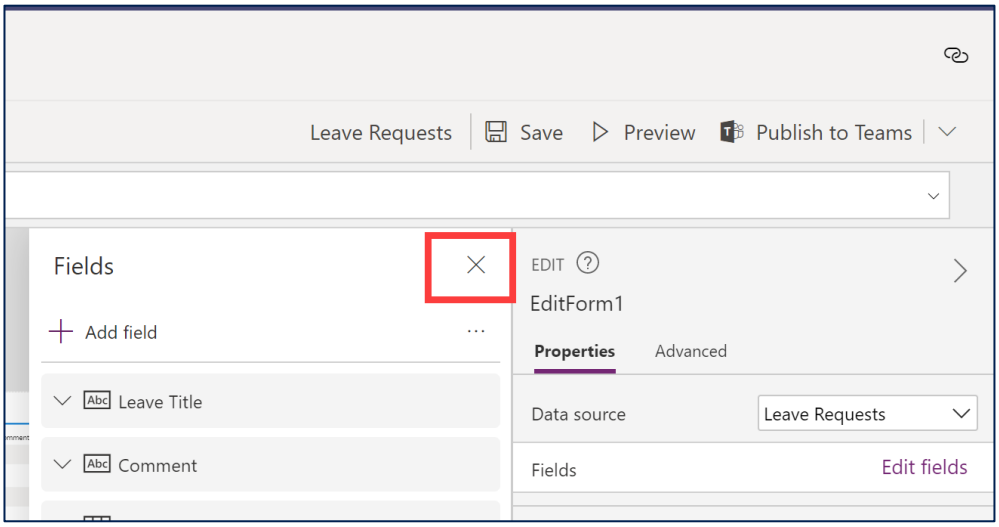
Tip: Use the search on the tree view to find the objects based on their name easier.



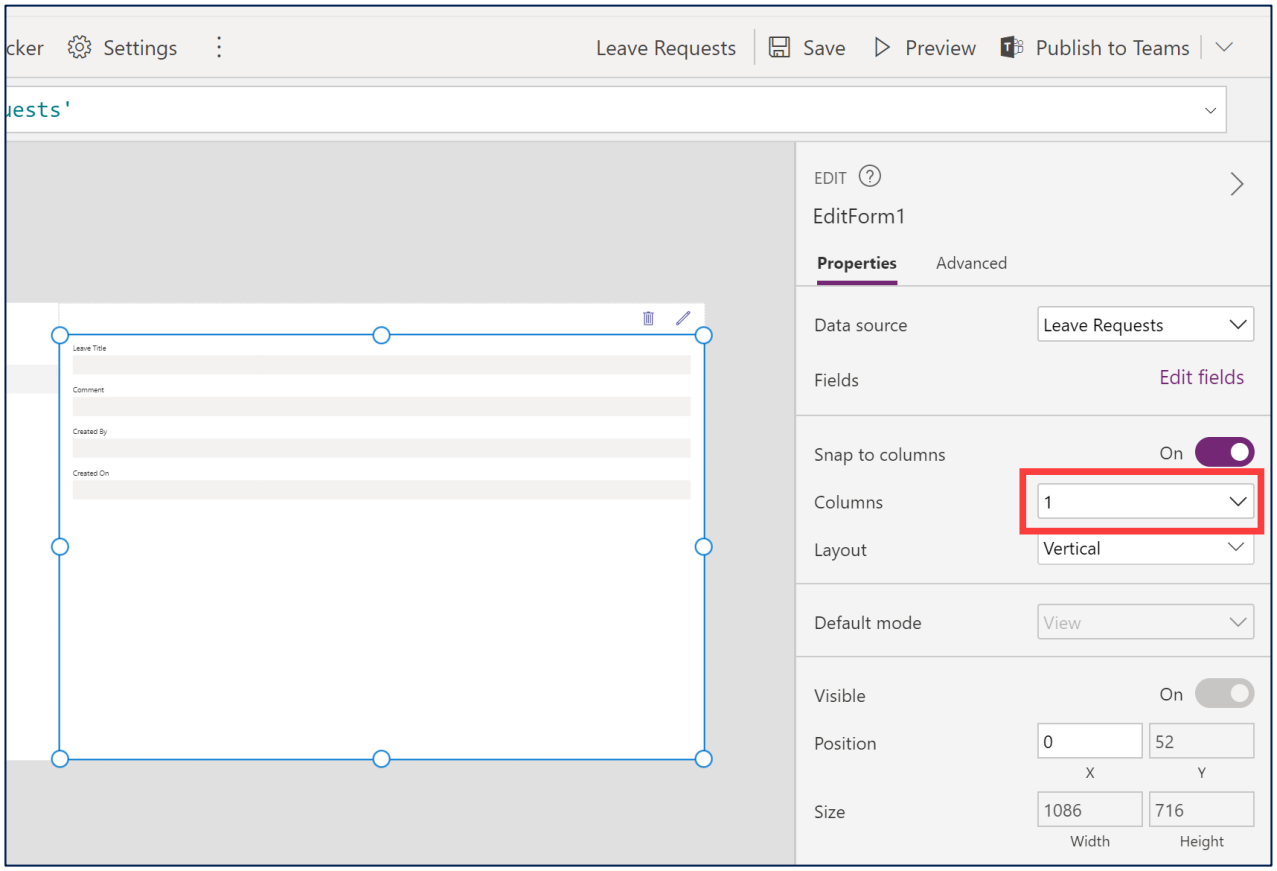
2. Click **+Add field** and add the **Created By** and **Created On** fields.



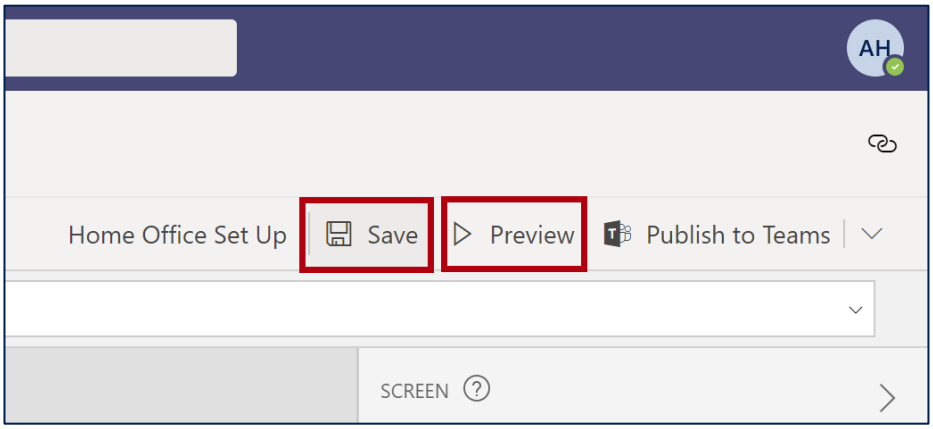
3. You can now close the Fields menu.



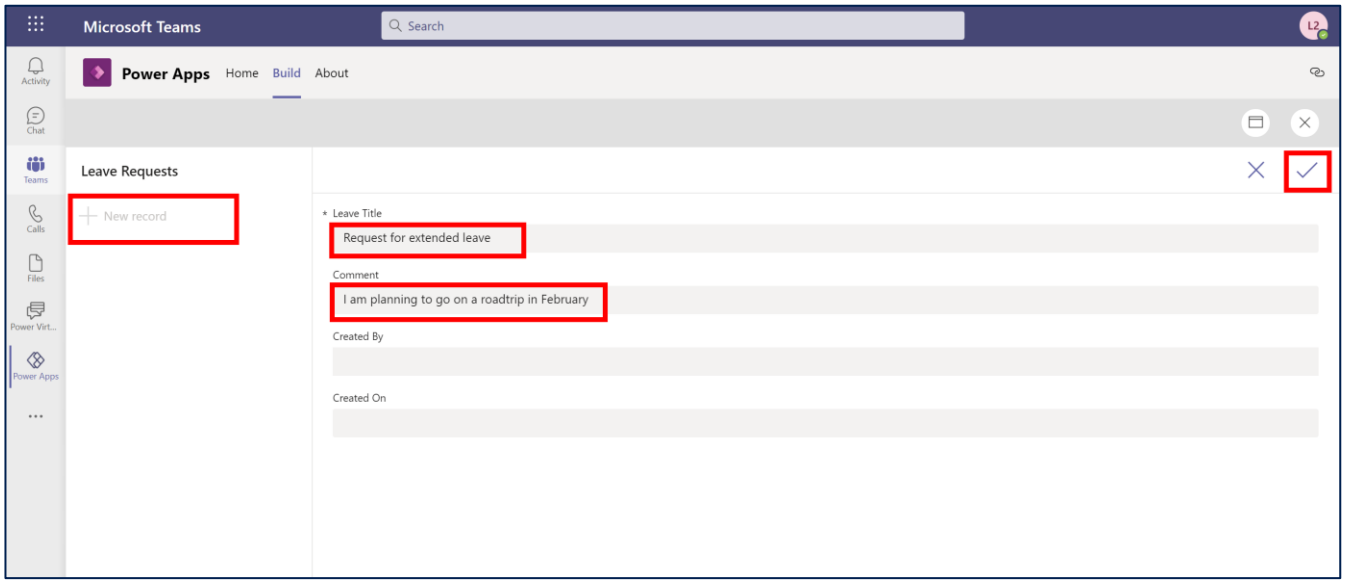
4. With EditForm1 selected, change the column value to **1** as shown below.



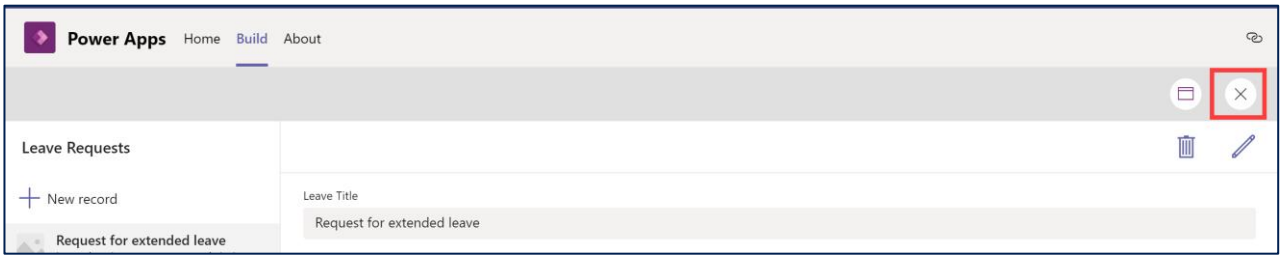
5. Save then click to preview the app.



6. To preview the app, click on **+New record**. Enter in a Leave Title, then a Comment. Then, submit the form.



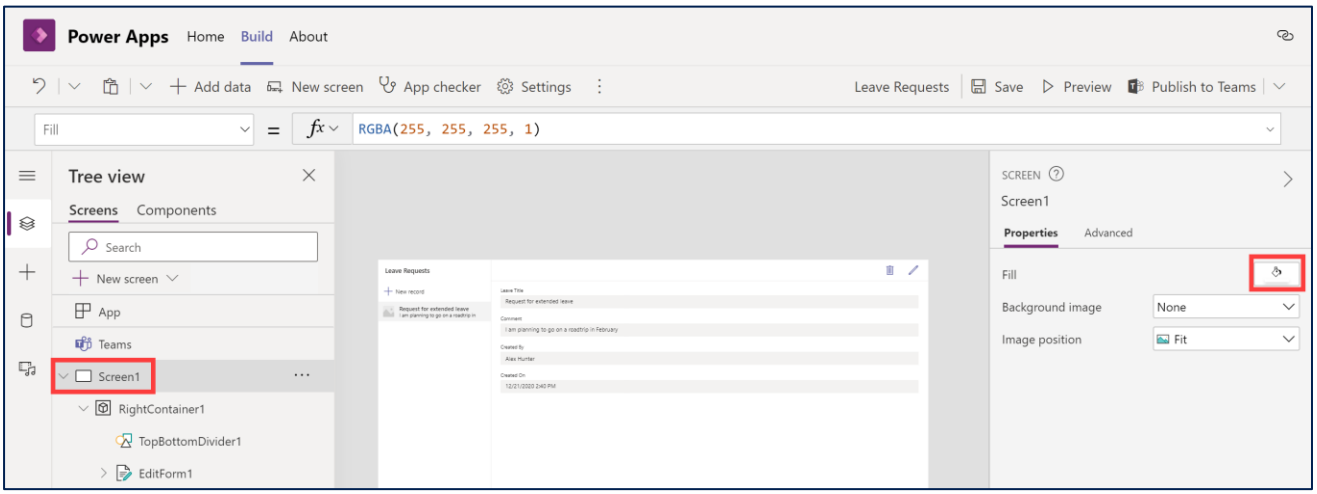
7. Close the preview.

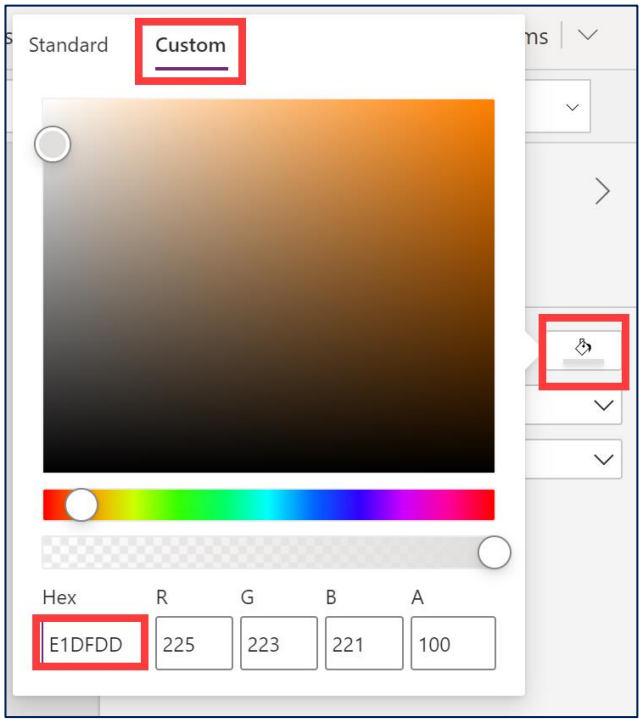


Task 5: Customize app design

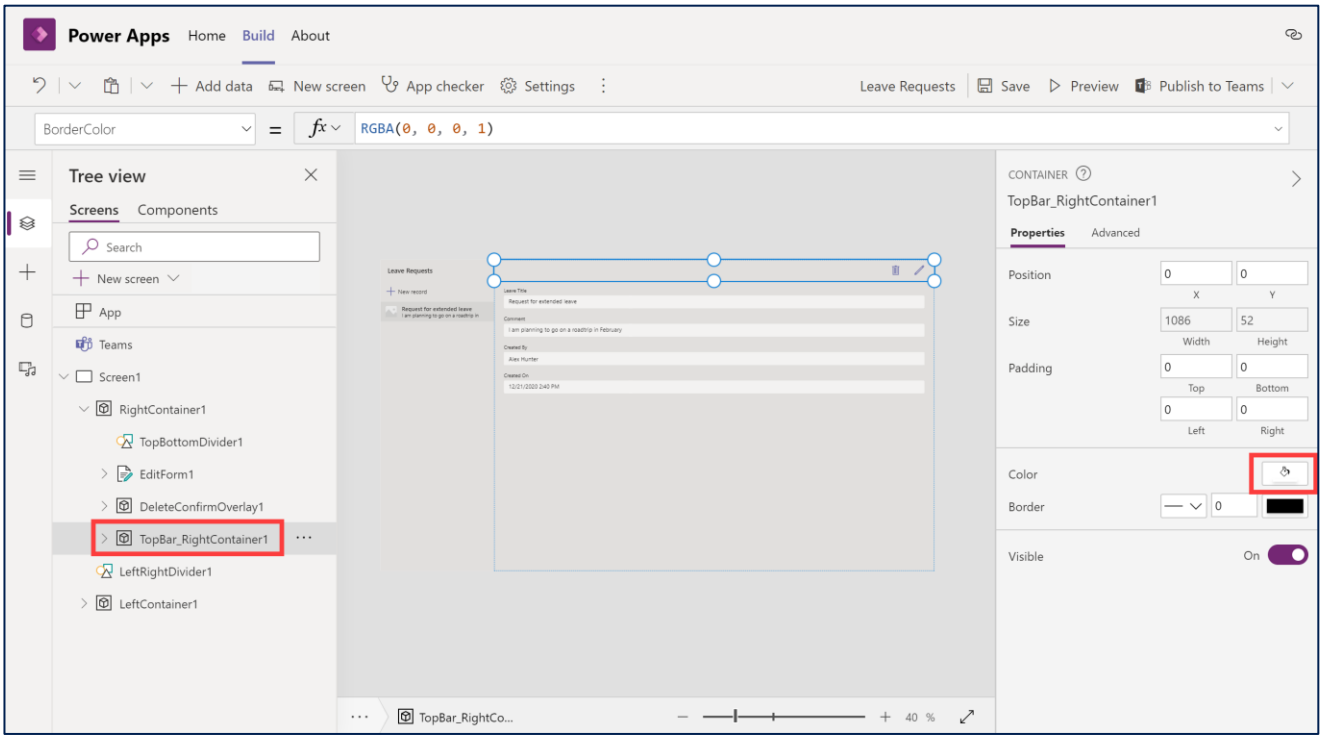
When creating an app, you have full control of the design of the screens. In this case, we will be using colors to match with the overall theme of Microsoft Teams.

1. From the tree view of your canvas app, select **Screen1**. On the properties pane for Screen1, change the **Fill** to the custom value **E1DFDD** as shown below.

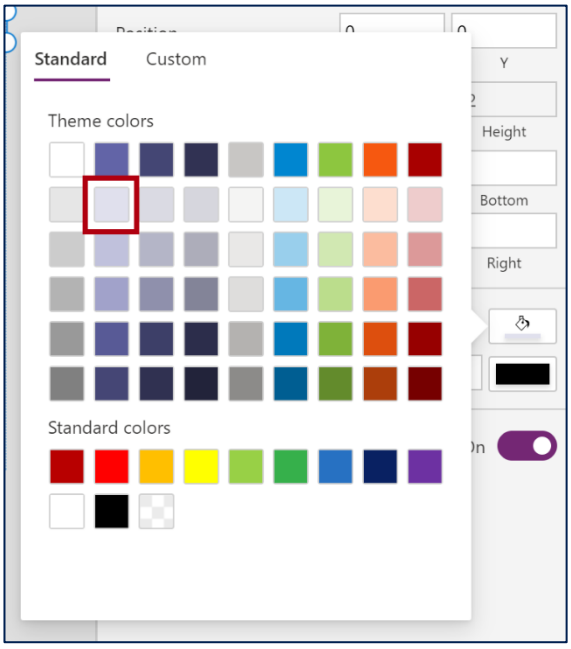




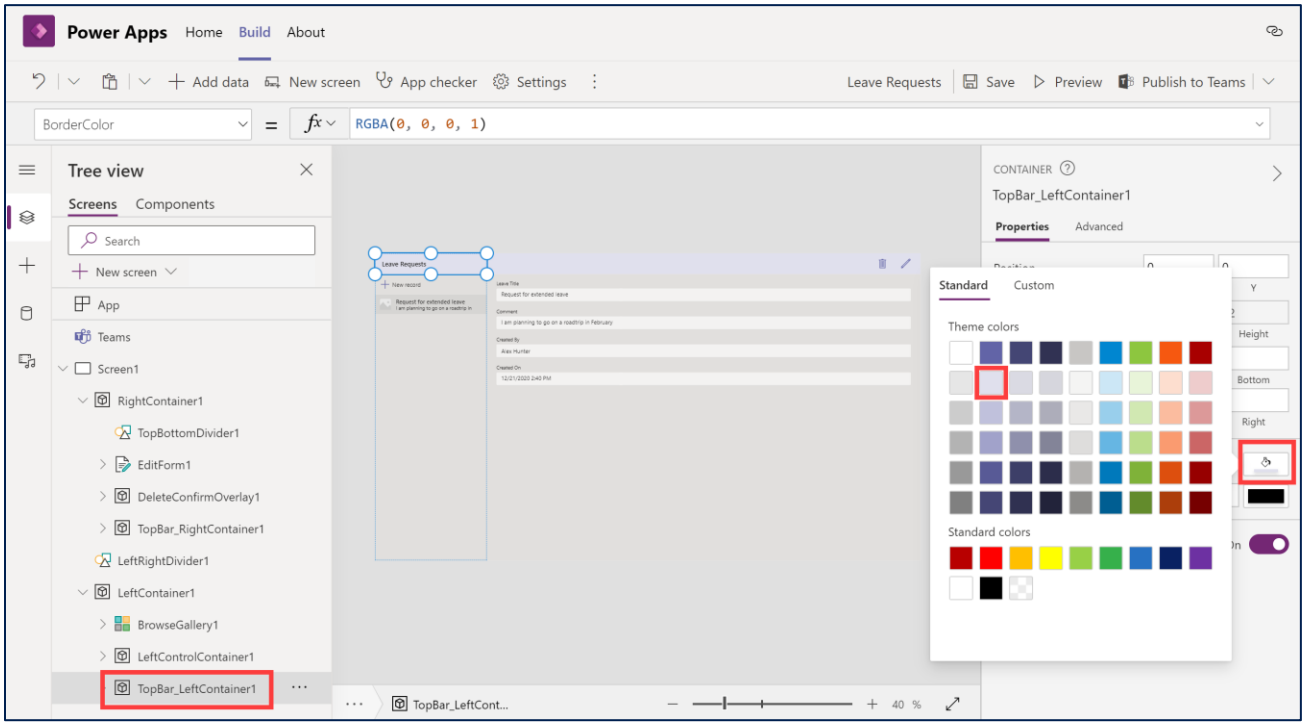
2. From the tree view, select **TopBar_RightContainer1**, then click on it's color property from the properties pane.



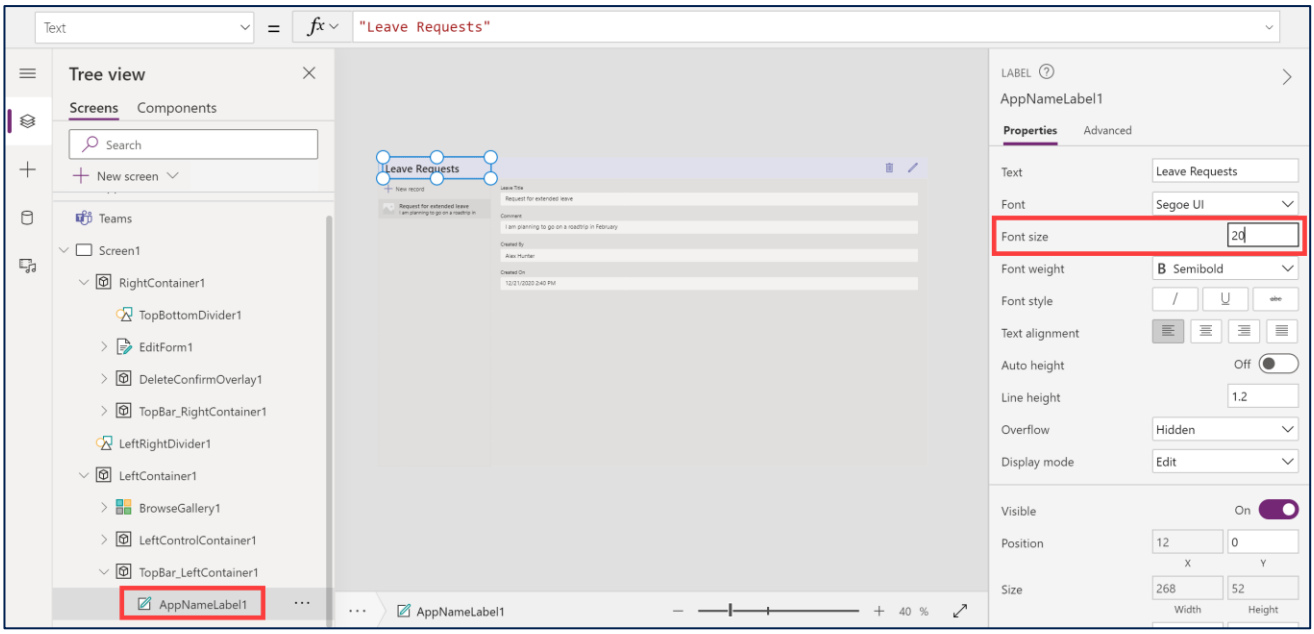
3. Change the color of **TopBar_RightContainer1** to the light purple shown selected below.



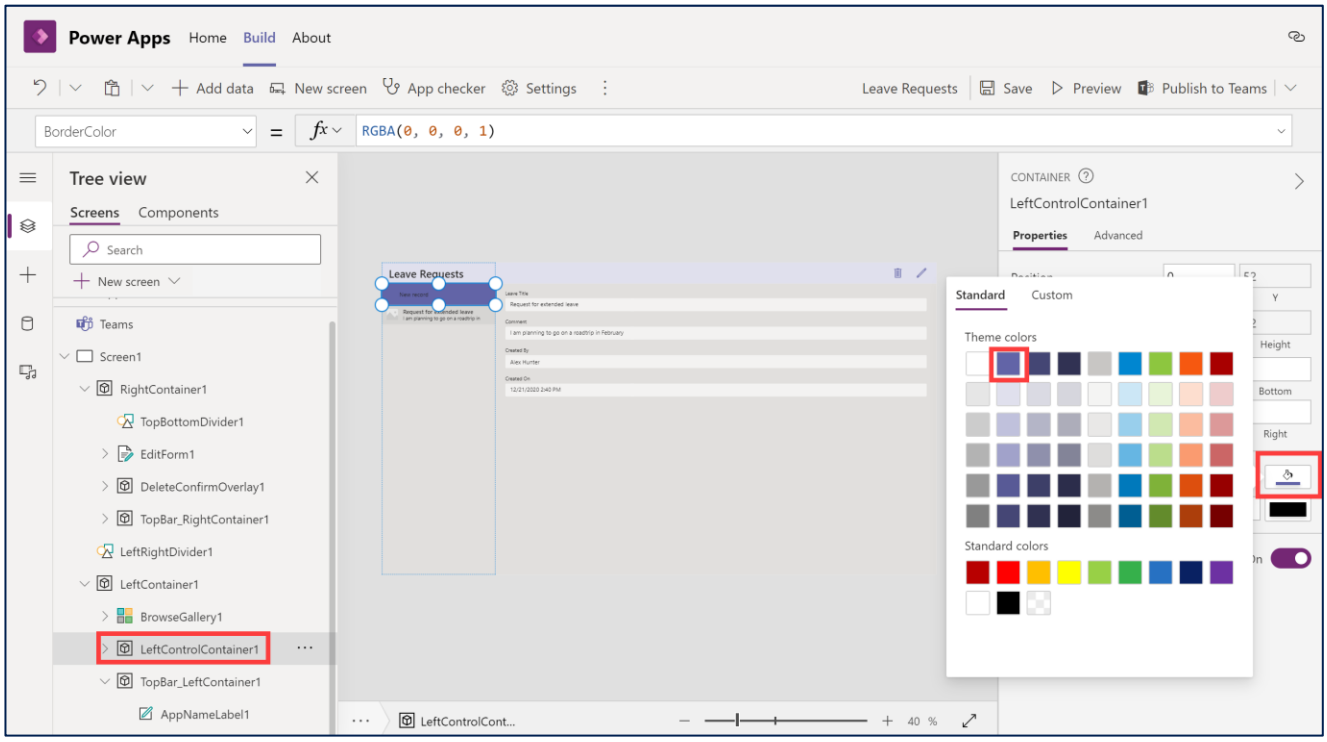
4. From the tree view, select **TopBar_LeftContainer1** and change the color property to match the color shown in step 3 above. Your app should now appear as below.



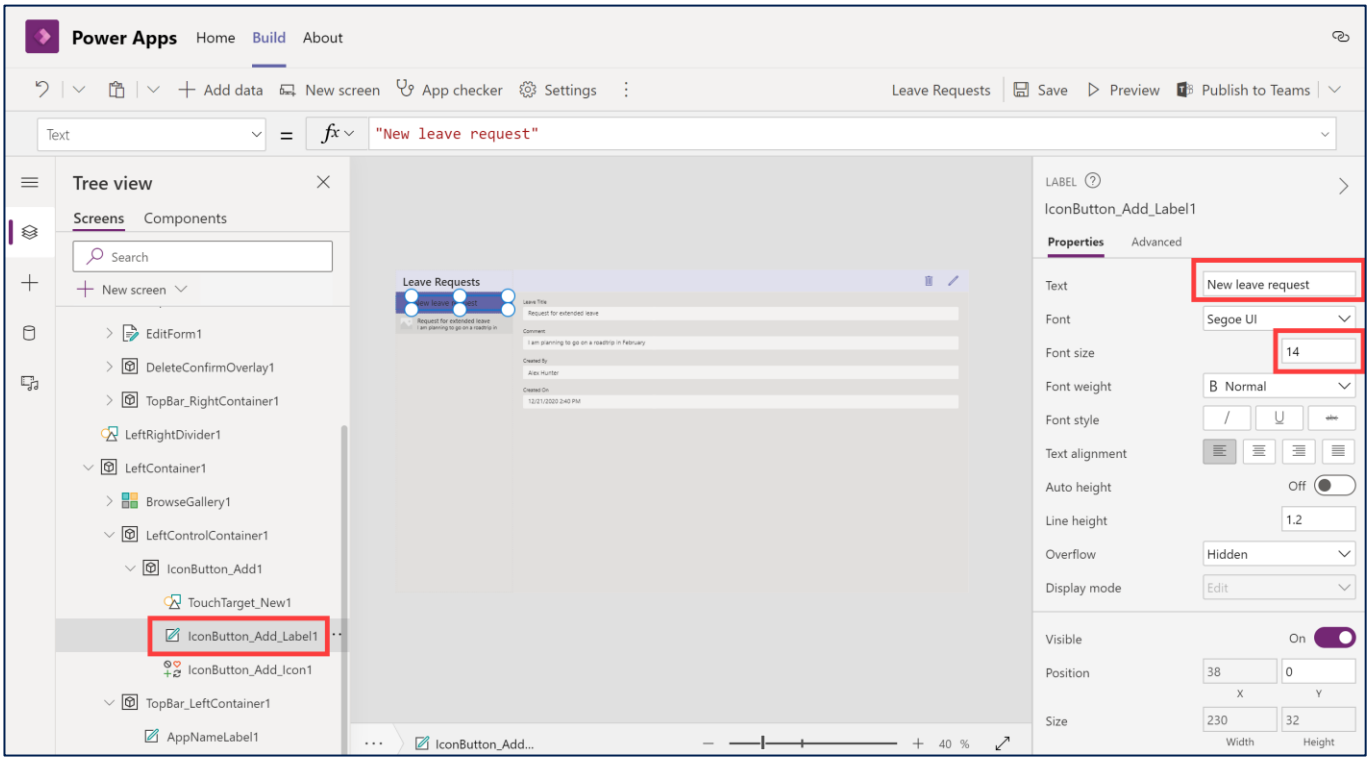
5. Click on **AppNameLabel1**. In the properties pane, change the Font size to **20**.



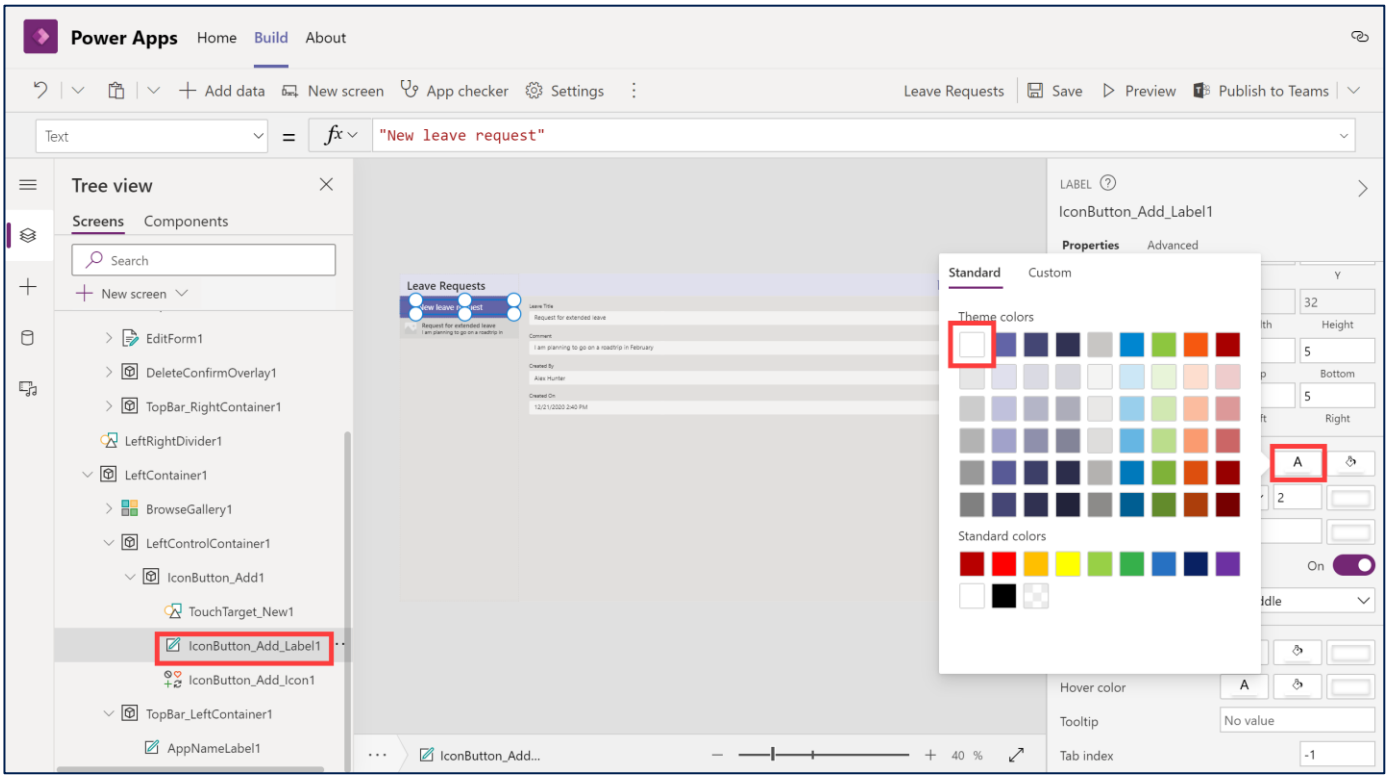
6. Select **LeftControlContainer1**. Change the color property to the purple as shown below.



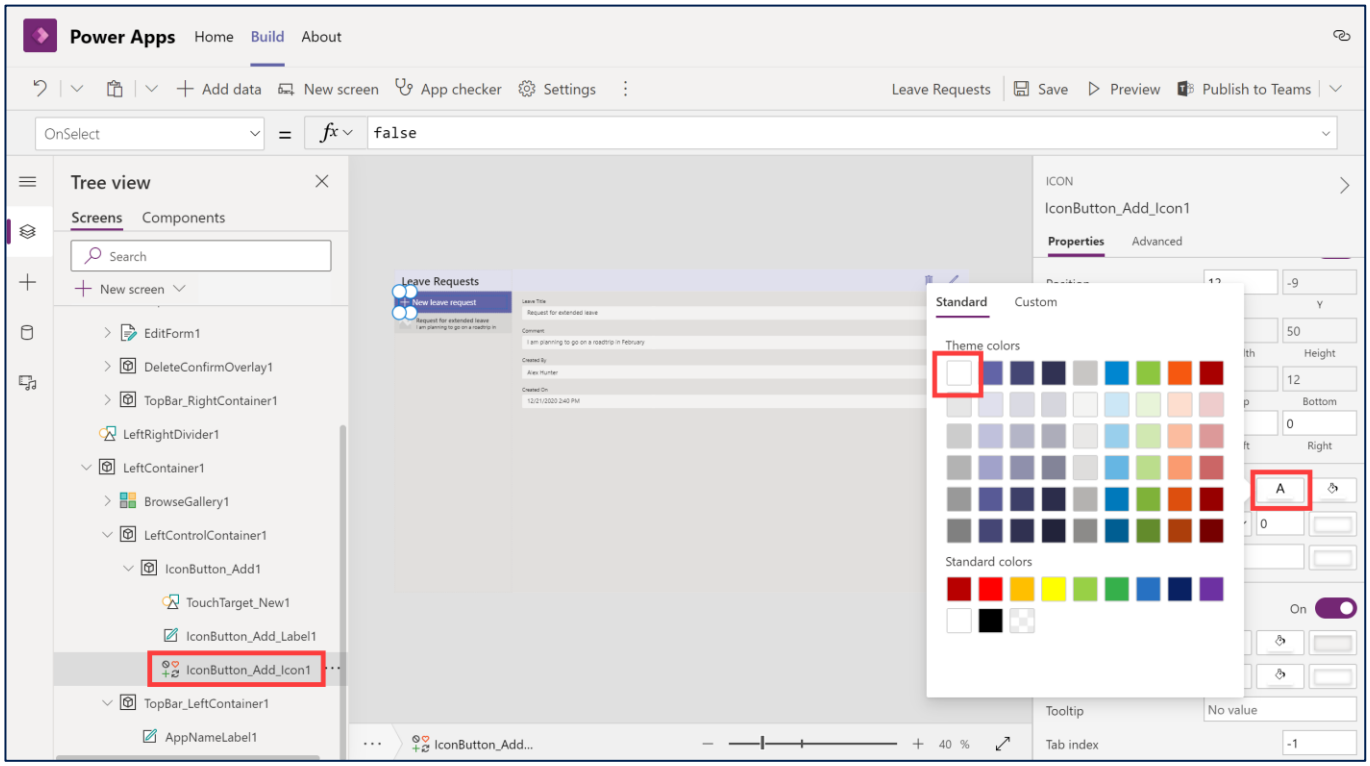
7. Click on **IconButton_Add_Label1.** Change the Text property to **New leave request**, and set the font size as **14**.



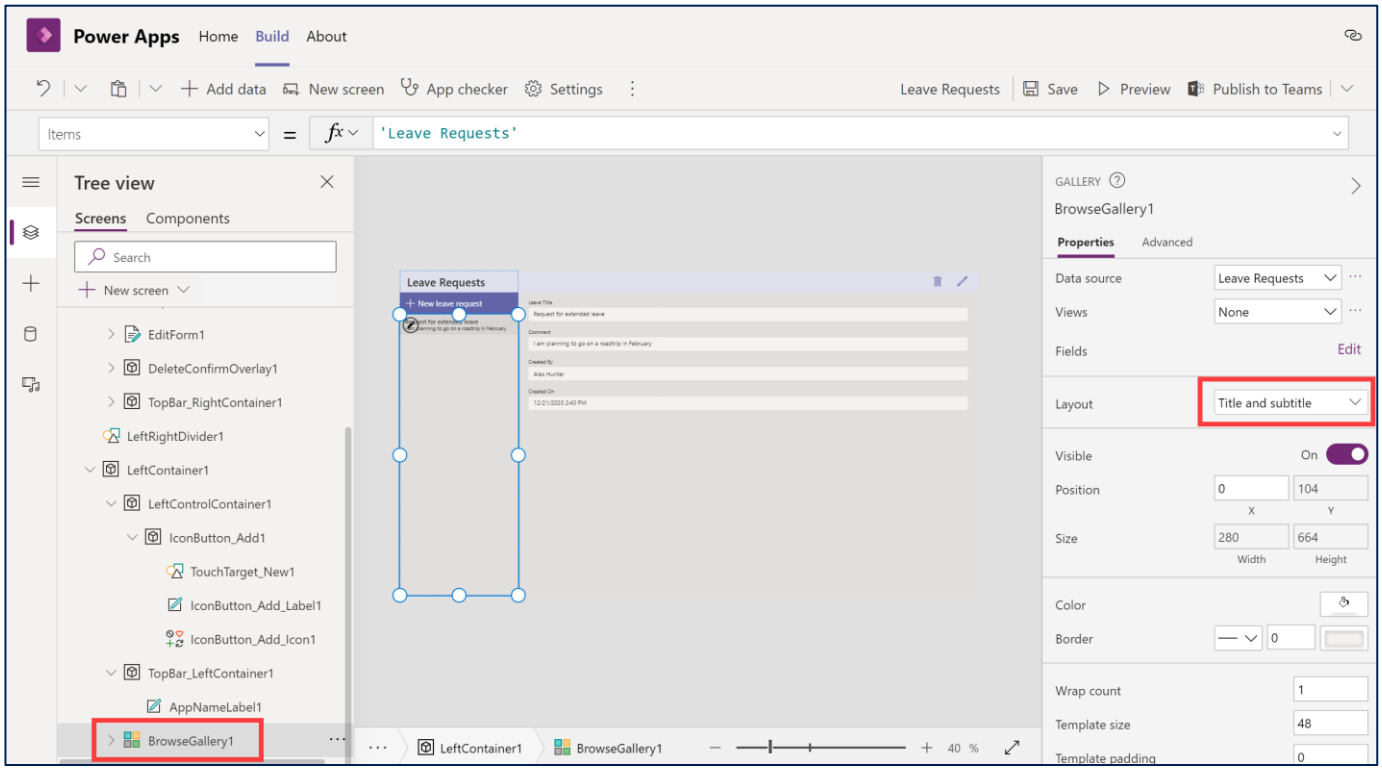
8. Change the color of **IconButton_Add_Label1** to white.



9. Select **IconButton_AddIcon1** and change the color to white.

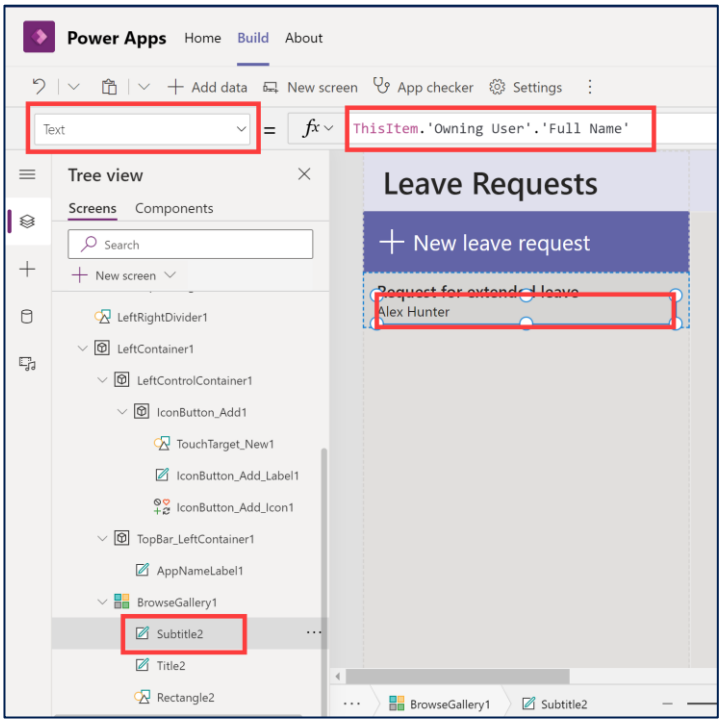


10. Select **BrowseGallery1** and change the Layout property to **Title and subtitle**.

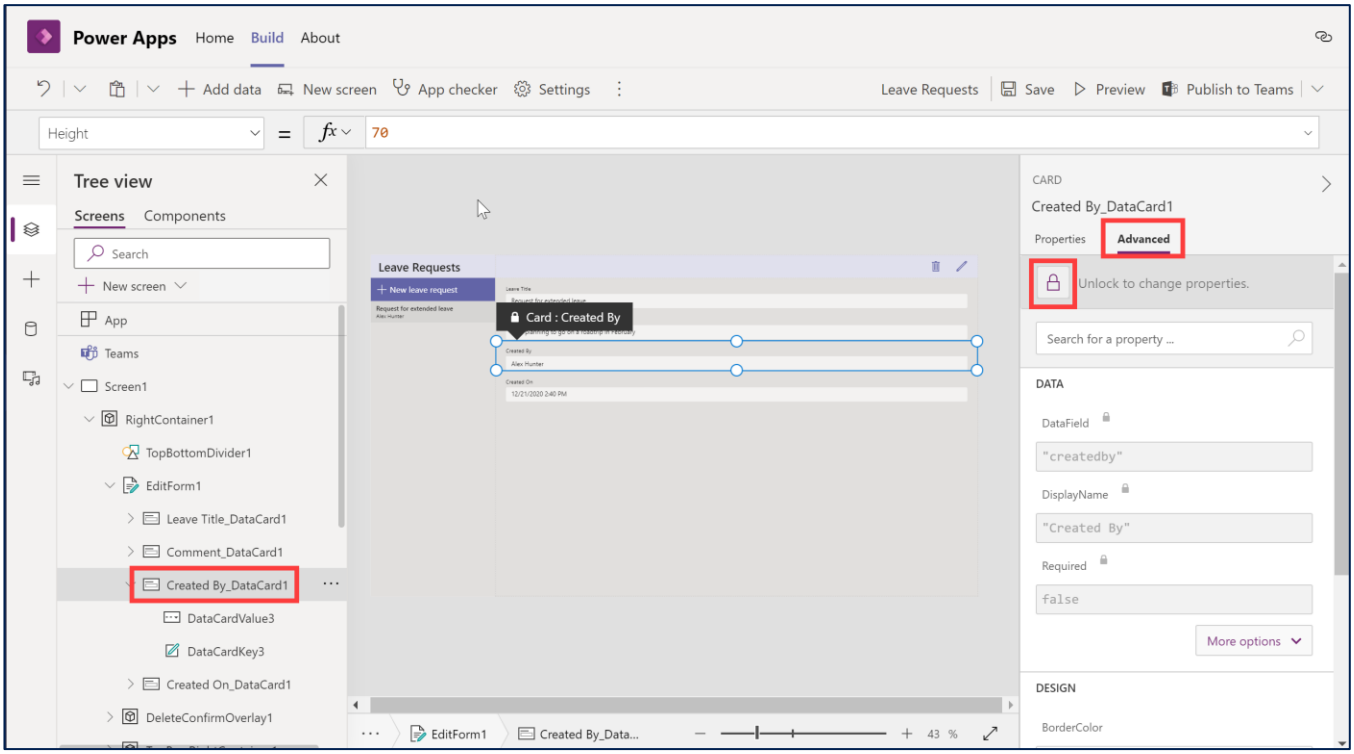


11. Within BrowseGallery1, click on **Subtitle2**, i.e. the 2nd text label within the gallery. In the formula bar at the top of the screen, change the property dropdown to **Text**, then type in the following formula.

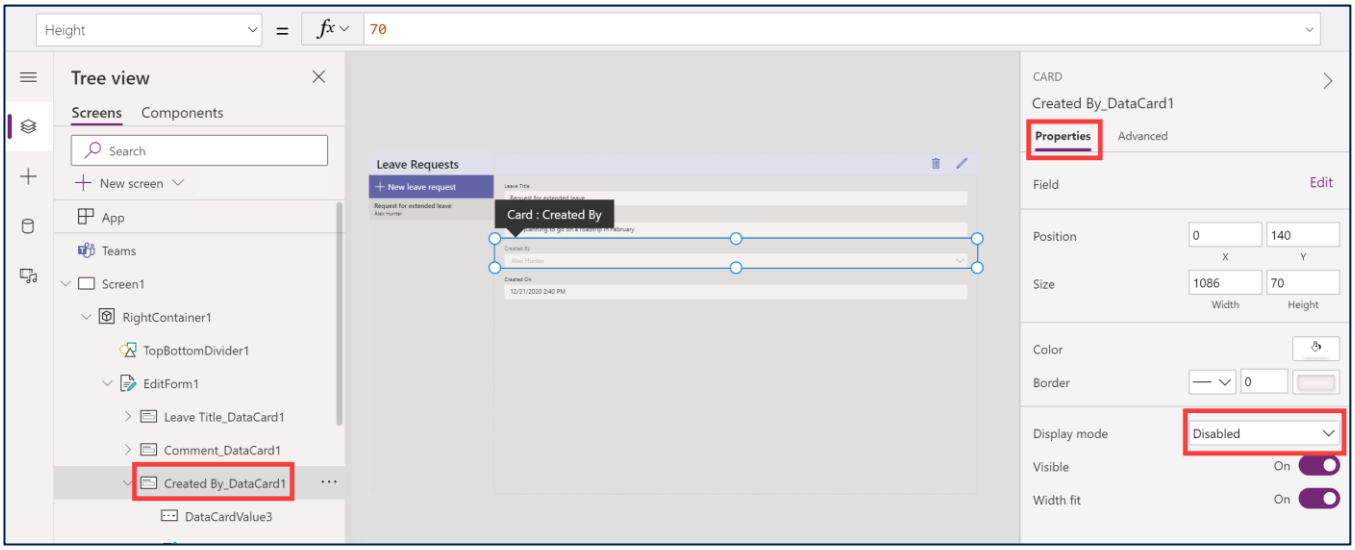
    ThisItem.'Owning User'.'Full Name'



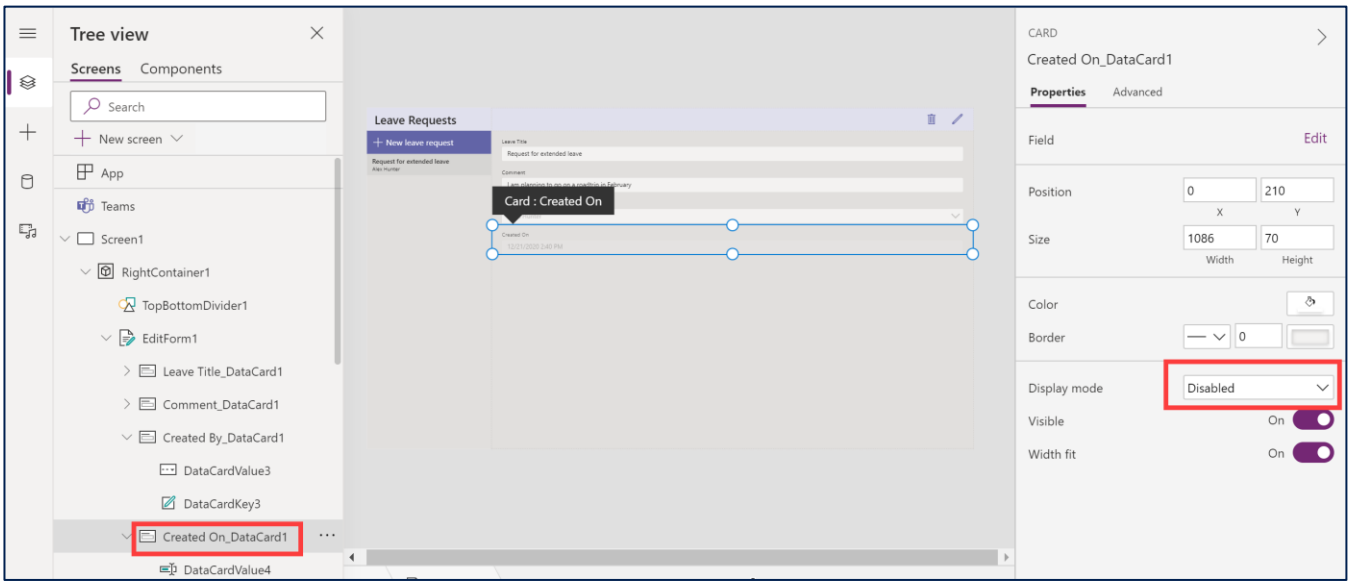
12. Within EditForm1, click on Created By_DataCard1 (i.e. the Created By field of the form). From the properties pane, click on Advanced tab, and **Unlock to change properties**.



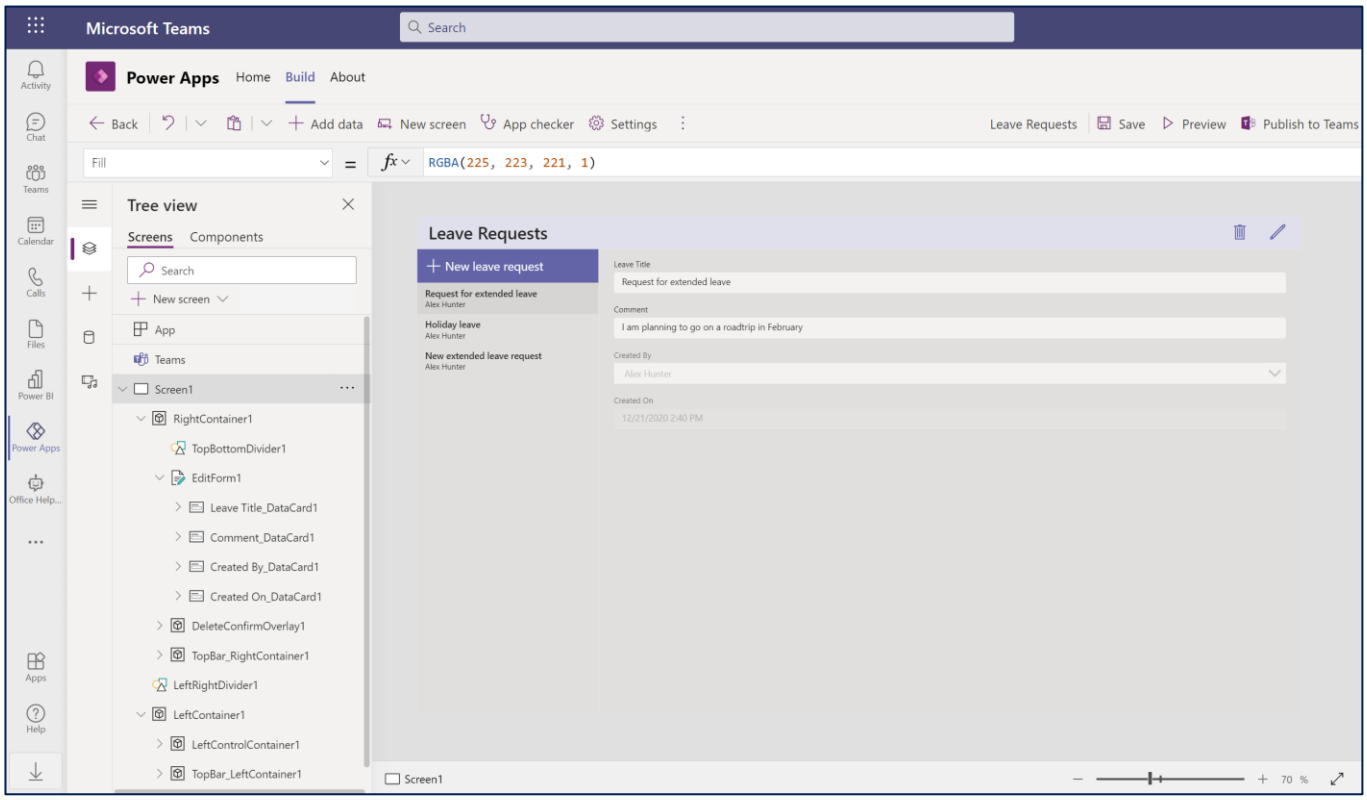
13. Click on the Properties tab of the properties pane, and set the display mode to **Disabled**.



14. Since it is not editable by the user, we will also disable the Created On field of the form. Within EditForm1, click on Created On_DataCard1 (i.e. the Created On field of the form). From the properties pane, click on Advanced tab, and **Unlock to change properties**. Change the display mode to **Disabled**.



15. Your app should now appear as below.

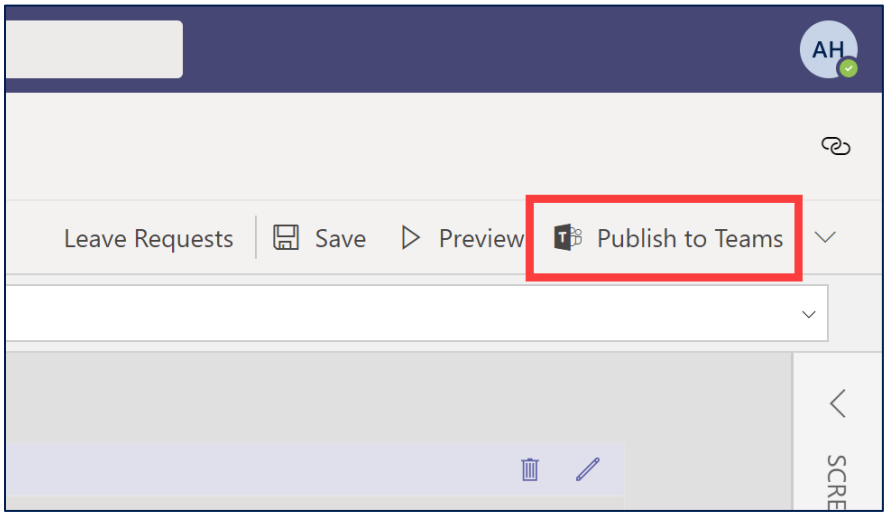


16. Save and preview the app. Note that from the app, you can also click on a past request to view or edit it from the form.

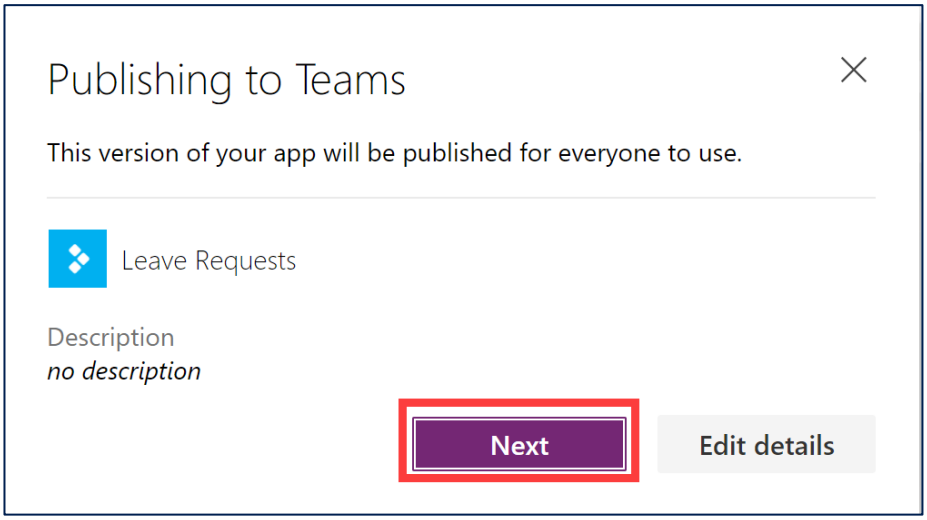
Task 6: Publishing and sharing your app

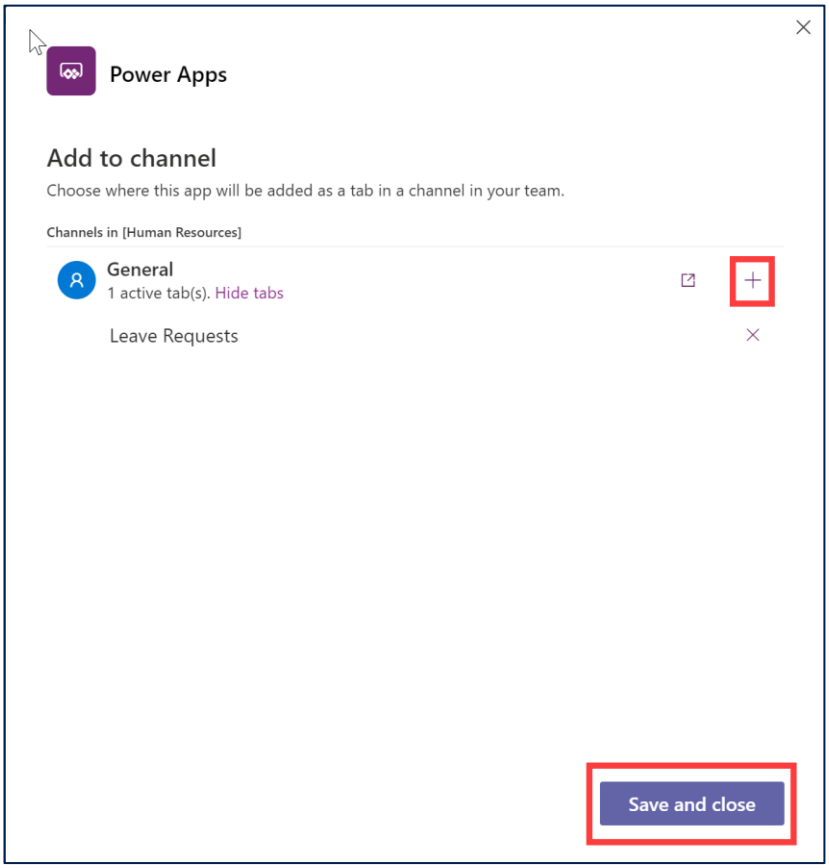
The app is now ready to be published out to Teams. Once published, it will be available for Team members to use within Microsoft Teams on desktop, web and mobile clients.

1. Once you are finished previewing the app, click on **Publish to Teams**.

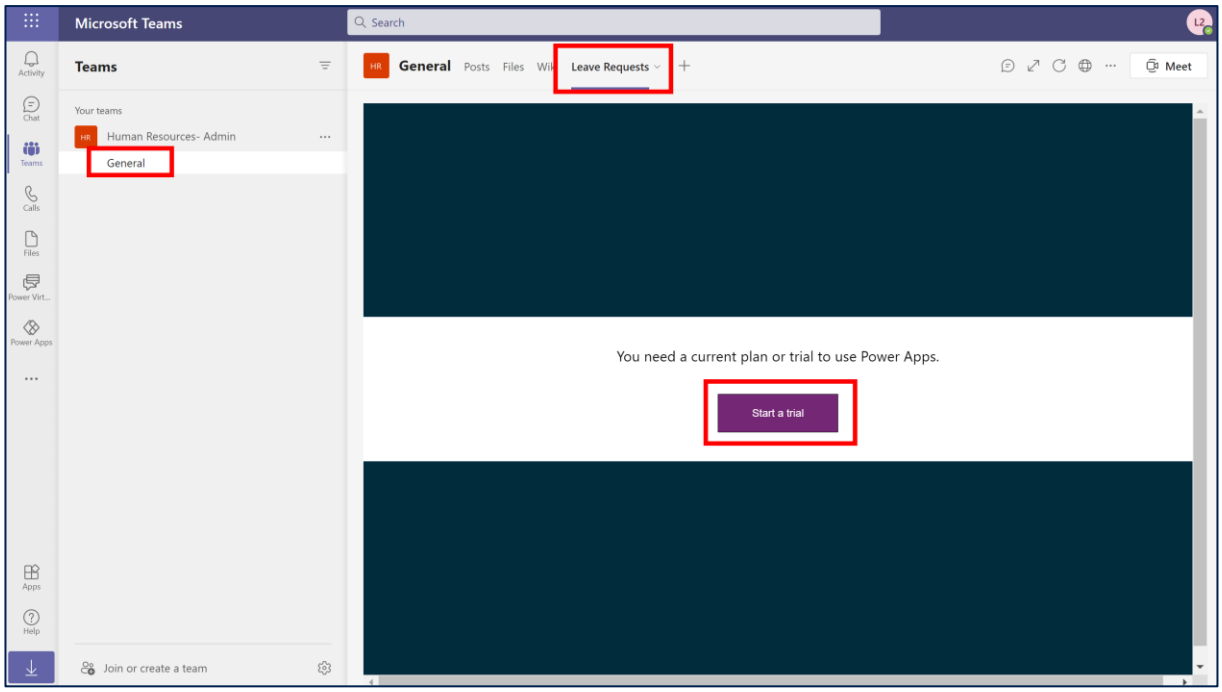


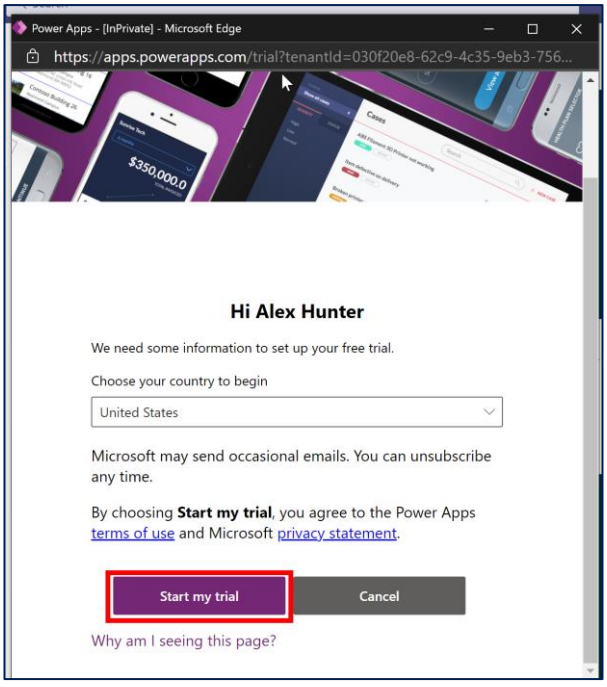
2. Click **Next**. You can then select the channel that you would like to add the app to. Click on the + icon next to General, then click **Save and close**.

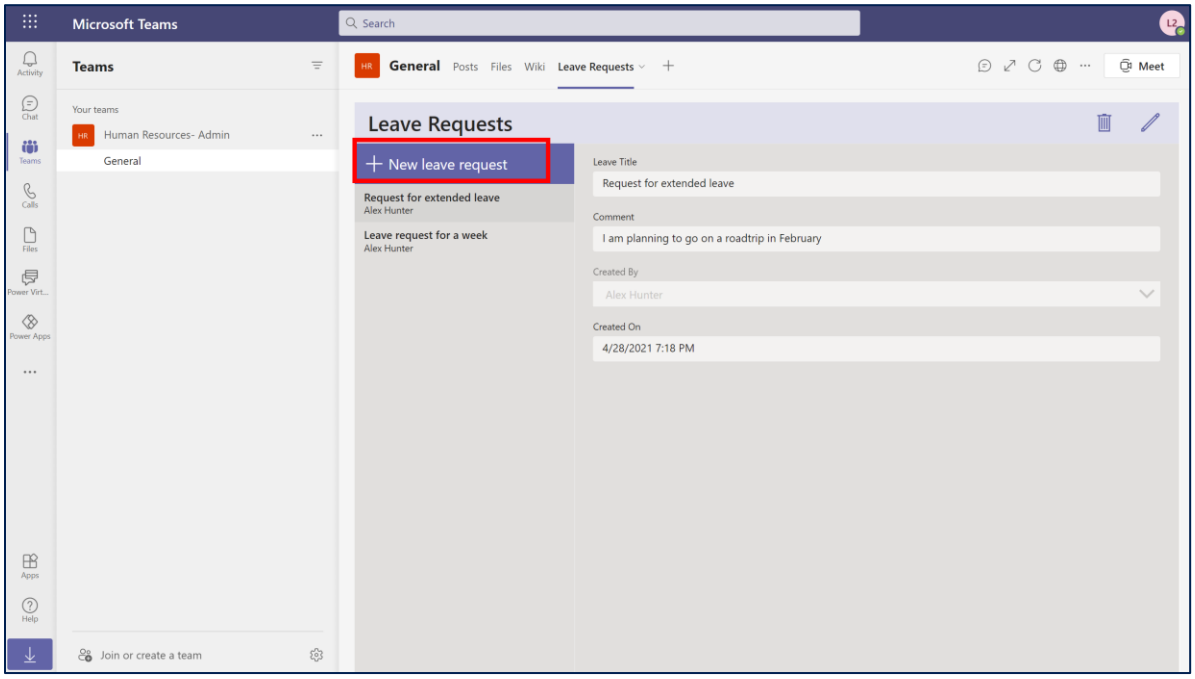




3. You can now go to the Team where your app is published and interact with your app. You may be required to first click **Start a trial** for Power Apps. After selecting your country and clicking **Start my trial** in the pop-out window, you can close the pop-out window and go back to Teams. You should now see your app. Try using the app to submit a leave request.



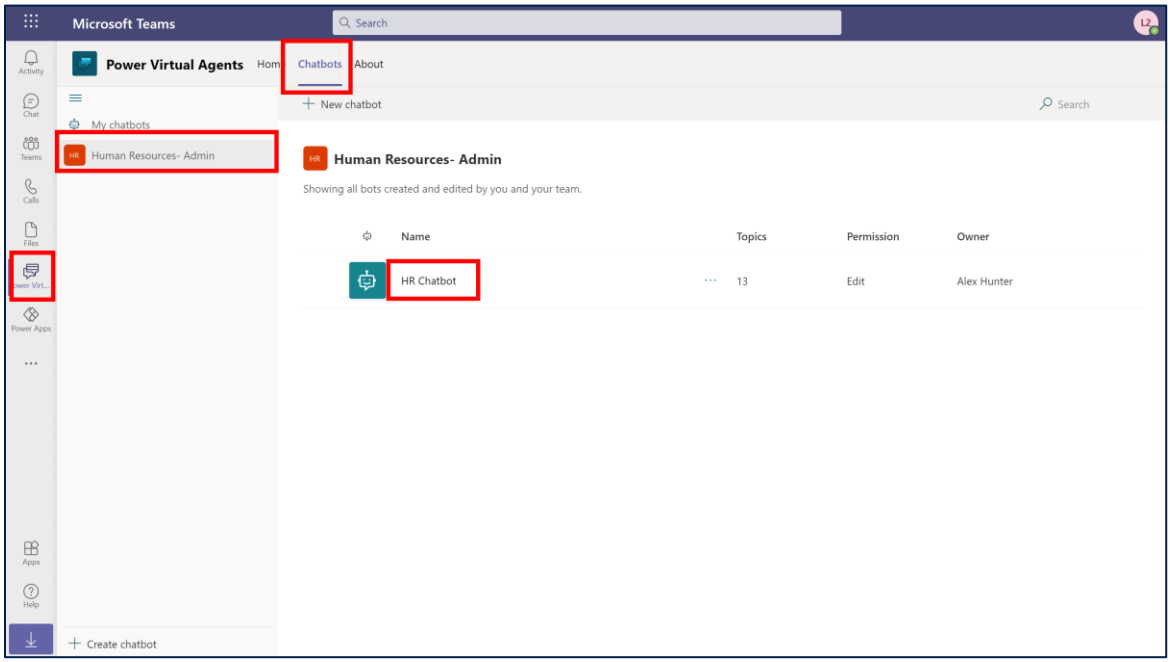




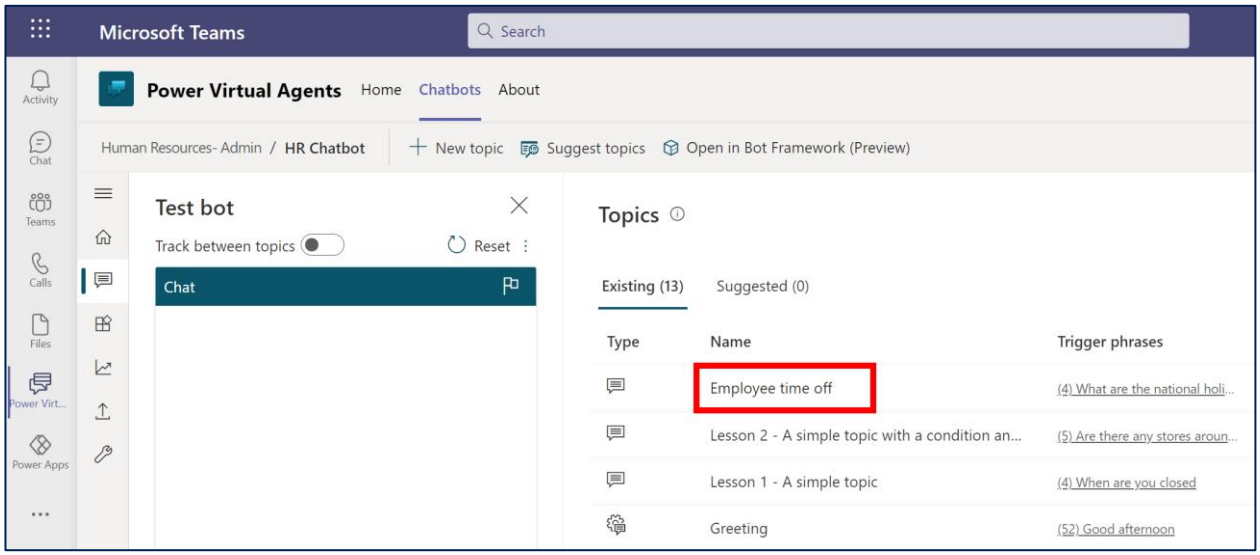
Members of the team can use the Leave Requests app to log their leave requests. In the next task, we will expand the Employee time off topic so that it interacts with our database table by allowing users to submit their extended leave requests via the chatbot.

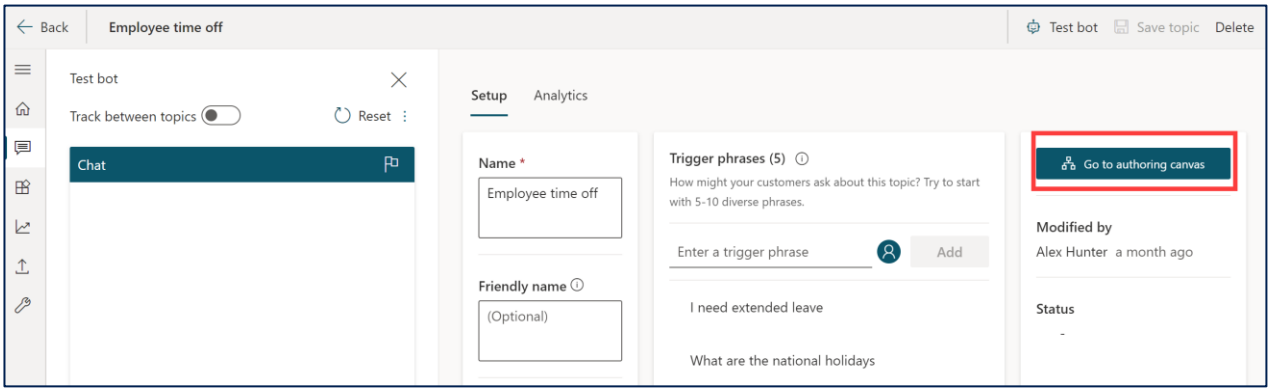
Task 7: Connect your chatbot to Dataverse for Teams

1. In Teams, navigate to the Power Virtual Agents app. Click on the **Chatbots** tab and select the Team where your bot has been created. Click on the bot to launch it.

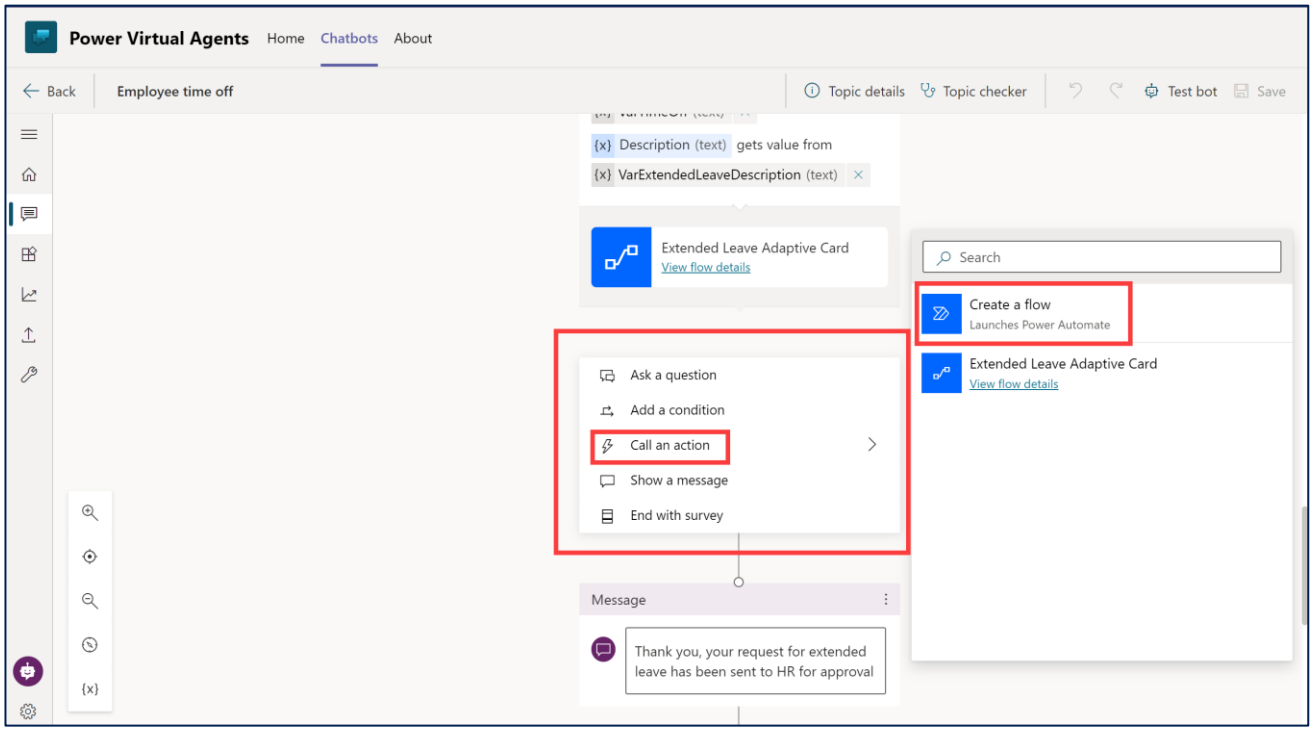


2. Open the Employee time off topic, then **Go to authoring canvas**.

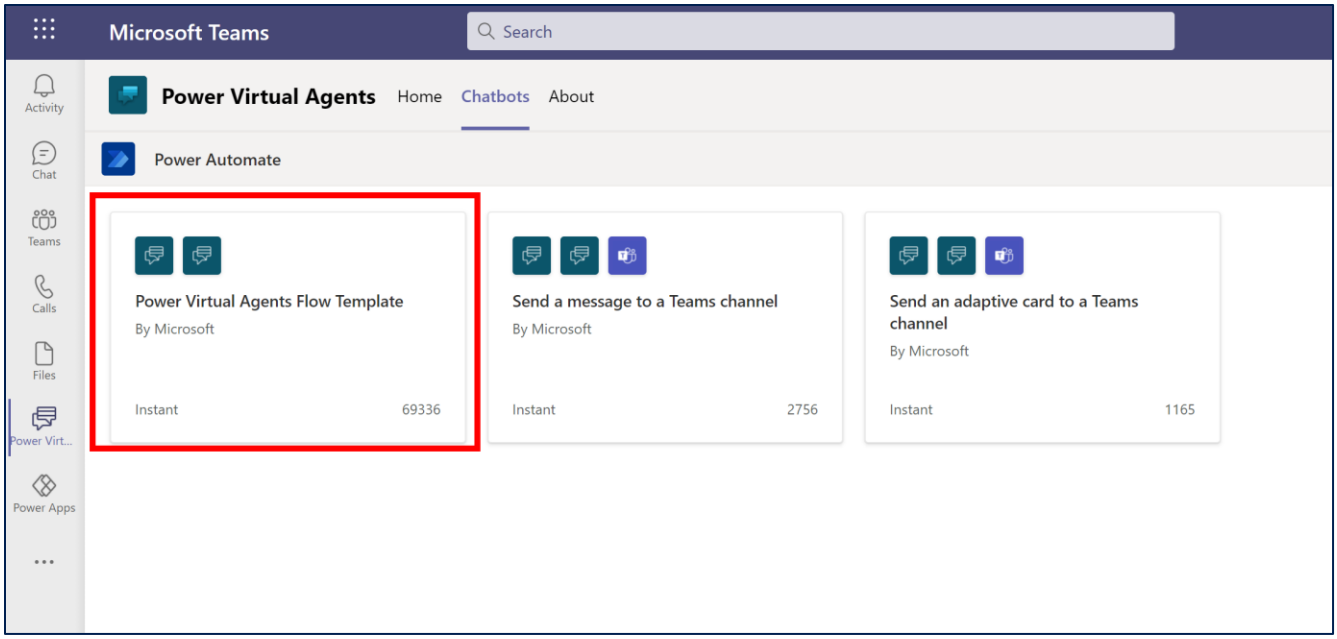




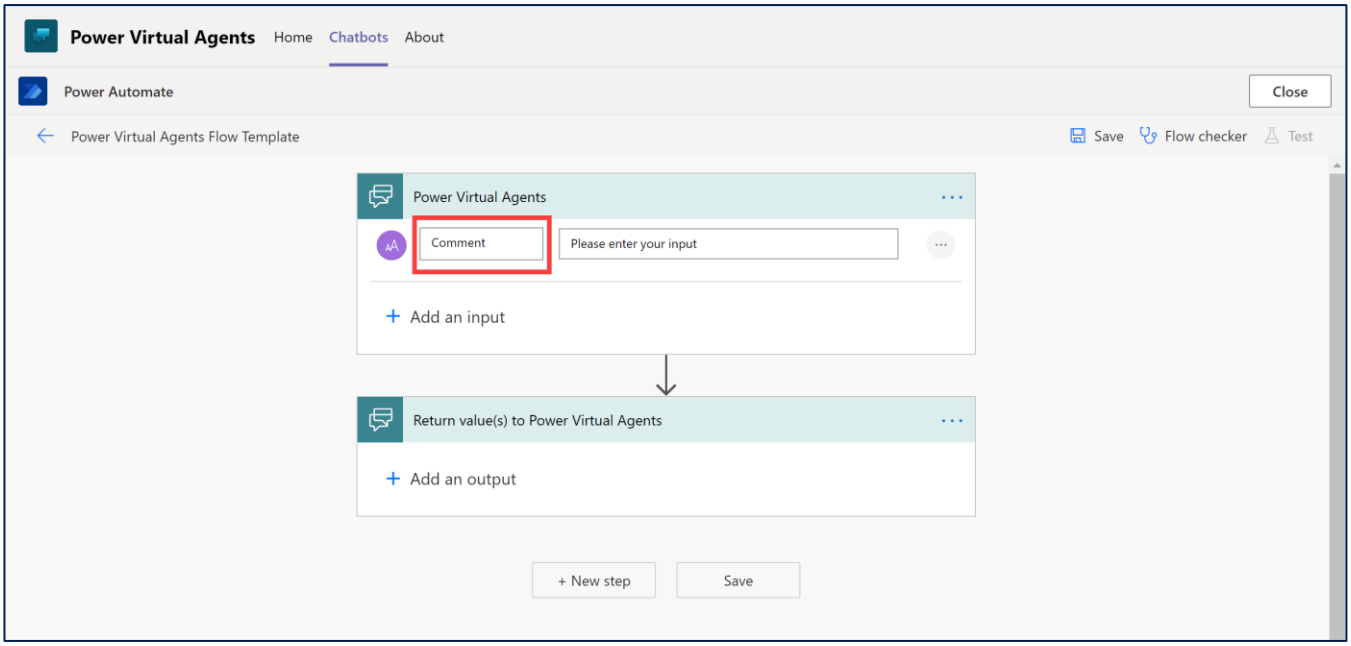
3. Within the Employee time off authoring canvas, go to the Extended Leave Adaptive Card flow step. You will be creating a new flow that will submit an extended leave request to your database, (i.e. add a new row to the Leave Request Dataverse for Teams table) after the adaptive card flow runs. Under the Extended Leave Adaptive Card flow node, add another **Call an action** step. Click on **Create a flow** to create one from scratch.



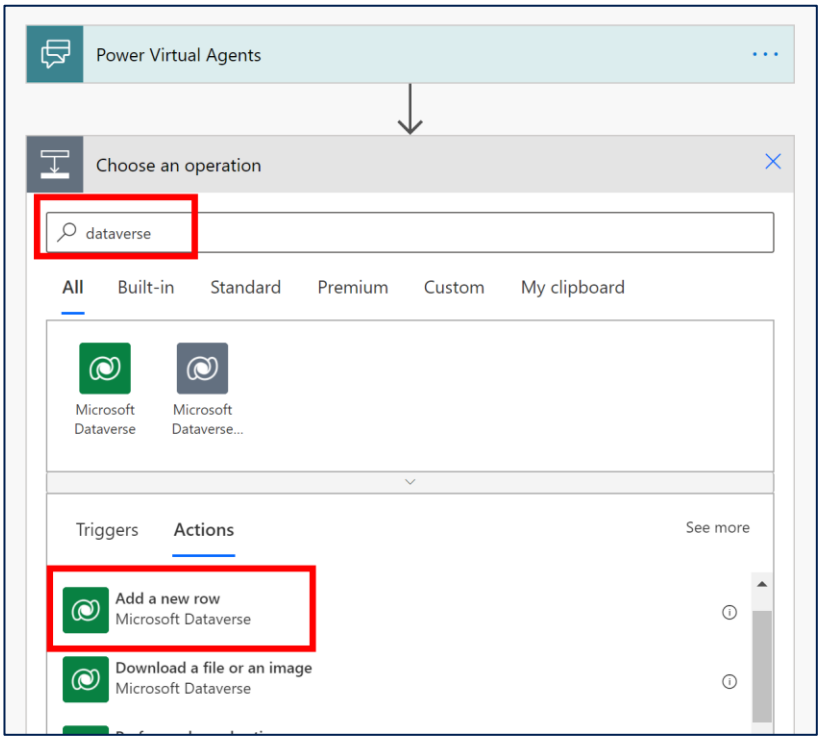
4. Choose the **Power Virtual Agents Flow Template**.



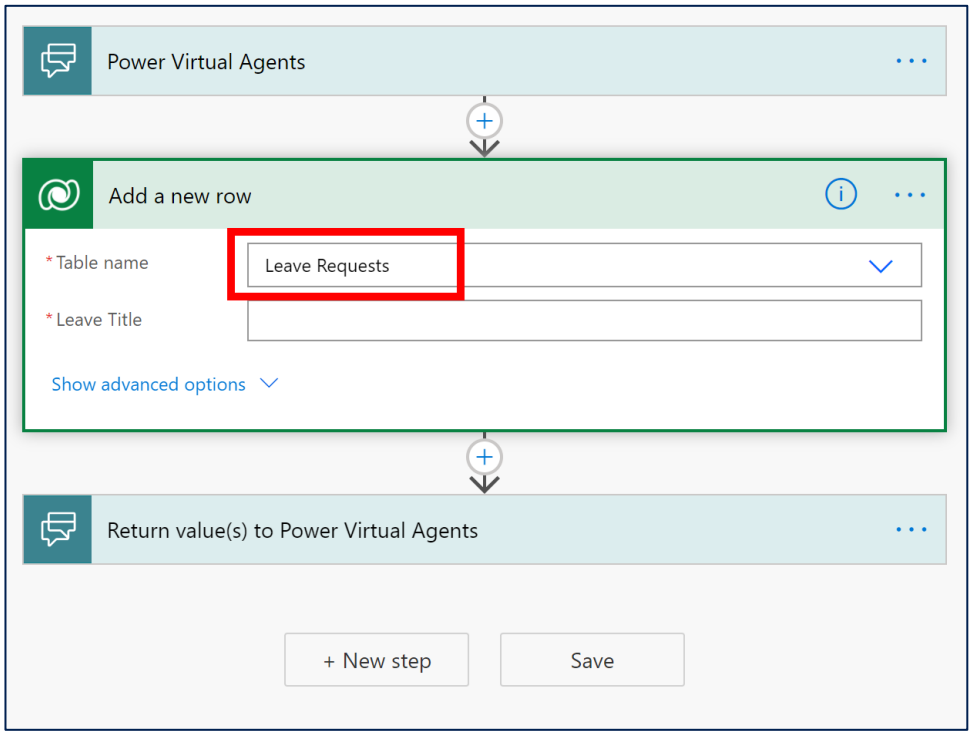
5. The description about their leave request that the user has mentioned earlier in the chatbot conversation will be used as an input in the new flow. Click **+ Add an input**. Select the **Text** type, and name it **Comment**.



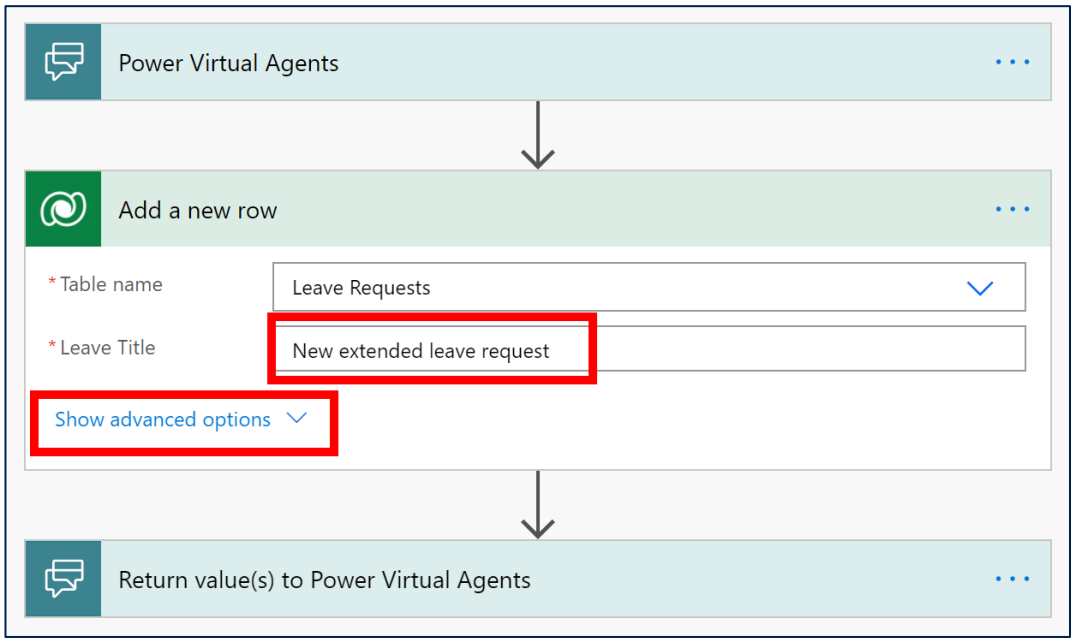
6. Add a step into the flow in between the 2 Power Virtual Agents actions. Search for the **Dataverse** connector and select **Add a new row** action.



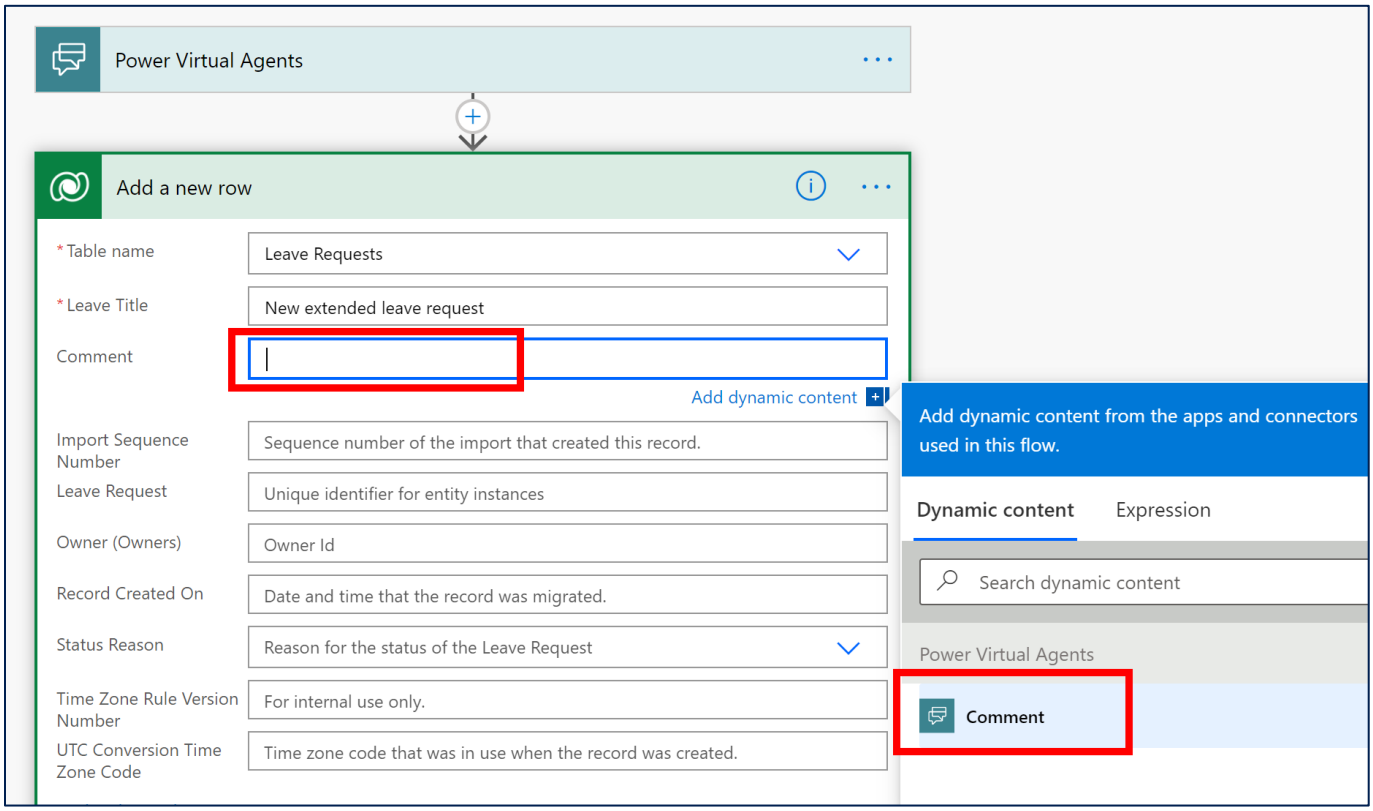
7. In the **Table name** field, select the **Leave Requests** table you created.

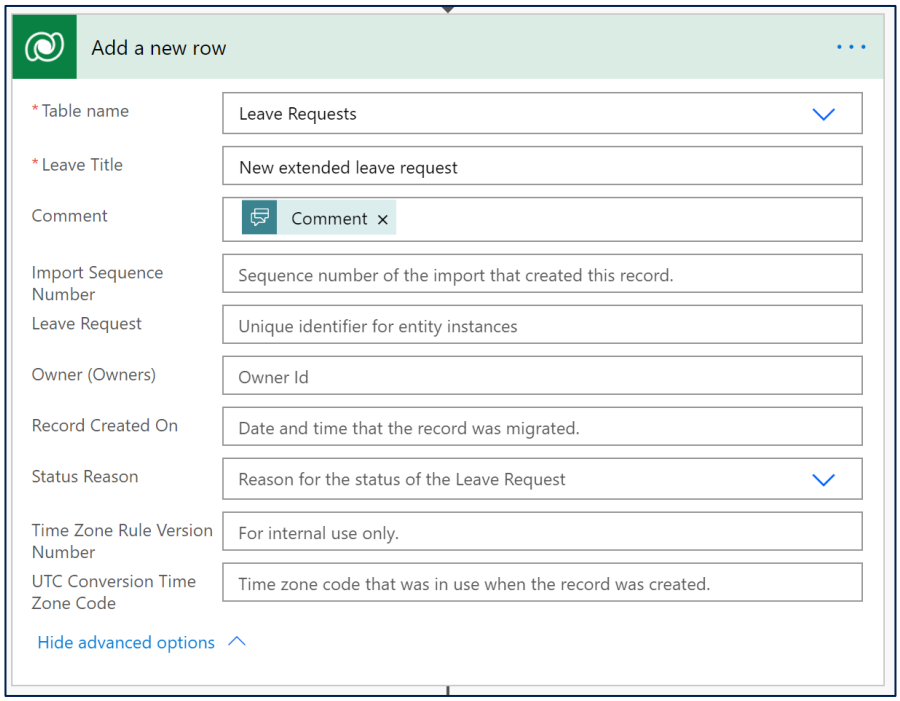


8. Enter the **Leave Title** as **New extended leave request**, then click on **Show advanced options**.

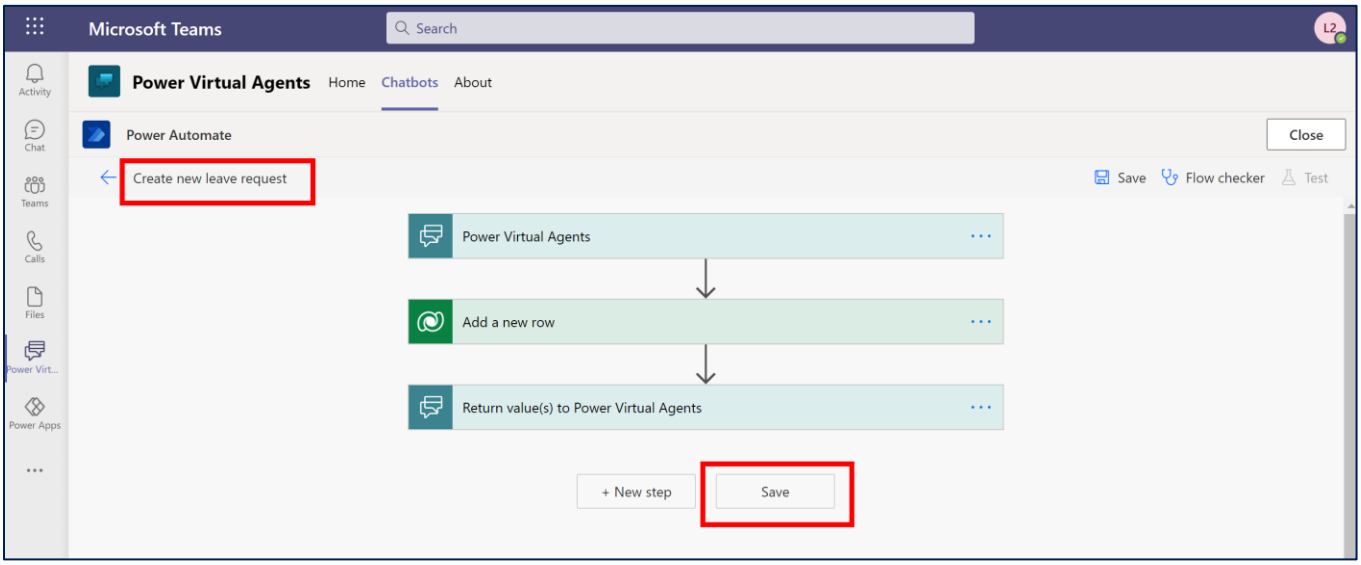


9. In the **Comment** field, select the **Comment dynamic content** from Power Virtual Agents.

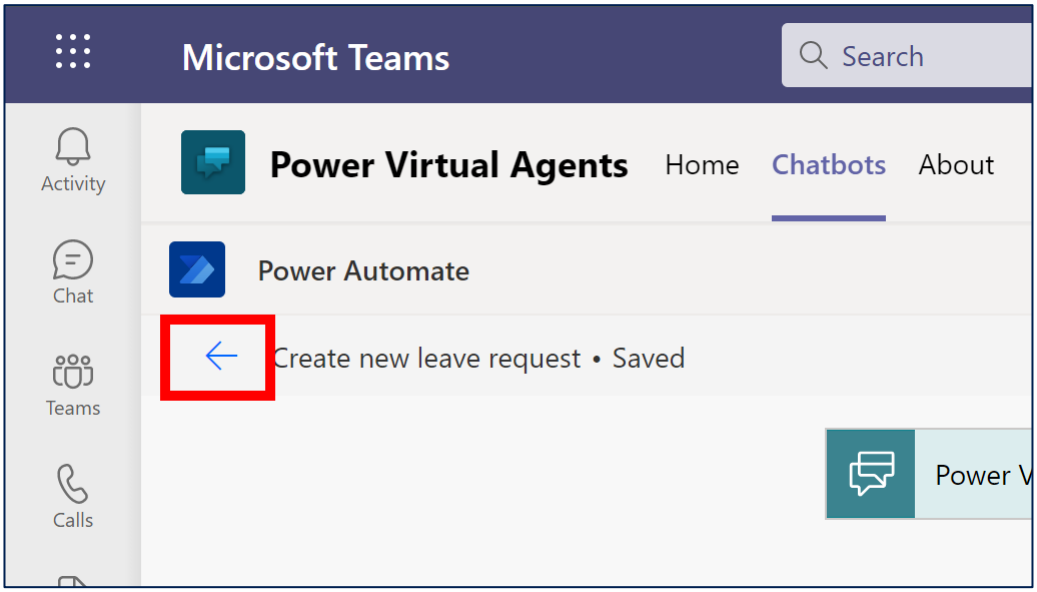




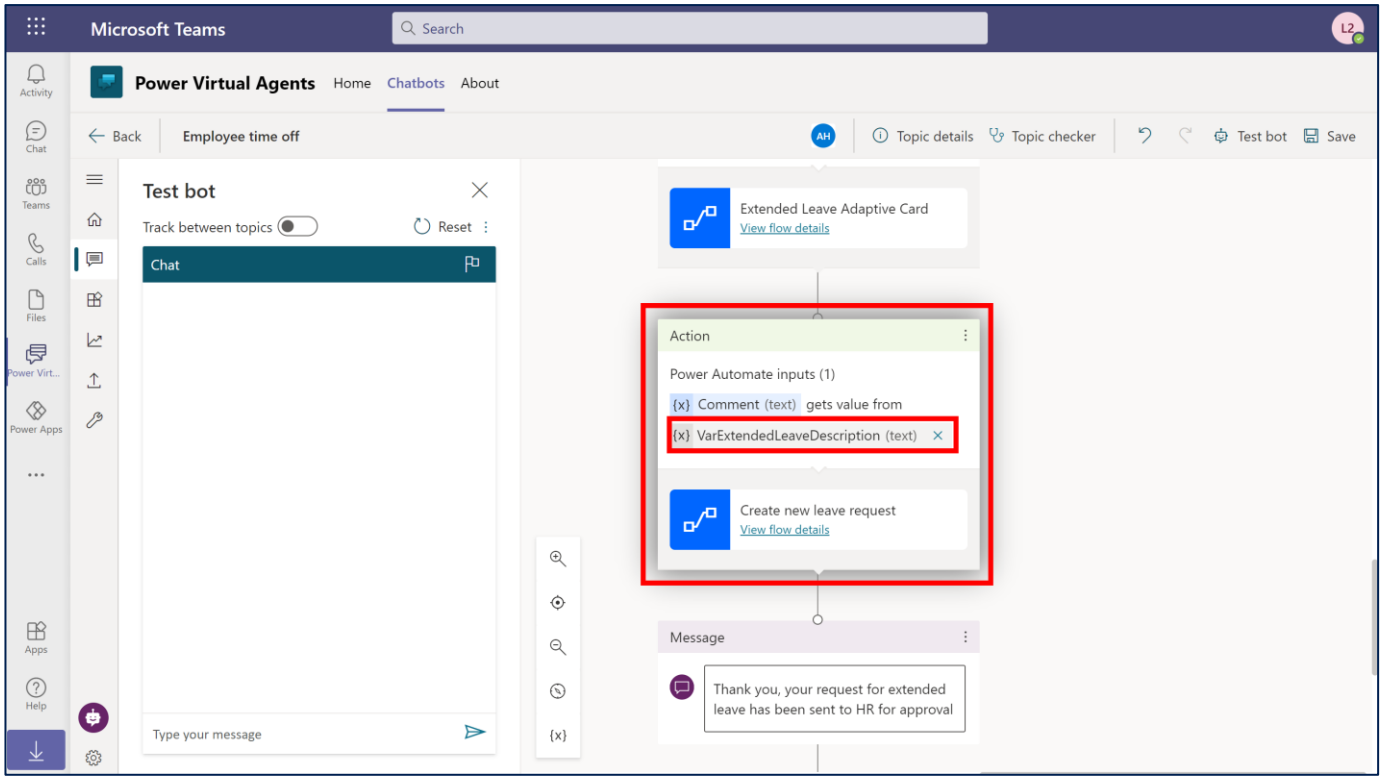
10. Rename the flow to **Create new leave request** and save the flow.



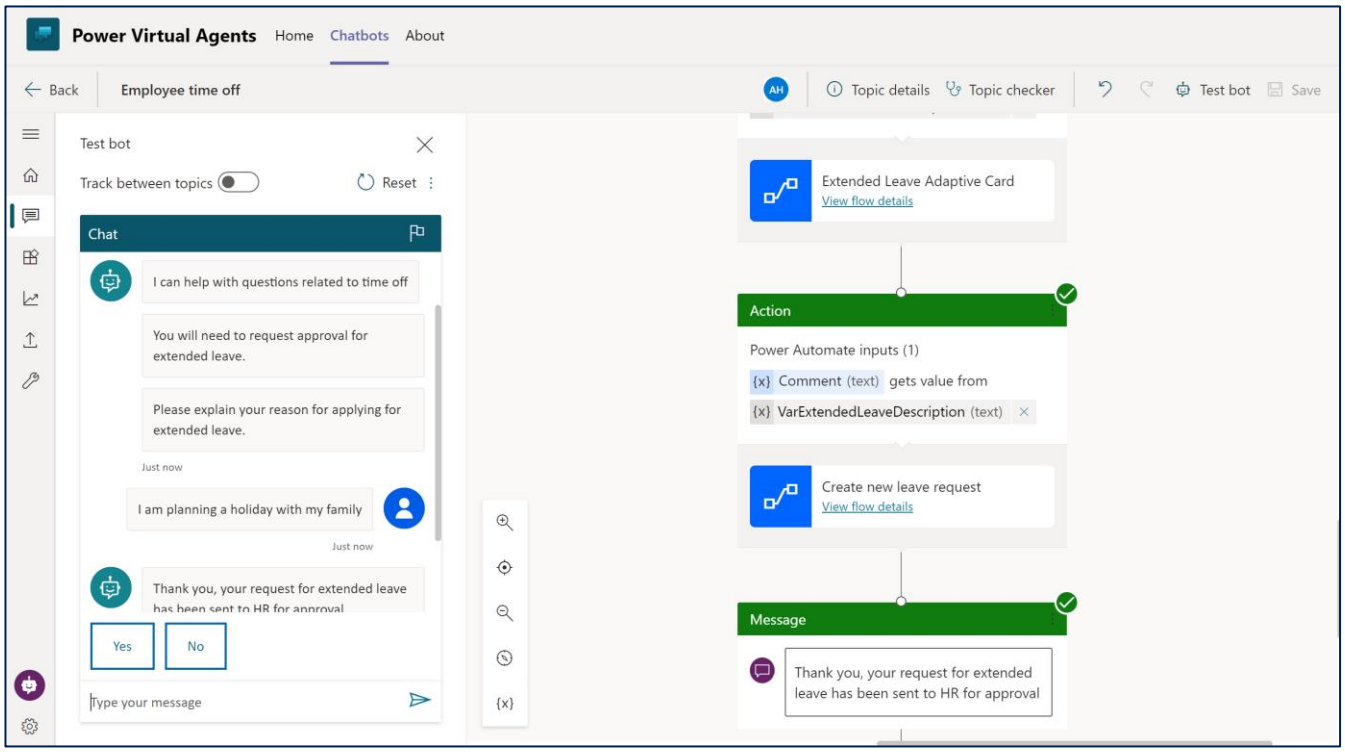
11. Click the back arrow to go back to the chatbot authoring canvas.



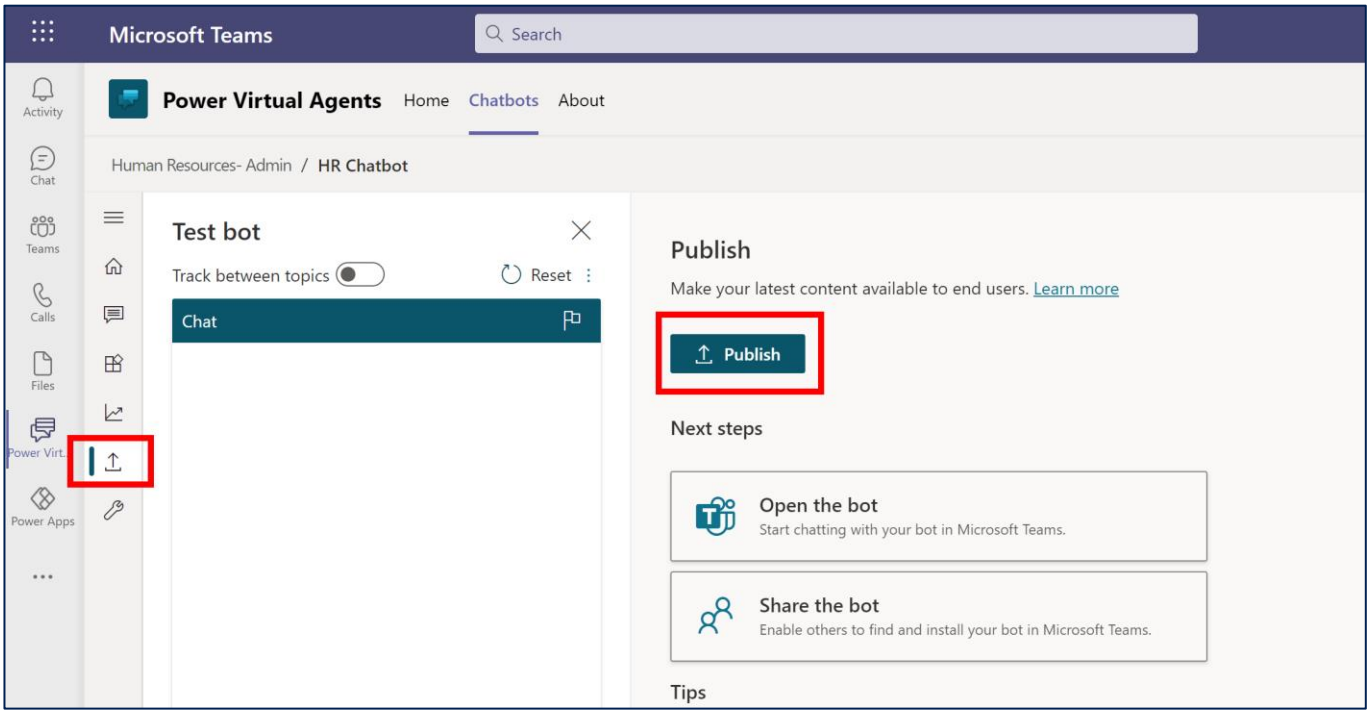
12. Back in the Employee time off topic authoring canvas, add the Create new leave request flow action under the Extended Leave Adaptive Card node. Set the **Comment** to get value from **VarExtendedLeaveDescription**.



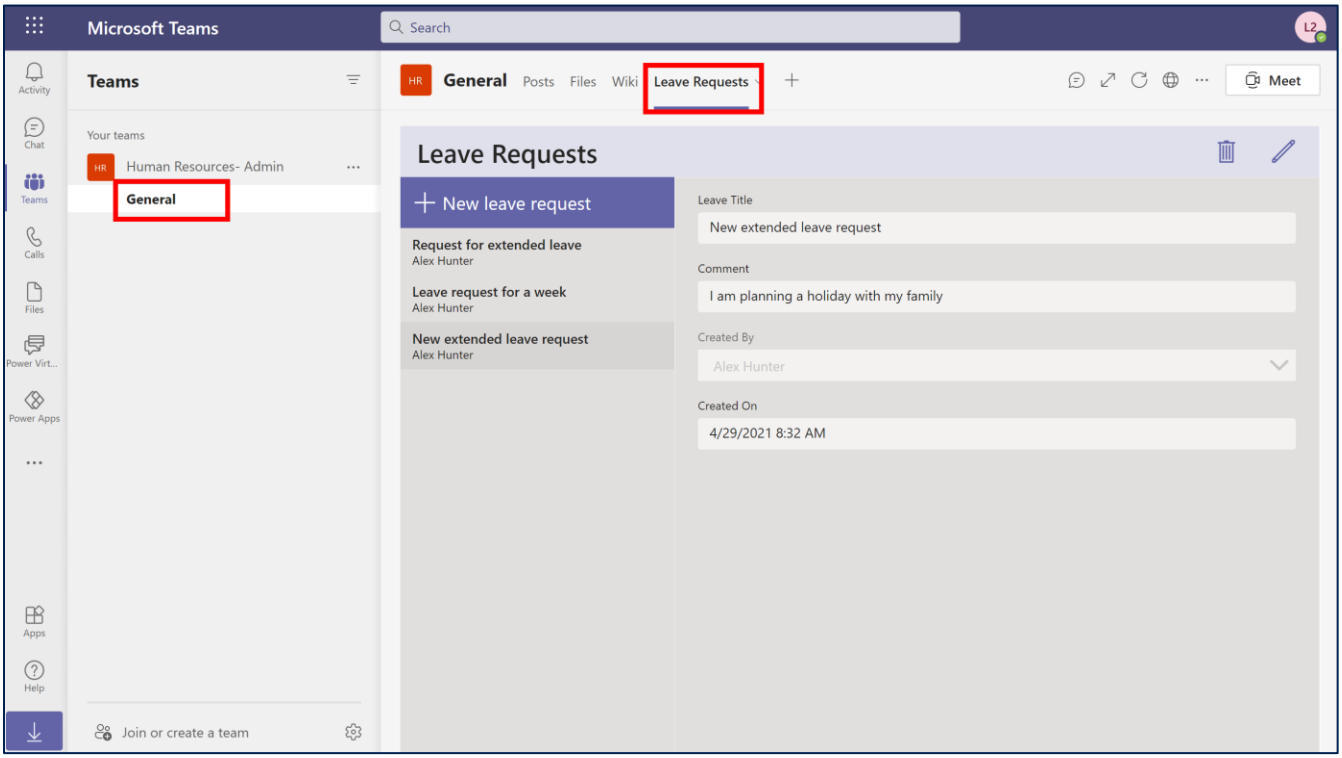
13. Save the bot, then test the bot by selecting the extended leave option.



17. Publish the bot.



18. We can confirm that the flow has worked by checking our Leave Requests app. The Dataverse for Teams table in the app should be updated with your new leave requests that you submitted via the chatbot. Navigate to the team where your app has been published. Confirm that you can view the details of your leave requests via the chatbot.



Summary

As you've seen in this lab, you can build a bot for Power Virtual Agents in Teams, with the same authoring canvas that you used in the full web app. We will now leave Teams and return to the main Power Virtual Agents app for the rest of the day.

Close the browser window where you have been working in Teams, and go back to Power Virtual Agents (still open in another tab, or navigate to https://aka.ms/PVAhome)

Lab survey

We would appreciate your feedback on Power Virtual Agents and on this hands-on-lab, such as the quality of documentation and the usefulness of the learning experience.

Please use the survey at https://aka.ms/PVAiaDSurvey to share your feedback.

You may provide feedback for each module as you complete it or at the end once you've completed all the modules. Thank you!

Terms of Use

By using this document, in whole or in part, you agree to the following terms:

Notice

Information and views expressed in this document, including (without limitation) URL and other Internet Web site references, may change without notice. Examples depicted herein, if any, are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred. This document does not provide you with any legal rights to any intellectual property in any Microsoft product.

Use Limitations

Copying or reproduction, in whole or in part, of this document to any other server or location for further reproduction or redistribution is expressly prohibited. Microsoft provides you with this document for purposes of obtaining your suggestions, comments, input, ideas, or know-how, in any form, ("Feedback") and to provide you with a learning experience. You may use this document only to evaluate its content and provide feedback to Microsoft. You may not use this document for any other purpose. You may not modify, copy, distribute, transmit, display, perform, reproduce, publish, license, create derivative works from, transfer, or sell this document or any portion thereof. You may copy and use this document for your internal, reference purposes only.

Feedback

If you give Microsoft any Feedback about this document or the subject matter herein (including, without limitation, any technology, features, functionality, and/or concepts), you give to Microsoft, without charge, the right to use, share, and freely commercialize Feedback in any way and for any purpose. You also give third parties, without charge, the right to use, or interface with, any Microsoft products or services that include the Feedback. You represent and warrant that you own or otherwise control all rights to such Feedback and that no such Feedback is subject to any third-party rights.

DISCLAIMERS

CERTAIN SOFTWARE, TECHNOLOGY, PRODUCTS, FEATURES, AND FUNCTIONALITY (COLLECTIVELY "CONCEPTS"), INCLUDING POTENTIAL NEW CONCEPTS, REFERENCED IN THIS DOCUMENT ARE IN A SIMULATED ENVIRONMENT WITHOUT COMPLEX SET-UP OR INSTALLATION AND ARE INTENDED FOR FEEDBACK AND TRAINING PURPOSES ONLY. THE CONCEPTS REPRESENTED IN THIS DOCUMENT MAY NOT REPRESENT FULL FEATURE CONCEPTS AND MAY NOT WORK THE WAY A FINAL VERSION MAY WORK. MICROSOFT ALSO MAY NOT RELEASE A FINAL VERSION OF SUCH CONCEPTS. YOUR EXPERIENCE WITH USING SUCH CONCEPTS IN A PHYSICAL ENVIRONMENT MAY ALSO BE DIFFERENT.

THIS DOCUMENT, AND THE CONCEPTS AND TRAINING PROVIDED HEREIN, IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING (WITHOUT LIMITATION) THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NONINFRINGEMENT. MICROSOFT DOES NOT MAKE ANY ASSURANCES OR REPRESENTATIONS WITH REGARD TO THE ACCURACY OF THE RESULTS, THE OUTPUT THAT DERIVES FROM USE OF THIS DOCUMENT OR THE CONCEPTS, OR THE SUITABILITY OF THE CONCEPTS OR INFORMATION CONTAINED IN THIS DOCUMENT FOR ANY PURPOSE.

MICROSOFT POWER VIRTUAL AGENTS (1) IS NOT INTENDED OR MADE AVAILABLE AS A MEDICAL DEVICE FOR THE DIAGNOSIS OF DISEASE OR OTHER CONDITIONS, OR IN THE CURE, MITIGATION, TREATMENT OR PREVENTION OF DISEASE, OR OTHERWISE TO BE USED AS A COMPONENT OF ANY CLINICAL OFFERING OR PRODUCT, AND NO LICENSE OR RIGHT IS GRANTED TO USE MICROSOFT POWER VIRTUAL AGENTS FOR SUCH PURPOSES, (2) IS NOT DESIGNED OR INTENDED TO BE A SUBSTITUTE FOR PROFESSIONAL MEDICAL ADVICE, DIAGNOSIS, TREATMENT, OR JUDGMENT AND SHOULD NOT BE USED AS A SUBSTITUTE FOR, OR TO REPLACE, PROFESSIONAL MEDICAL ADVICE, DIAGNOSIS, TREATMENT, OR JUDGMENT, AND (3) SHOULD NOT BE USED FOR EMERGENCIES AND DOES NOT SUPPORT EMERGENCY CALLS. ANY CHATBOT YOU CREATE USING MICROSOFT POWER VIRTUAL AGENTS IS YOUR OWN PRODUCT OR SERVICE, SEPARATE AND APART FROM MICROSOFT POWER VIRTUAL AGENTS. YOU ARE SOLELY RESPONSIBLE FOR THE DESIGN, DEVELOPMENT, AND IMPLEMENTATION OF YOUR CHATBOT (INCLUDING INCORPORATION OF IT INTO ANY PRODUCT OR SERVICE INTENDED FOR MEDICAL OR CLINICAL USE) AND FOR EXPLICITLY PROVIDING END USERS WITH APPROPRIATE WARNINGS AND DISCLAIMERS PERTAINING TO USE OF YOUR CHATBOT. YOU ARE SOLELY RESPONSIBLE FOR ANY PERSONAL INJURY OR DEATH THAT MAY OCCUR AS A RESULT OF YOUR CHATBOT OR YOUR USE OF MICROSOFT POWER VIRTUAL AGENTS IN CONNECTION WITH YOUR CHATBOT, INCLUDING (WITHOUT LIMITATION) ANY SUCH INJURIES TO END USERS.