

watsonx Orchestrate Lab 4a:

Using Decision Automation Flow

Objective

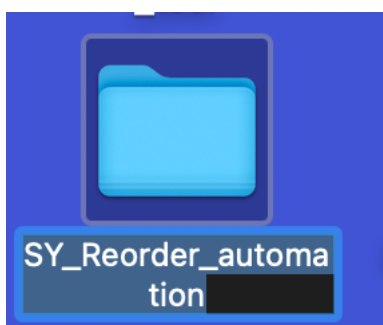
Another integral part of watsonx orchestrate is automating workflow. Besides that, we can also leverage the embedded Generative AI and decision components within the Projects section and insert it into a workflow (or just run as a single skill).

For this lab, we will be creating an automation workflow which will allow us to set some conditions to place order. The conditions can be for example if an order meets the minimum order requirement or budget requirement. Different condition will result in different results.

Prepare the zip file

For the purpose of this workshop, you will be uploading a copy of a pre-fabricated object.

1. Download the project file from [here](#) and save to your desktop.
2. If you are using a shared instance, we will need to ensure our project name does not clash with one another.
3. Navigate to your desktop, unzip the file and rename the file to [YourName]_Reorder_automation.



4. Zip up the file again after you've renamed.

*** If you are using a Macbook, the current built in archiver utility is not compatible.

To rezip your folder please follow the following steps or please ask a facilitator to assist you.

- a. Launch terminal
- b. Paste in this code and press return:

```
cd desktop
```

- c. Paste in this code and press return:

```
zip -r [YourName]_Reorder_automation_demo.zip
```

```
[YourName]_Reorder_automation_demo
```

Create a Project

1. Return to Watsonx Orchestrate. Click on the Projects tab.
2. From the menu, select **Skill studio**.
3. In the **Skill studio** page, click **Create**, and select **Project**.
4. Select Import automation and select the zip file which you've processed in the first section [YourName]_Reorder_automation.zip and click import

Welcome to Skill studio

Optimize productivity by using projects to build and manage skills like workflows, decisions, generative AI and others.

Projects

Skills and apps

Q Search projects

Create

Project

Skill Flow

Import API

New automation

Create automation

Import automation

Discovery tutorials

Industry samples

Import automation

Select a ZIP file to import. This file can contain only one automation. Maximum size: 20MB.

Browse

Import project

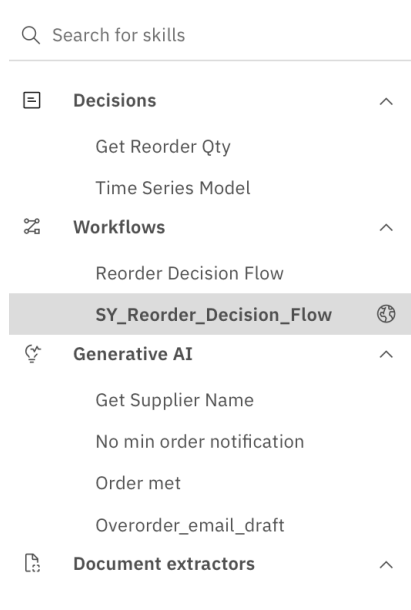
Select a ZIP file to import. This file can contain only one project. M

Browse

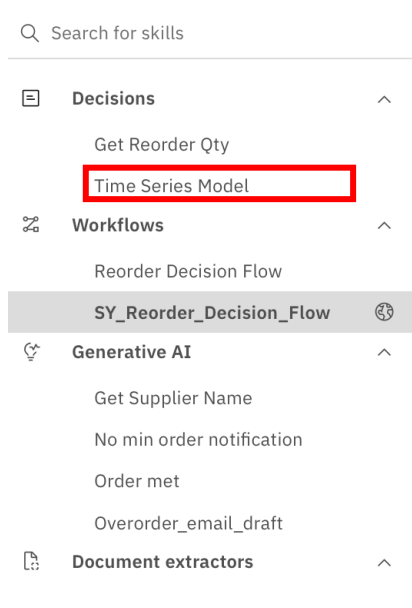
SY_Reorder_automation.zip ×

Build a Workflow

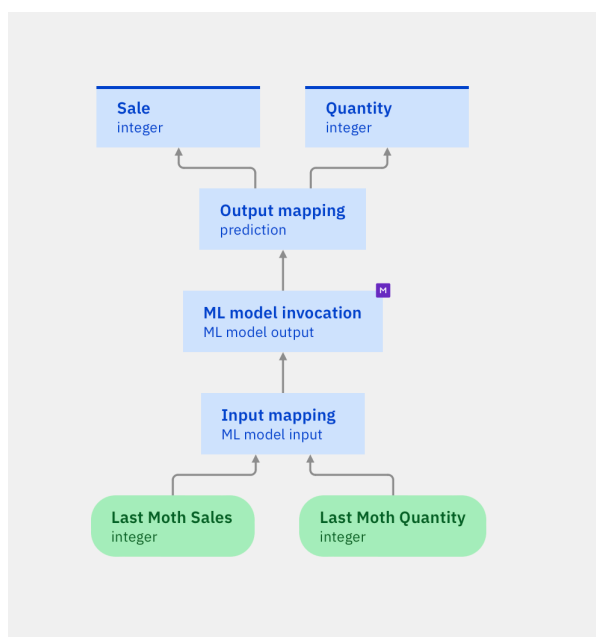
1. After importing the project, you will see that a few components have been created for you.



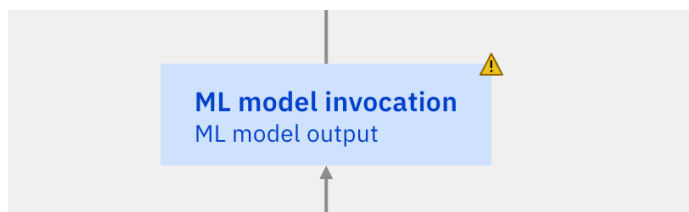
- a. Decision models help simplify and visually organize how decisions are made, using a clear, structured diagram. These diagrams show how decisions connect with the needed information. The process involves breaking down big decisions into smaller, manageable ones.
 - b. Workflows can be used to design an automation flow using skills from the catalogue and from other components from within the project. There is an option to hand over tasks to relevant parties if necessary.
 - c. Generative AI allows user to create prompt and using Large Language Model to generate text which can be utilised within workflows and skills catalogues.
2. Feel free to click on the different created components and look at the inner workings of the different projects component.
 3. Earlier on, we were using a skill called AutoAI to calculate the reorder quantity. The model has been pre-imported into the environment.
 4. We will now walk through the process on how to import this model which has been deployed in our watsonx platform.
 5. Click On Time Series Model within the Decision section.



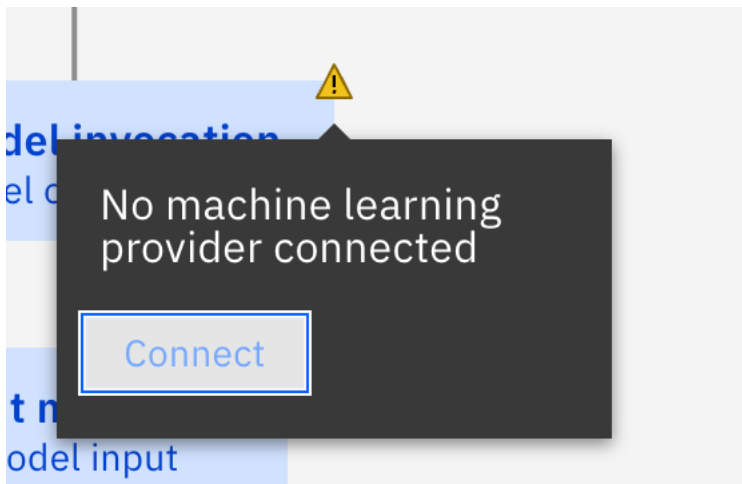
6. You will see a flow diagram like this. If the model is not configured, you will see a yellow exclamation mark on the ML model invocation tile



7. Click on the exclamation mark on the tile if there is.



8. Click on Connect



9. Choose "Remote machine learning model" and click Next (top right)


[Back to SY_Time Series Forecasting](#)

Configure prediction

Choose configuration method

Select provider and c

Choose configuration method
Choose the method you want to use to configure this prediction.



Remote machine learning model
Connect to a remote machine learning service to configure the invocation of a machine learning model.

✓

10. Set up a New Provider

Select provider
Select the provider where your deployed model is stored.

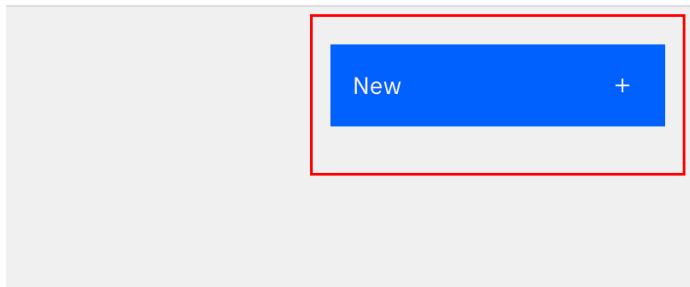
Machine learning provider

Select a provider ▼

No providers configured

New provider +

11. Click on New



12. Give it a name. As for the rest of the details, refer to the “Connection Details” list given to you, under “Auto AI Connection”.

13. Test the connection once you’ve filled in all the details.

API key

.....

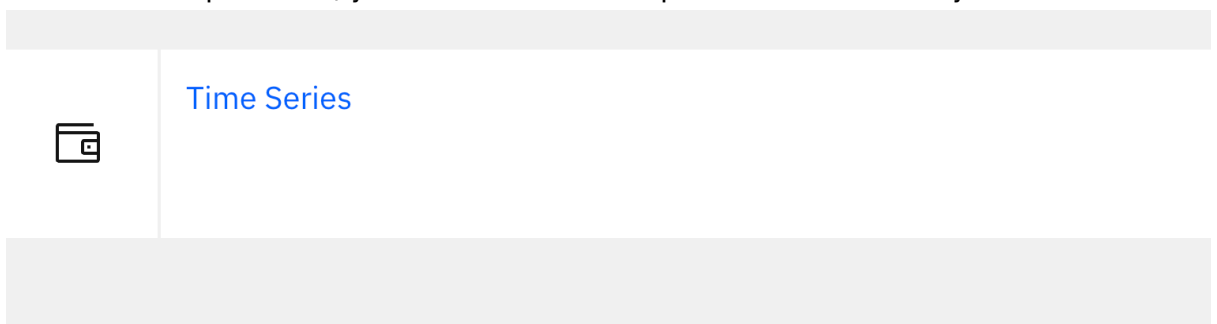
Test connection



Successfully connected to machine learning provider

****If you are facing error, check that your API key/Space ID and URL does not have a space at the end.**

14. Once the setup is done, you will see a service provider created for you



15. Click Back to [YourName]_TimeSeries on the top left and click on the exclamation mark again.

16. Select the Model provide you’ve created.

[Back to SY_Time Series Forecasting](#)

Configure prediction

☒ Choose configuration method

☐ Select provider and deployment

Select provider

Select the provider where your deployed model is stored.


Machine learning provider

✓ Time Series

New provider



17. Select the Auto AI P10 BATS Model

| Machine learning model name | | Status |
|--|----------------------------|--------|
|  | Auto AI - P10 BATS - Model | |

| Deployment name | | Status |
|-----------------------|------|--------|
| <input type="radio"/> | BATS | ready |

18. Do not change the input schema and proceed to test.

19. Click Run on the Test Invocation section.


Back

Next

☒ Test invocation
Optional

☐ Define output schema

Run

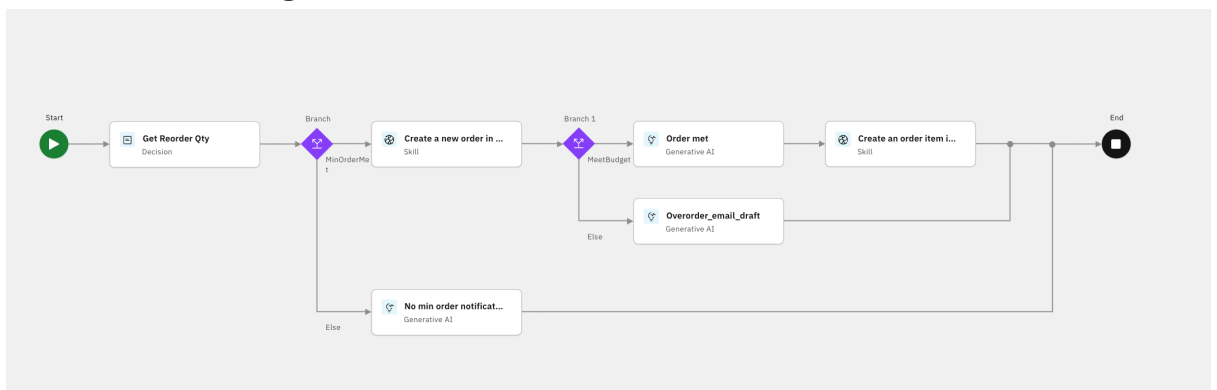


20. Once it is successful you can click Next and click on “Generate from test output”



21. Click Apply to finish the set up. The exclamation mark should change to a purple M.

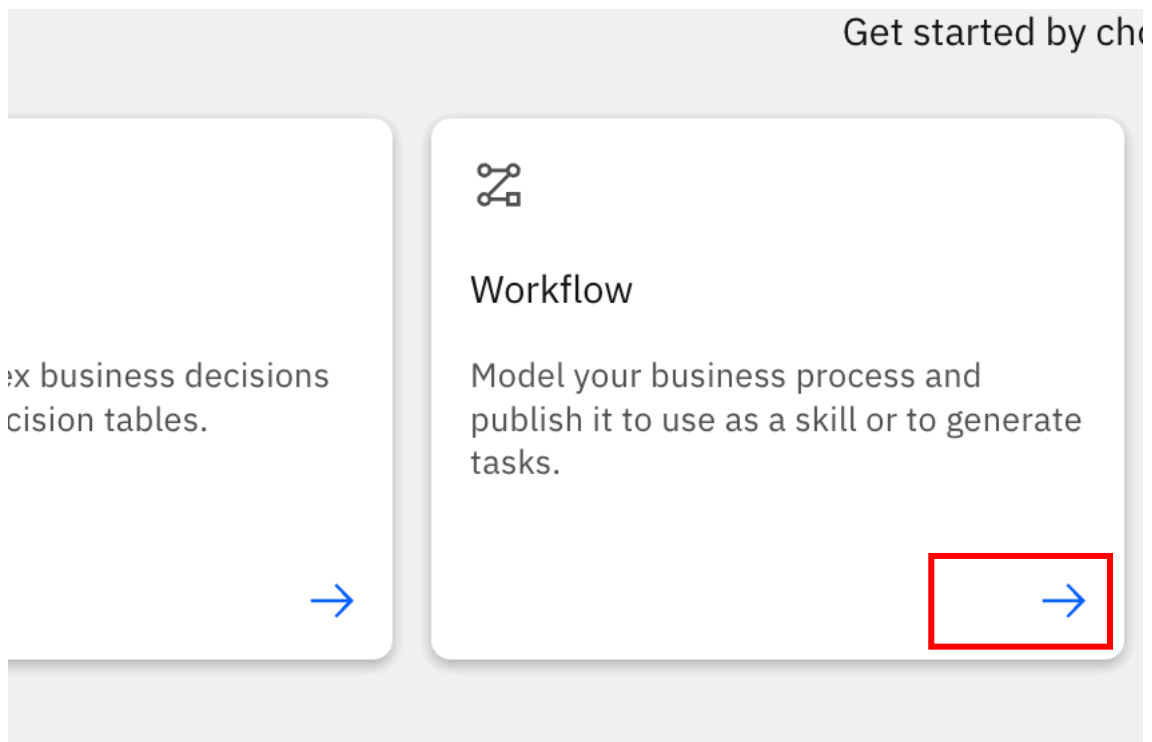
22. Now we will learn how to create an automation workflow. The full workflow is as shown in the diagram.



23. For this lab, we will only build a portion of it.

24. Click on Create Skill at the bottom left and select Workflow



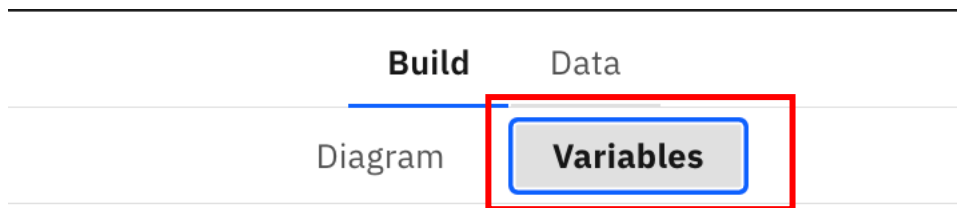


25. Name your Workflow “[YourName]_Reorder_Decision_Demo” and click Create

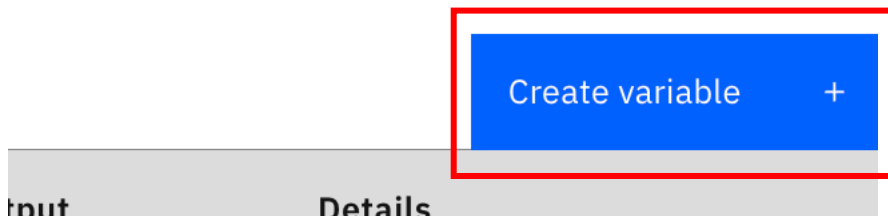
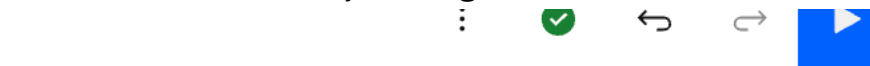
A form titled "Create a workflow" with a vertical gray bar on the left. It has two input fields: "Name" and "Description (optional)". The "Name" field contains the text "SY_Reorder_Decision_Demo" and is highlighted with a red rectangular box. Below the "Name" field is a small note: "Note: This is a symbolic name that must be unique and cannot be changed later." The "Description (optional)" field is empty and has the placeholder text "Describe your skill". At the bottom of the form are two buttons: a dark gray "Cancel" button on the left and a blue "Create" button on the right. The "Create" button is highlighted with a red rectangular box.

26. Each workflow requires its own set of variables. Let's create those first.

27. Select your workflow, and navigate to the “Variable” section at the top of the page



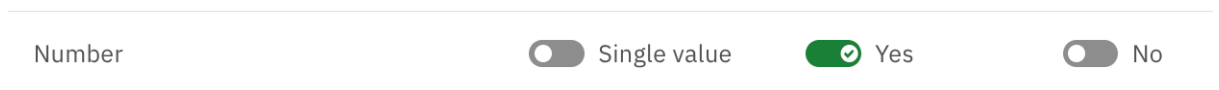
28. Create a new variable by clicking on "Create Variable"



29. Type in "ReorderQty" in the Name column.



30. Select "Number" in the Data type column and toggle Yes for the Input column



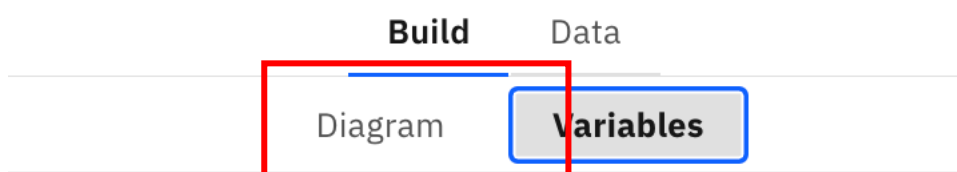
31. The full details of our first variable are as follow.

| Name | Data type | List | Input | Output | Details |
|------------|-----------|------------------------------------|--------------------------------------|--------------------------|---------|
| ReorderQty | Number | <input type="radio"/> Single value | <input checked="" type="radio"/> Yes | <input type="radio"/> No | |

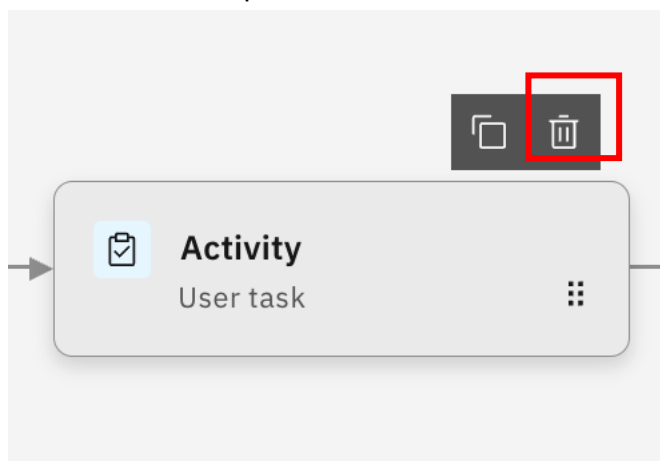
32. Repeat steps 9-11 until you get a list of variables like this:

| Name | Data type | List | Input | Output | Details |
|------------------|-----------|---------------------------------------|---|---|---------|
| :: ReorderQty | Number | <input type="checkbox"/> Single value | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| :: ReorderValue | Number | <input type="checkbox"/> Single value | <input type="checkbox"/> No | <input type="checkbox"/> No | |
| :: UnitPrice | Number | <input type="checkbox"/> Single value | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| :: NoMinOrderMsg | String | <input type="checkbox"/> Single value | <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes | |
| :: OrderID | String | <input type="checkbox"/> Single value | <input type="checkbox"/> No | <input type="checkbox"/> No | |
| :: PriceBookID | String | <input type="checkbox"/> Single value | <input type="checkbox"/> No | <input type="checkbox"/> No | |
| :: AccountID | String | <input type="checkbox"/> Single value | <input type="checkbox"/> No | <input type="checkbox"/> No | |
| :: OrderMetMsg | String | <input type="checkbox"/> Single value | <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes | |

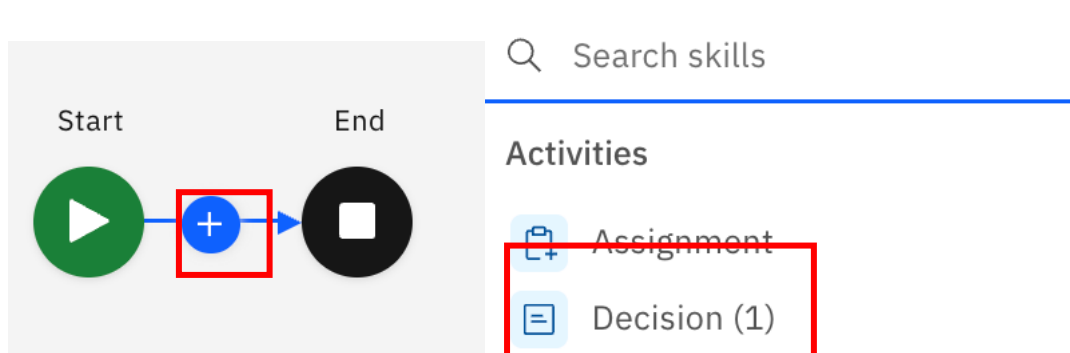
33. After creating the variables, navigate back to Diagram



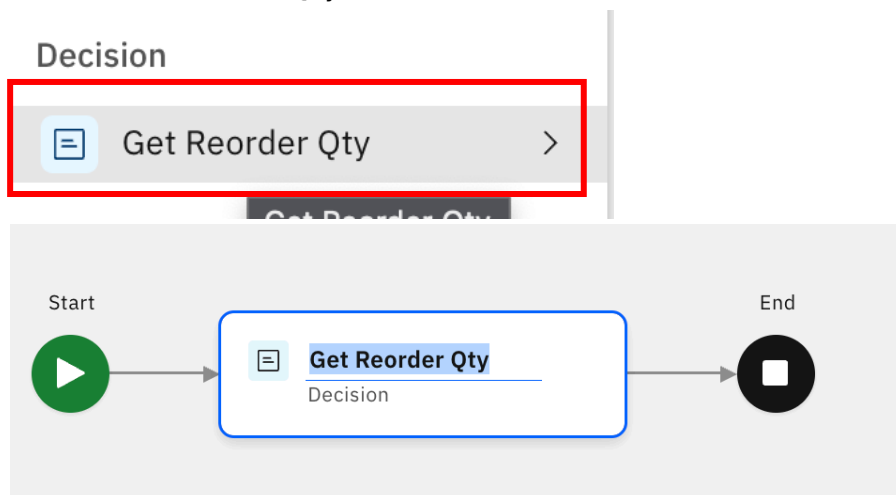
34. Remove the templated skill .



35. Just like in skill flows, we can add different components within our flow. Click on the “+” sign and click on Decision(1).



36. Add in Get Reorder Qty



37. Get Reorder Qty requires 2 inputs, we will need to map it with the variables we've created. Click on "Define data mapping" on the right.

Activity properties ×

Name

Get Reorder Qty

Implementation

Get Reorder Qty ▼

[Go to Get Reorder Qty →](#)

Define data mapping ⌵

38. Select a variable

Input mapping Output mapping [Show full variable path](#)

reorderQty ← .00 Enter a value [Select a variable](#) ⌵

Variables ⓘ

.00 ReorderQty Number

39. Repeat for unitPrice but selecting UnitPrice variable as mapping

| | | |
|------------------|-----|-------------|
| unitPrice | .00 | UnitPrice X |
|------------------|-----|-------------|



40. Navigate to output mapping and map to ReorderValue. Click Ok

| | |
|----------------------|-----------------------|
| Input mapping | Output mapping |
|----------------------|-----------------------|

| | | |
|--|-----|----------------|
| GetReorderQty_Get_Reorder_Qty → | .00 | ReorderValue X |
|--|-----|----------------|

41. Now, we will include a branch, to check if the order meets minimum order requirement. Select the “+” and look for “branch”

Workflow controls

| | |
|--|---|
|  Branch | + |
|  For-each | |

Branch

42. Rename the path name to MinOrderMet

Branch properties

×

Name

Branch

Type ⓘ

Conditional (single) ▾

Paths

New path +

Edit conditions

Path name

MinOrderMet

⋮

Path name

Else

43. We will add in some condition. Click on Edit conditions

Branch properties

×

Name

Branch

Type ⓘ

Conditional (single) ▾

Paths

New path +

Edit conditions

Path name

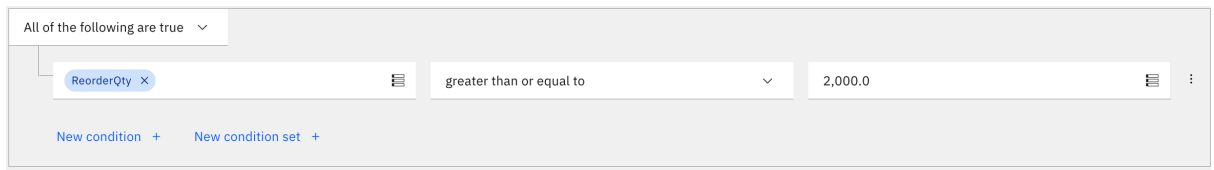
MinOrderMet

⋮

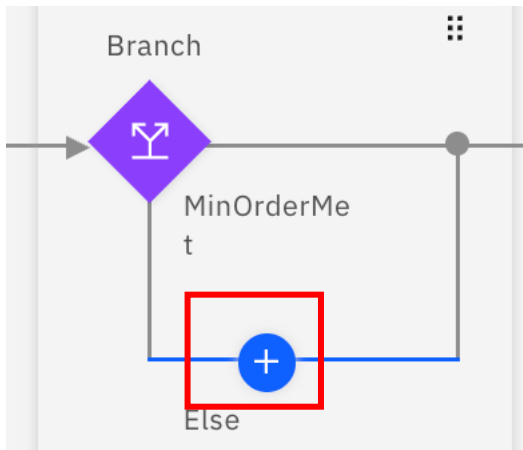
Path name

Else

44. Set the condition to be true if ReorderQty is greater than or equal to 2000.
This number is just an arbitrary number and can be changed,

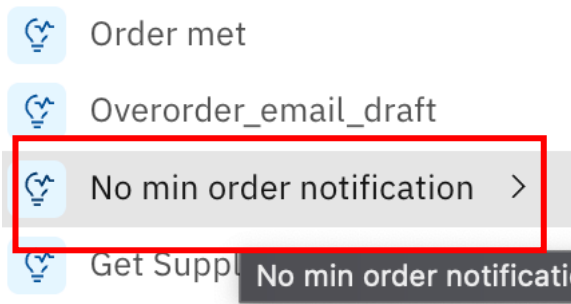


45. Let's get the system to send a notification to the user if a minimum order is not met. We will be using one of our pre-prepared Generative AI skill.
46. Click on "+" on the else route.

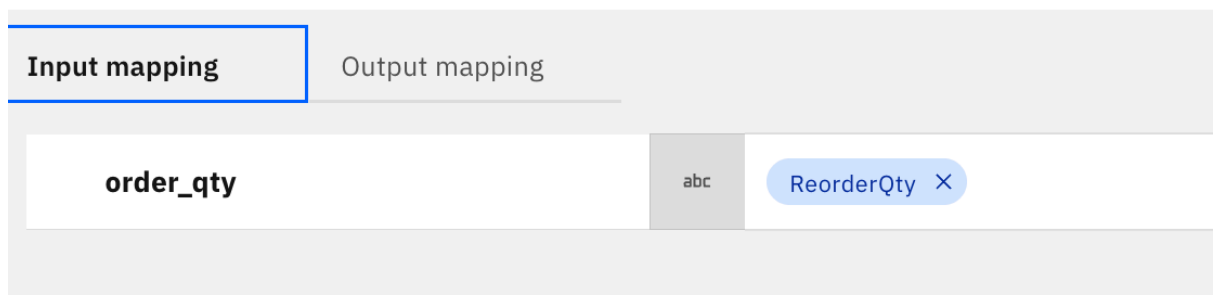


47. Click on Generative AI and select "No min order notification"

Generative AI



48. Click into the tile and define the data mapping. Click OK once the input and output mapping is done.



Input mapping

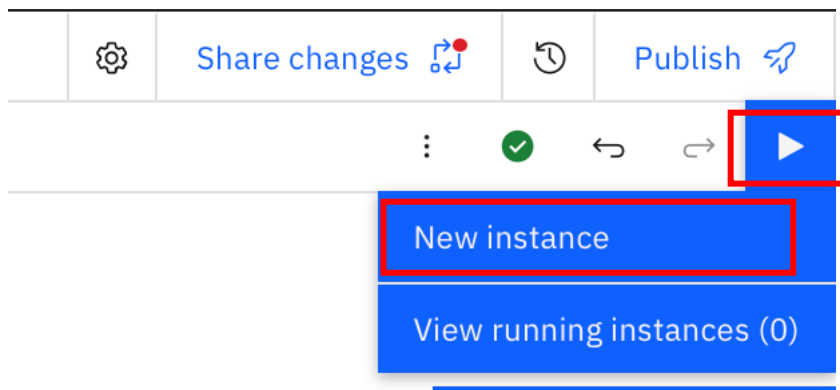
Output mapping

generated_text

abc

NoMinOrderMsg X

49.Let’s test this flow locally for now. Click on the play button at the top right corner and Select New Instance



50.For the ReorderQty, put a number that is less than 2000 and Unit Price can be any value. Once you’re done, click Run.

ReorderQty

1500

UnitPrice

31.50

**** You may need to allow pop out window for this step.**

51.There will be a new window/tab appear showing you a sample output.

Tasks

Workflows

Workflows /

Reorder Decision Flow

Completed

Outputs

NoMinOrderMsg

Hi, Your order quantity of 1000.0 is less than minimum order requirement of 2000, the...

52. For orders which met the minimum order, let's have the system to create a Draft order in Salesforce automatically.

Activities

Assignment

Decision (1)

Document processors

Generative AI (4)

Skill from catalog

User t

Branch

+

MinOrderMe

Choose a skill from the list to invoke

Add a skill

Q custom

Most popular

Send an email from Gmail

Skill signature

All skills

Salesforce Custom Skills Version2

3 skills

Choose a skill from the list to invoke

Add a skill

Salesforce Custom Skills Version2

Create a new order in Salesforce
An API for managing orders and price books in Salesforce.
[Skill signature](#)

Create an order item in salesforce
An API for managing orders and price books in salesforce.
[Skill signature](#)

Fetch all price books from salesforce
An API for managing orders and price books in Salesforce.
[Skill signature](#)

Items per page: 18 1-3 of 3 items 1 of 1 page

[Back](#) [Cancel](#) [Save](#)

53. Input and Output mapping for Create an Order in Salesforce. The date can be any date you want.

Input mapping

Output mapping




| | | |
|--------------|-----|-------------------------------|
| account_id | abc | AccountID × |
| date | | 03/17/2025 |
| status | abc | Draft |
| Pricebook2Id | abc | PriceBookID × |

| Input mapping | Output mapping |
|----------------------|-----------------------------|
| ▼ createOrder | Child attributes mapped |
| order_id | abc order_id X |

54. You can run a test just like in step 49-50, using Reorder Qty more than 2000. This time you will see the return as success with no messages.

Publish the Workflow

1. Share the changes.

| | |
|--|---|
|  | Share changes  |
| ⋮  | |

2. Click on Publish and put in a version name.

Version and publish

Create a version and publish it to the catalog.

Version name

v1.03

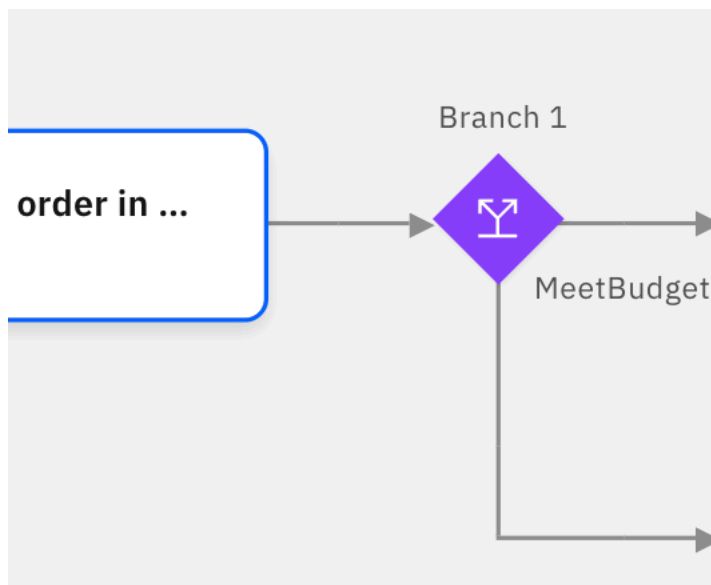
Comments (optional)

Enter details about this version

3. Navigate back to Skill Studio, you will see your workflow being published under Skills and Apps tab. (May need to refresh the page).
4. This is only part of the flow. To understand how we build the whole flow, you can refer to the rest of the steps.

[READ ONLY]

55. We will add in another branch to check if the order value is within budget.



Branch properties ×

Name

Branch 1

Type ⓘ

Conditional (single) ▼

Paths

New path + Edit conditions

Path name

MeetBudget ⋮

Path name

Else

Route to MeetBudget if:

All of the following are true ▼

ReorderValue × less than or equal to 100,000.0 ⋮

[New condition +](#) [New condition set +](#)

56. For orders which met the budget, we can also include a Generative AI notification and finalise the order with item details and unit prices.

Branch 1 ⋮ End

Search skills

← All

Generative AI

⚡ Order met

⚡ Overorder_email_draft

⚡ No min order notification

⚡ Get Supplier Name

[Create a Generative AI +](#)

Activities

+ Assignment

= Decision (1)

📄 Document processors

⚡ Generative AI (4)

🌐 Skill from catalog

57. Input and Output mapping for Order met.

Input mapping

Output mapping

| | | |
|-------------|-----|-------------------------|
| product | abc | Xtralife |
| supplier | abc | <div>SupplierName</div> |
| reorder_qty | abc | <div>ReorderQty</div> |
| value | abc | <div>ReorderValue</div> |
| variable5 | abc | Enter a value |