

# APPLIED NATURAL LANGUAGE PROCESSING

## BOOK STORE CHATBOT DEVELOPMENT

### PART III: Conversational AI System: Implementation and Development

Deploying a Conversational AI system for a bookstore involves several key steps, from testing to implementation. Here is a general guide:

#### Testing Phase:

##### Functionality Testing:

Ensure that the AI system understands and responds appropriately to user queries related to ordering books, opening hours, location, and other relevant information.

##### User Experience Testing:

Test the conversational flow to ensure a smooth and intuitive interaction. Check for natural language understanding and generation to make sure the system comprehends user input accurately and provides coherent responses.

##### Integration Testing:

Verify the integration of the conversational AI system with other platforms or systems the bookstore might use, such as a website, mobile app, or social media channels.

##### Multi-Channel Testing:

Test the AI system's performance across various channels, such as website chat, social media messaging, or dedicated apps.

##### Error Handling Testing:

Assess how the system handles unexpected or incorrect user inputs.  
Implement effective error messages or fallback mechanisms.

## Deployment Phase:

Please take note of the following steps:

1. Choose a Deployment Channel: Decide where you want to integrate the conversational AI system - on your bookstore website, through a dedicated mobile app, or on social media platforms.
2. Integrate with Existing Systems: Integrate the AI system with other bookstore systems, such as inventory management, order processing, or customer relationship management tools.
3. Implement Security Measures: Implement security protocols to protect user data and ensure secure transactions, especially if the AI system involves handling sensitive information.
4. Plan for Scalability: Plan for scalability, considering potential increases in user interactions. Ensure that the system can handle higher loads during peak times.
5. Set up Continuous Monitoring: Set up monitoring tools to keep track of the AI system's performance and user interactions. This helps identify and address issues promptly.
6. Implement a User Feedback Mechanism: Implement a feedback mechanism to gather user input on the AI system's performance. Use this feedback to make continuous improvements.
7. Regular Updates: Ensure that the AI system is up to date with regular updates.

**Compliance:** It is important to ensure that the deployment adheres to relevant data protection regulations and industry standards.

**Training for Staff:** The bakery staff should be trained to assist customers who may prefer human interaction or encounter issues with the AI system.

**Marketing and Promotion:** Developing a marketing strategy is crucial to promote the new AI system and encourage customers to use it for a better overall customer experience.

Creating a new virtual retail agent for G-Records using Dialogflow CX involves setting up a project in Google Cloud Console, enabling the Dialogflow API, and creating a new CX agent.

New Dialogflow CX agent creation-

Open the Dialogflow CX Console first to create a new Dialogflow CX agent.

Select the Google Cloud project that was already created.

Select the Create agent button.

- We can choose any display name.so here I create my display name as record-retailers.
- Choose us-central1 as location.
- Select your preferred time zone.
- Select en - English as default language.
- Finally, click on the create option.

Google Cloud

Search (/) for resources, docs, products and more

Search

New Project

You have 7 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name \*

Bookstore

Project ID: bookstore-407304. It cannot be changed later. [EDIT](#)

Location \*

No organisation

[BROWSE](#)

Parent organisation or folder

CREATE

CANCEL

Dialogflow CX

Project  
bookstore

6

Agents

Location  
us-central1 (Iowa, USA)

[Location settings](#)

[Use pre-built agents](#)

[Create agent](#)

Search

Search agents by ID or display name

Display Name	Default language	Region ↑	
Bookstore	en	us-central1 (Iowa, USA)	

Next, complete the steps to add the flows to the conversational AI system.

### Creating Flows:

- Creating flows in Dialogflow CX is an important step in designing your conversational agent. Each flow represents a part of the conversation that handles specific user interactions or topics. Here are the steps to create the flows you mentioned:

### Create the "Book Recommendation" Flow:

- In Dialogflow CX, click on the "+" icon (usually located in the left sidebar) to create a new flow.

This will create your first flow, "

### Create the "Order Management" Flow:

- Similarly, create a new flow by clicking the "+" icon.
- Specify the name as "Order Management" and hit enter.

Create the "Membership Services" Flow:

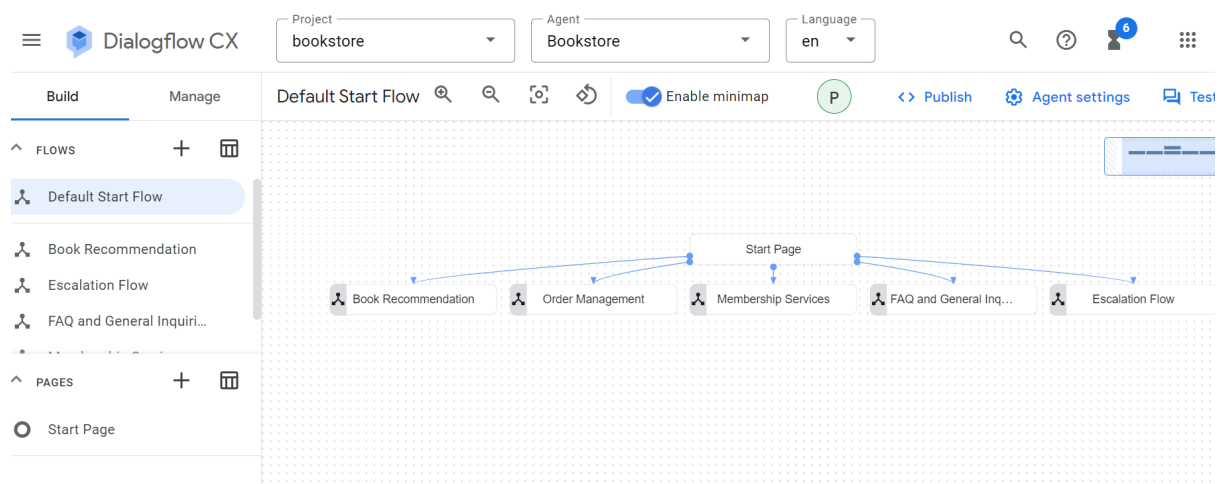
- Create another flow by clicking the "+" icon.
- Specify the name as "Membership Services" and hit enter.

Create the "General Enquiry" Flow:

- Once again, create a new flow using the "+" icon.
- Specify the name as "Customer Care" and hit enter.

By following these steps, you'll create the four flows: "Book Recommendation Menu", "Order Management", "Membership services", "General Enquiry" in Dialogflow CX. These flows represent different sections of your conversational agent and will be used to organize and manage the conversation with users.

Later in your lab, you will set up page state handlers to define the visual structure of your flows, ensuring that the conversation flows smoothly as intended for your retail virtual agent.



We will set page state handlers later in this experiment to ensure that the visualization will finally appear as follows:

- The built-in simulator allows us to test the virtual agent on the right side of the Dialogflow CX Console. We have the option of testing the dialogue from the beginning or from a certain flow.

- In the upper right corner of the screen, choose the Test Agent button.

#### Default Start Flow

- To set up the Default Start Flow in Dialogflow CX and configure the welcome message with quick reply to buttons or suggestion chips, follow these steps:

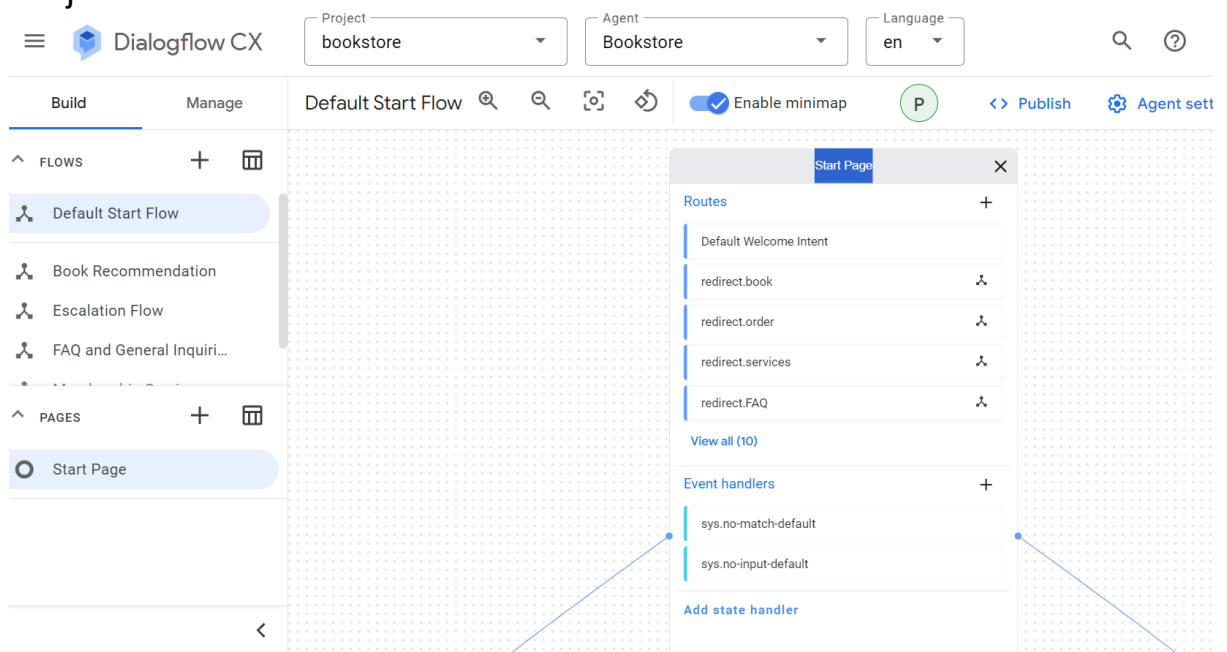
#### Configure the Start Page:

- On the Start page, you will see the "Start" tree node automatically selected. This is the entry point for your conversation.

In the "Start > Routes" section, click on the "Default Welcome Intent."

- Let's modify this default welcome text.
- Let's begin by establishing an Intent Route that will be activated as soon as you meet the virtual agent.
- Select the Start tree node by clicking on the Default Start Flow link in the left Build > Flows sidebar.
- The Start page will then be shown. In the Build > Pages sidebar area, the Start page was automatically chosen.
- Click on the Default Welcome Intent under Start > Routes.
- An end user's desire for one conversational turn is classified by an intent. Intents in Dialogflow CX may be used in a state handler to direct users to the following active page or fulfillment.
- Substitute the following new text for all the Agent says entries.
- Click on Add dialogue option > Custom payload and use the below code snippet.
- Use the below code snippet as a Custom payload and click save.
- Add Quick Reply Buttons (Suggestion Chips):
- To provide quick reply to buttons or suggestion chips, click on "Add dialogue option" > "Custom payload."
- {
- "suggestions": [

- {
- "reply": "Book Recommendation"
- },
- {
- "reply": "Order Management"
- },
- {
- "reply": "General Enquires"
- },
- {
- "reply": "Escalation"
- },
- {
- "reply": "Membership services"
- }
- 
- 
- }
- }



## Creating Entities

create an entity named "Menu" in Dialogflow. Entities help the chatbot or virtual agent understand and extract specific pieces of information from user inputs. Here are the steps

Create the "Menu" entity.

- In the left sidebar, click on "Manage."

Create a New Entity Type:

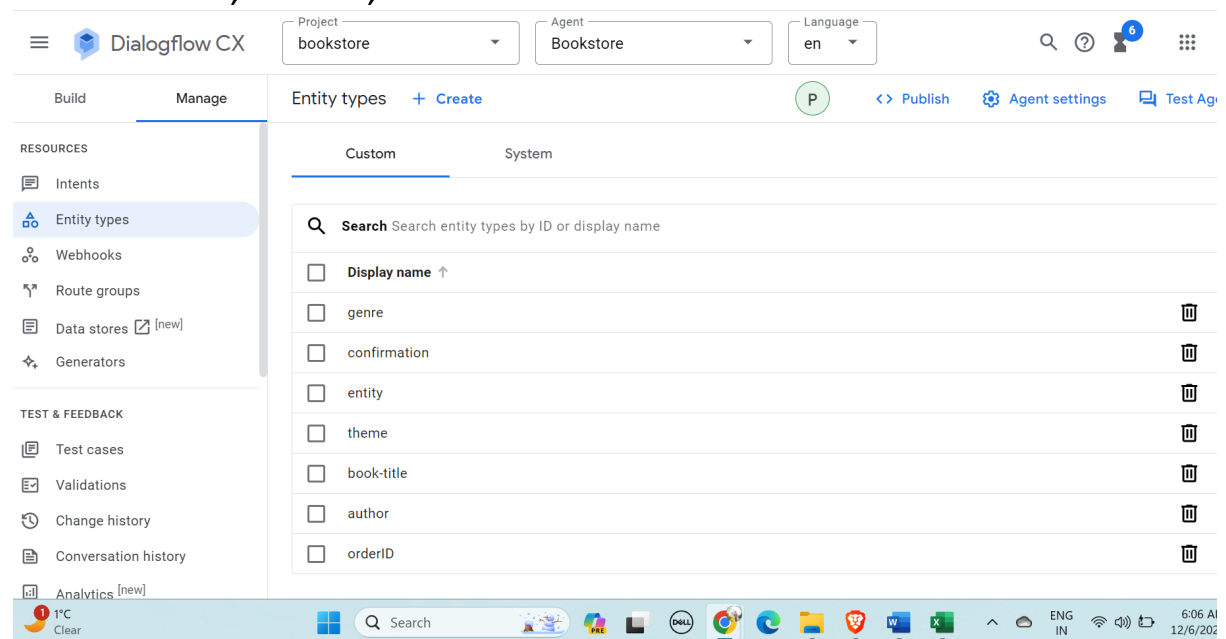
- Under the "Manage" section, click on "Entity Types."

Create the "Menu" Entity:

- Click the "+ Create" button to create a new entity.

Configure the "Menu" Entity:

- In the "Display Name" field, enter "Menu."  
The entity list contains genre, confirmation, entity, theme, book-title, author, Order-ID



Advanced Options:

- Click on "Advanced options."
- Check the "Fuzzy Matching" option. This will allow Dialogflow to match similar variations of the band names, even if they are misspelled.
- Check the "Redact in log" option. This will ensure that even if a band name is misspelled, the correct name will be logged.

Save the Entity:



- After configuring the entity and advanced options, click the "Save" button to save the "Menu" entity.

Certainly, here are the steps to create a "Bookstore" entity with the specified items and synonyms in Dialogflow:

Navigate to Entity Types:

- In the left sidebar, click on "Manage."

Create a New Entity Type:

- Under the "Manage" section, click on "Entity Types."

## Genre:

Project: bookstore Agent: Bookstore Language: en

Entity type [Save](#) [Cancel](#) [Publish](#) [Agent settings](#) [Test Ag](#)

value and *green onion* as an optional synonym.

Entity	Synonyms	
Fantasy	Fantasy X	
Mystery	Mystery X	
Romance	Romance X	
Sci-Fi	Sci-Fi X	
Horror	Horror X	
Thriller	Thriller X	

## Step:2

Navigate to Entity Types:

- In the left sidebar, click on "Manage."

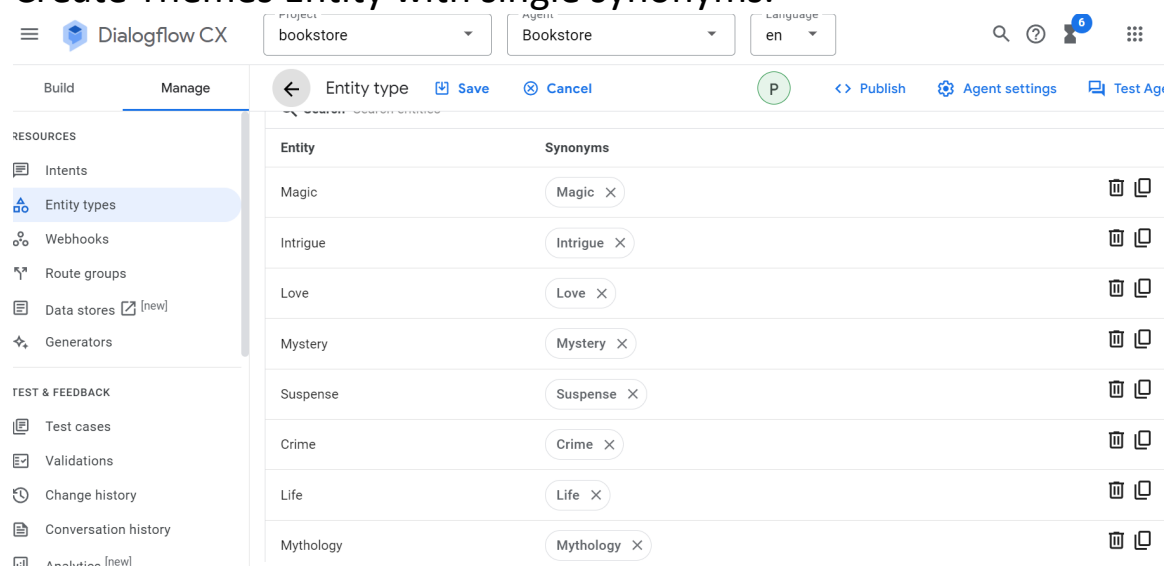
Create a New Entity Type:

- Under the "Manage" section, click on "Entity Types."

Create the "Size" Entity:

Click the "+ Create" button to create a new entity.

Create Themes Entity with single synonyms.



The screenshot shows the Dialogflow CX interface. The top bar includes the Dialogflow CX logo, project and agent dropdowns (both set to 'bookstore'), and a language dropdown (set to 'en'). The left sidebar has a 'Manage' tab selected, with 'Entity types' highlighted. The main content area is titled 'Entity type' and shows a table of entities with their synonyms.

Entity	Synonyms	
Magic	Magic X	🗑️ 📄
Intrigue	Intrigue X	🗑️ 📄
Love	Love X	🗑️ 📄
Mystery	Mystery X	🗑️ 📄
Suspense	Suspense X	🗑️ 📄
Crime	Crime X	🗑️ 📄
Life	Life X	🗑️ 📄
Mythology	Mythology X	🗑️ 📄

## Step3:

Navigate to Entity Types:

- In the left sidebar, click on "Manage."

Create a New Entity Type:

- Under the "Manage" section, click on "Entity Types."

Create the "Size" Entity:

Click the "+ Create" button to create a new entity.

## Book Titles:

Dialogflow CX interface showing the 'Entity types' management page. The left sidebar shows 'Manage' selected, with 'Entity types' highlighted under 'RESOURCES'. The main area displays a table of existing entity types with columns for 'Entity' and 'Synonyms'. The table lists book titles and their synonyms. At the bottom, there are buttons for 'Add reference value', 'Add synonyms', and 'Add'.

Entity	Synonyms
Whispers of the Silent Forest	silent forest X Whispers of the Silent Forest X
Echoes in the Attic	Echoes in the Attic X
Harry Potter and the Philosopher's Stone	Harry Potter and the Philosopher's Stone X
Harry Potter and the Chamber of Secrets	Harry Potter and the Chamber of Secrets X
Harry Potter and the Prisoner of Azkaban	Harry Potter and the Prisoner of Azkaban X
Harry Potter and the Goblet of Fire	Harry Potter and the Goblet of Fire X

### Navigate to Entity Types:

- In the left sidebar, click on "Manage."

### Create a New Entity Type:

- Under the "Manage" section, click on "Entity Types."

### Create the "Size" Entity:

Click the "+ Create" button to create a new entity.

Create author names.

## Author:

Dialogflow CX

Project: bookstore Agent: Bookstore Language: en

Entity type Save Cancel P Publish Agent settings Test Agent

Entity	Synonyms
Mira Evergreen	Mira Evergreen X
Thaddeus Sterling	Thaddeus Sterling X
Isabella Moonlight	Isabella Moonlight X
J.K. Rowling	J.K. Rowling X
Chaos Harmony	Chaos Harmony X
Stellar Enigma	Stellar Enigma X
Abyss Sonata	Abyss Sonata X
Silver Sovereign	Silver Sovereign X

### Save the Entity:

- After configuring the entity with the specified items and synonyms, click the "Save" button to save the "Author" entity.

By creating this "Themes" entity with synonyms, you enable your Dialogflow agent to recognize and extract information related to merchandise items, making it easier to understand user queries and provide appropriate responses, especially book store context.

### Navigate to Entity Types:

- In the left sidebar, click on "Manage."

### Create a New Entity Type:

- Under the "Manage" section, click on "Entity Types."

### Create the "OrderNumber" Entity with Regular Expression:

- Click the "+ Create" button to create a new entity.

### Configure the "OrderNumber" Entity:

- In the "Display Name" field, enter "OrderNumber."

Under "Regex entities," add the following regular expression pattern for the entity:

- Entity: `[A-Z]{1}[0-9]{6}`

Dialogflow CX

Project: bookstore Agent: Bookstore Language: en

Build Manage

Entity type Save Cancel

RESOURCES

- Intents
- Entity types
- Webhooks
- Route groups
- Data stores [new]
- Generators

TEST & FEEDBACK

- Test cases
- Validations
- Change history
- Conversation history
- Analytics [new]

☐ Entities only (no synonyms) ?

☒ Regexp entities ?

**Entities**

To add an entity, enter a reference value and optional synonyms. For example, if *vegetables* is the entity type, you might have *scallion* as a ref value and *green onion* as an optional synonym.

Search Search entities

Entity	
[A-Z]{2}[0-9]{4}	
Add value	Add

+ Add entity

## Save the Entity:

- After configuring the entity with the specified regular expression pattern, click the "Save" button to save the "OrderNumber" entity.

By creating this "OrderNumber" entity with a regular expression pattern, your Dialogflow agent will be able to recognize and extract order numbers that match the specified format (e.g., AB56123). This can be useful for handling order-related queries and tasks within your retail virtual agent.

Finally, complete the steps to add the intents for the conversation AI system.

## Creating Intents

Navigate to Intents:

- In the left sidebar, click on "Manage."

- Under the "Manage" section, click on "Intents."
- To change an intent named "Default Welcome Intent" with the provided training phrases from above table in Dialogflow,
- Add Training Phrases:
- In the "Training Phrases" section of the intent, click inside the text box to add training phrases from above table. Based on your provided list, add the following training phrases:
- Save the Intent:
- After configuring the intent with the display name and training phrases, click the "Save" button to create the "Default Welcome Intent" intent.
- Explanation: The "redirect. Book Recommendation" intent is designed to handle user requests to specify Ice cream sizes when purchasing book. When users mention, this intent will be triggered. You can set up responses and fulfillment logic to understand and process the size information provided by the user, helping them choose the right size for their purchase.

Dialogflow CX interface showing the 'Intents' list under the 'Manage' tab. The interface includes a top navigation bar with 'Project: bookstore', 'Agent: Bookstore', and 'Language: en'. The left sidebar shows 'Build' and 'Manage' tabs, with 'Intents' selected under 'Manage'. The main area displays a table of intents with columns for checkboxes, display names, labels, number of training phrases, and last modified dates.

<input type="checkbox"/>	Display name	Labels	# of Training phrases	Last modified
<input type="checkbox"/>	Default Welcome Intent		16	Dec 5, 2023 04:27 PM
<input type="checkbox"/>	Default Negative Intent		1	Dec 6, 2023 02:35 AM <span style="color: orange;">⚠</span>
<input type="checkbox"/>	authors		6	Dec 6, 2023 03:38 AM
<input type="checkbox"/>	theme		18	Dec 6, 2023 03:43 AM
<input type="checkbox"/>	redirect.services		10	Dec 6, 2023 12:46 AM
<input type="checkbox"/>	confrmaton		2	Dec 6, 2023 05:09 AM
<input type="checkbox"/>	genre		10	Dec 6, 2023 03:22 AM
<input type="checkbox"/>	redirect.FAQ		10	Dec 6, 2023 12:47 AM
<input type="checkbox"/>	redirect.order		0	Dec 6, 2023 03:36 AM
<input type="checkbox"/>	title		7	Dec 6, 2023 03:49 AM

Navigate to Intents:

- In the left sidebar, click on "Manage."

- Under the "Manage" section, click on "Intents."
- To change an intent named "Author" with the provided training phrases from above table in Dialogflow,
- Add Training Phrases:
- In the "Training Phrases" section of the intent, click inside the text box to add training phrases from above table. Based on your provided list, add the following training phrases:
- Save the Intent:
- After configuring the intent with the display name and training phrases, click the "Save" button to create the "Authors" intent.
- Explanation: The "redirect. Book Recommendation" intent is designed to handle user. When users mention, this intent will be triggered. You can set up responses and fulfillment logic to understand and process the size information provided by the user, helping them choose the right size for their purchase.

Project: bookstore Agent: Bookstore Language: en

Build Manage

RESOURCES

- Intents
- Entity types
- Webhooks
- Route groups
- Data stores [new]
- Generators

TEST & FEEDBACK

- Test cases
- Validations
- Change history
- Conversation history
- Analytics [new]

← Intent Save Cancel

Skip auto annotation

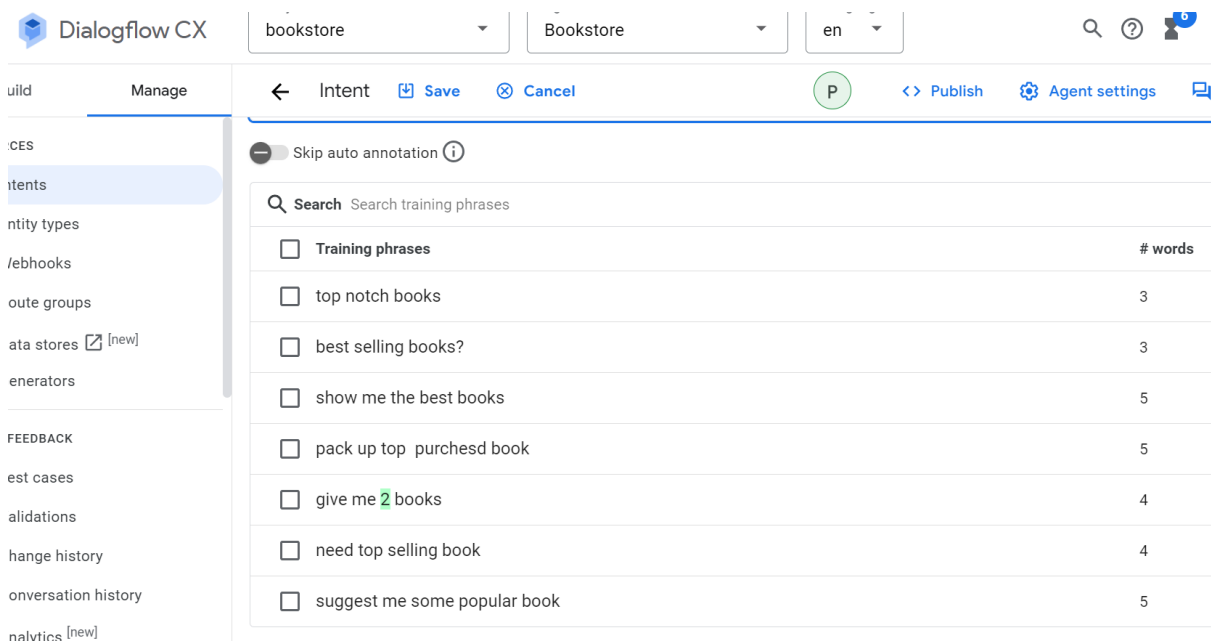
Search training phrases

Training phrases	# words
<input type="checkbox"/> JK Rowling	2
<input type="checkbox"/> Velvet Shadow Book	3
<input type="checkbox"/> Seraphina	1
<input type="checkbox"/> Oracle	1
<input type="checkbox"/> Astral	1
<input type="checkbox"/> Celeste	1

### Navigate to Intents:

- In the left sidebar, click on "Manage."
- Under the "Manage" section, click on "Intents."
- To change an intent named "redirect.order" with the provided training phrases from above table in Dialogflow,
- Add Training Phrases:

- In the "Training Phrases" section of the intent, click inside the text box to add training phrases from above table. Based on your provided list, add the following training phrases:
- Save the Intent:
- After configuring the intent with the display name and training phrases, click the "Save" button to create the "Authors" intent.
- Explanation: The "redirect. Book Recommendation" intent is designed to handle user. When users mention, this intent will be triggered. You can set up responses and fulfillment logic to understand and process the size information provided by the user, helping them choose the right size for their purchase.



Dialogflow CX

bookstore Bookstore en

Intents

← Intent Save Cancel P <> Publish Agent settings

— Skip auto annotation

Search Search training phrases

Training phrases	# words
<input type="checkbox"/> top notch books	3
<input type="checkbox"/> best selling books?	3
<input type="checkbox"/> show me the best books	5
<input type="checkbox"/> pick up top purchased book	5
<input type="checkbox"/> give me 2 books	4
<input type="checkbox"/> need top selling book	4
<input type="checkbox"/> suggest me some popular book	5

### Navigate to Intents:

- In the left sidebar, click on "Manage."
- Under the "Manage" section, click on "Intents."
- To change an intent named "order.FAQ " with the provided training phrases from above table in Dialogflow,
- Add Training Phrases:
- In the "Training Phrases" section of the intent, click inside the text box to add training phrases from above table. Based on your provided list, add the following training phrases:
- Save the Intent:



- After configuring the intent with the display name and training phrases, click the "Save" button to create the "Authors" intent.
- Explanation: The "redirect. Book Recommendation" intent is designed to handle user. When users mention, this intent will be triggered. You can set up responses and fulfillment logic to understand and process the size information provided by the user, helping them choose the right size for their purchase.

The screenshot shows the Dialogflow CX interface. At the top, there are dropdowns for 'Project' (bookstore), 'Agent' (Bookstore), and 'Language' (en). The left sidebar has a 'Manage' tab selected, with 'Intents' highlighted under the 'RESOURCES' section. The main area displays a table of training phrases for an intent. The table has two columns: 'Training phrases' and '# words'. There are 10 rows of phrases, each with a checkbox in the first column. The phrases are: 'What's your policy on book reservations?', 'Do you sell gift cards?', 'Are there any job vacancies currently?', 'Do you host book signing events?', 'How can I contact customer service?', 'Is there a café inside the bookstore?', 'Do you have a section for children's books?', 'Can I return a book I bought?', and an empty row.

Training phrases	# words
<input type="checkbox"/> What's your policy on book reservations?	6
<input type="checkbox"/> Do you sell gift cards?	5
<input type="checkbox"/> Are there any job vacancies currently?	6
<input type="checkbox"/> Do you host book signing events?	6
<input type="checkbox"/> How can I contact customer service?	6
<input type="checkbox"/> Is there a café inside the bookstore?	7
<input type="checkbox"/> Do you have a section for children's books?	8
<input type="checkbox"/> Can I return a book I bought?	7
<input type="checkbox"/>	-

### Navigate to Intents:

- In the left sidebar, click on "Manage."
- Under the "Manage" section, click on "Intents."

- To change an intent named "order.service" with the provided training phrases from above table in Dialogflow,
- Add Training Phrases:
- In the "Training Phrases" section of the intent, click inside the text box to add training phrases from above table. Based on your provided list, add the following training phrases:
- Save the Intent:
- After configuring the intent with the display name and training phrases, click the "Save" button to create the "Authors" intent.
- Explanation: The "redirect. Book Recommendation" intent is designed to handle user. When users mention, this intent will be triggered. You can set up responses and fulfillment logic to understand and process the size information provided by the user, helping them choose the right size for their purchase.

The screenshot shows the Dialogflow CX interface. The top bar displays 'Project: bookstore', 'Agent: Bookstore', and 'Language: en'. The left sidebar has 'Build' and 'Manage' tabs, with 'Intents' selected under 'RESOURCES'. The main area shows the 'Intent' configuration page with a search bar and a table of training phrases.

Training phrases	# words
<input type="checkbox"/> How long is the membership valid?	6
<input type="checkbox"/> Are there special events for members?	6
<input type="checkbox"/> I lost my membership card, what should I do?	9
<input type="checkbox"/> How much does the membership cost?	6
<input type="checkbox"/> What does the membership include?	5
<input type="checkbox"/> Are there any discounts for members?	6
<input type="checkbox"/> Can I renew my membership here?	6
<input type="checkbox"/> What are the benefits of becoming a member?	8

To create an intent named "" with the provided training phrases from above table in Dialogflow,  
Add Training Phrases:

In the "Training Phrases" section of the intent, click inside the text box to add training phrases from above table. Based on your provided list, add the following training phrases:

Save the Intent:

After configuring the intent with the display name and training phrases, click the "Save" button to create the "redirect.cancel" intent.

Explanation: The "redirect.order" intent is designed to handle user requests to cancel their orders. When users express their intention to cancel an order using phrases like those provided in the training phrases, this intent will be triggered. You can set up responses and fulfillment logic to guide users through the order cancellation process and address their requests.

The screenshot shows the Dialogflow CX console interface. At the top, there are dropdowns for 'Project' (bookstore), 'Agent' (Bookstore), and 'Language' (en). The left sidebar has a 'Manage' tab selected, with a list of resources including 'Intents', 'Entity types', 'Webhooks', 'Route groups', 'Data stores', and 'Generators'. The main content area is titled 'Intent' and has buttons for 'Save', 'Cancel', 'Publish', and 'Agent settings'. Below the title, there is a text input field for training phrases and a 'Skip auto annotation' button. A table of suggested training phrases is displayed below the input field.

Training phrases	# words
<input type="checkbox"/> change to back screen	4
<input type="checkbox"/> need to go back	4
<input type="checkbox"/> forgot something go back?	4
<input type="checkbox"/> back	1
<input type="checkbox"/> go back	2

Create a new intent with the display name "redirect.confirmation." Add the following training phrases from the above table. Save the intent.

Dialogflow CX

Projectbookstore

AgentBookstore

Languageen

6

Build

Manage

Intents

Entity types

Webhooks

Route groups

Data stores [new]

Generators

Test cases

Validations

Change history

Intent

Save

Cancel

P

Publish

Agent settings

will fill out the list with similar expressions. To extract parameter values, use [annotations](#) with available [system](#) or [custom](#) entity types.

Type a training phrase and press 'Enter'

Skip auto annotation

Search Search training phrases

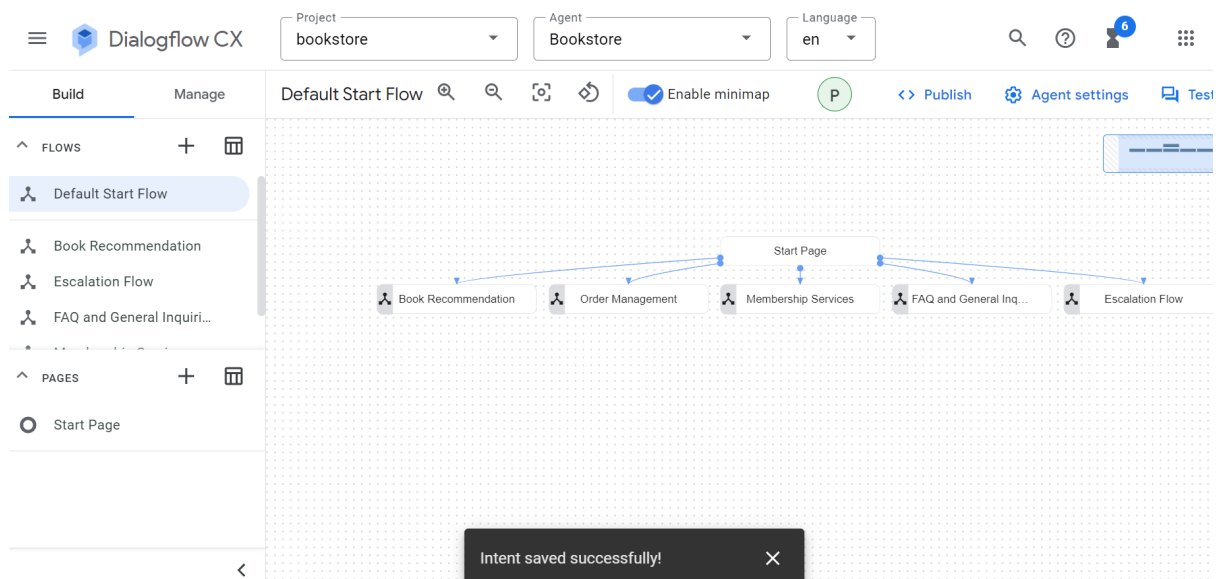
Training phrases	# words
<input type="checkbox"/> no	1
<input type="checkbox"/> yes	1

Parameter id	Entity type	Is list	Redact in
--------------	-------------	---------	-----------

The total Intent list to redirect to the specified the flow.

<input type="checkbox"/>	Display name	Labels	# of Training phrases	Last modified
<input type="checkbox"/>	Default Welcome Intent		16	Dec 5, 2023 04:27 PM
<input type="checkbox"/>	Default Negative Intent		1	Dec 6, 2023 02:35 AM ⚠
<input type="checkbox"/>	authors		6	Dec 6, 2023 03:38 AM
<input type="checkbox"/>	theme		18	Dec 6, 2023 03:43 AM
<input type="checkbox"/>	redirect.services		10	Dec 6, 2023 12:46 AM
<input type="checkbox"/>	confirmation		2	Dec 6, 2023 05:09 AM
<input type="checkbox"/>	genre		10	Dec 6, 2023 03:22 AM
<input type="checkbox"/>	redirect.FAQ		10	Dec 6, 2023 12:47 AM
<input type="checkbox"/>	redirect.order		0	Dec 6, 2023 03:36 AM
<input type="checkbox"/>	title		7	Dec 6, 2023 03:49 AM

The start flow contains the redirected flows while ordering the book.



## Creating Intents in start page

- Click Build > Default Start Flow
- Click the Start Page
- Click the + icon next to Routes.
- Add redirect.menu.overview

- Scroll down to *Transition*, and transition to the Catalog flow.
- Hit Save start page.
- Repeat the above steps for redirect.cake and the other rows from this table:

Page (In Flow)	Routes > Intent	Routes > Transition To
Start	Default Welcome Intent	
Start	redirect.order	Flow: Book recommendation
Start	redirect.author	Flow: Book recommendation
Start	redirect.theme	Flow: Book recommendation
Start	redirect.title	Flow: Book recommendation
Start	redirect.genre	Flow: Book recommendation
Start	redirect.escalation	Flow: Escalation service
Start	redirect.service	Flow: Membership service
Start	redirect.order	Flow: Order Management
Start	redirect.confirmation	Flow: Order Management
Start	redirect.my.order.status	Flow: Order Management
Start	redirect.end	Page: End Session

The Default Start Flow will work like an option menu works when calling a call center. However, in this virtual agent it is trained with Natural Language, with the training phrases in intents. Therefore, the interaction is driven by conversation and not by DTMF options and is more natural and human-like.

Creating intent “redirect.” and Transition to flow: “Book Recommendation” in start page.

Follow the same steps to create above mentioned intents in Default start flow.



## Connecting the pages in Book Recommendation

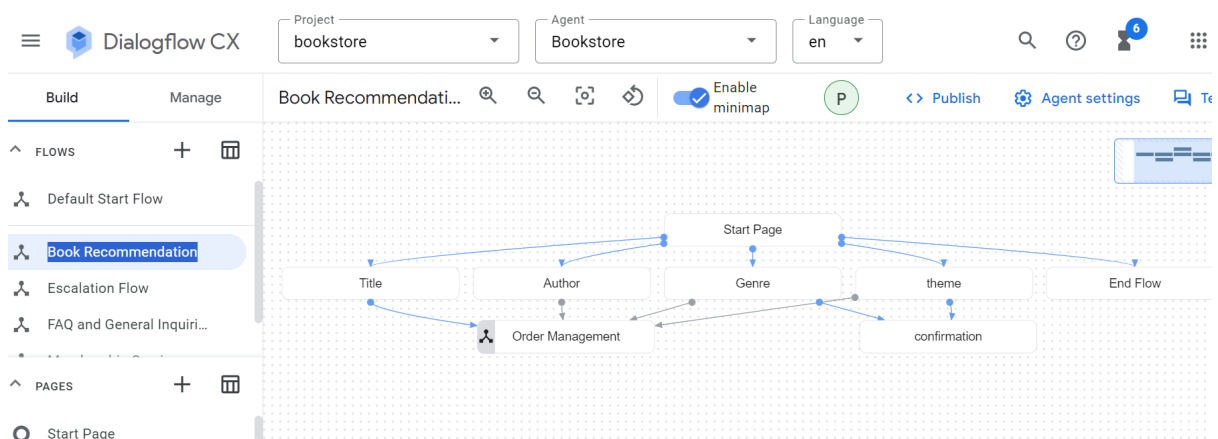
Select the catalog first.

- Click Build > Book Recommendation
- Click the Start Page
- Click the + icon next to Routes
- Add redirect.order
- Scroll down to *Transition*, select Page and choose: + new Page
- Use the page name: Menu Overview and hit Save
- Now let's finish the rest of the flow:
- The previous steps can be repeated with the following pages, intents and fulfillments. Take over this table. *Page* is the Page you will select in the flow, *Routes > Transition To* is the new flow or page you will create and transition to.

•

Page (In Flow)	Routes > Intent	Routes > Transition To
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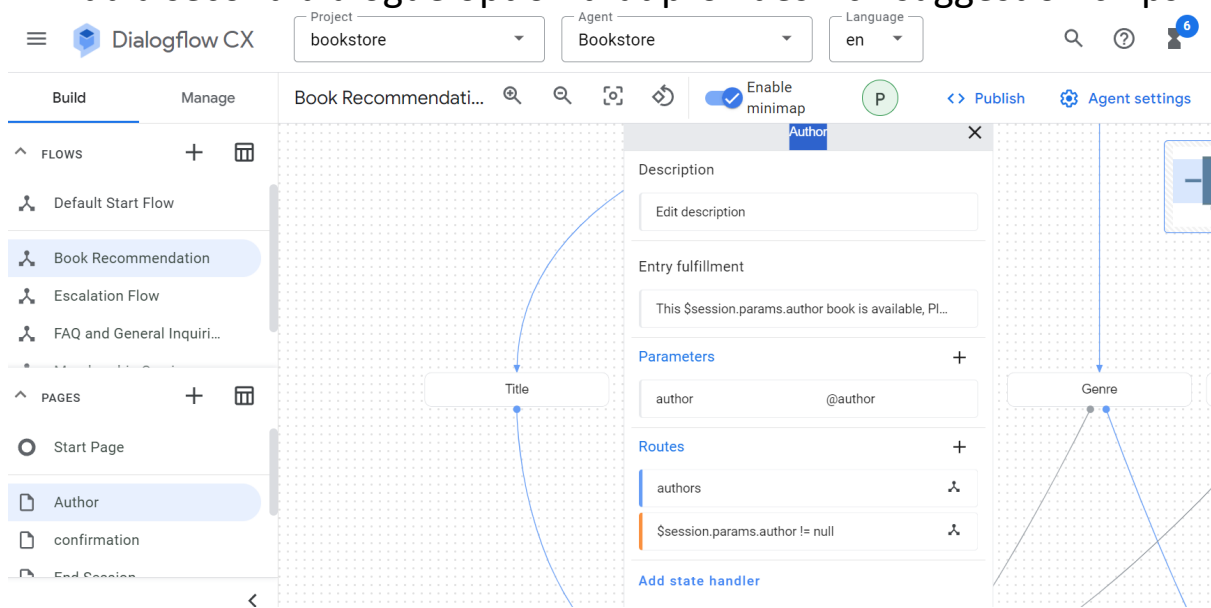
Book Recommendation	redirect.title	Title
Book Recommendation	author	Author
Book Recommendation	redirect.theme	Theme
Book Recommendation	redirect.genre	Genre
Book Recommendation	redirect.order	Order Management
Book Recommendation	redirect.end	End Session
Book Recommendation	redirect.cancel	End Flow



- Click the + in the Parameters block. Add the menu parameter:
  - Display Name: Author
  - Entity Type: @author
  - Required: Check
  - Redact in log: Check.
- Now we will add some custom parameter fulfillment messages. If the *author* parameter hasn't been collected by the virtual agent yet, the end user will get this agent response added to the response queue:



➤ Add a second dialogue option that provides rich suggestion chips.



- Scroll down to the Reprompt event handler's section.
- Click Add event handler and select the event: No-match default.

Use the following event static *text fulfillment*:

Click Save

- Click the + in the Parameters block. Add the menu parameter:
  - Display Name: Title
  - Entity Type: @title
  - Required: Check
  - Redact in log: Check.
- Now we will add some custom parameter fulfillment messages.  
If the *author* parameter hasn't been collected by the virtual

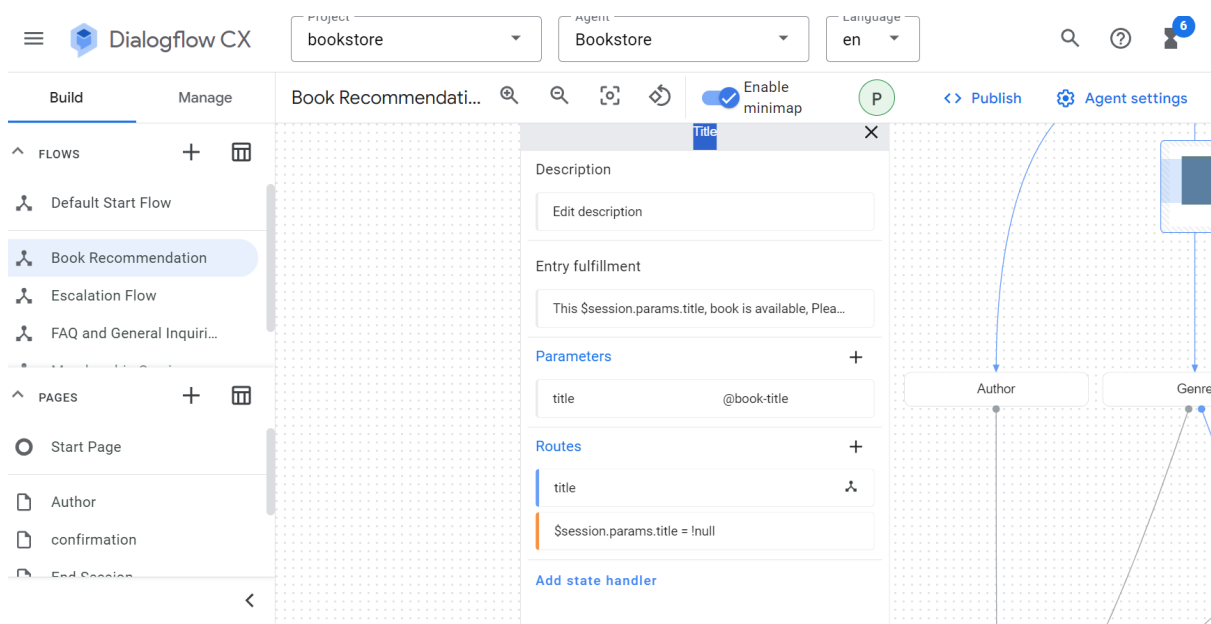
agent yet, the end user will get this agent response added to the response queue:

Add a second dialogue option that provides rich suggestion chips.

- Scroll down to the Reprompt event handler's section.
- Click Add event handler and select the event: No-match default.

Use the following event static *text fulfillment*:

Click Save



- Click the + in the Parameters block. Add the menu parameter:
  - Display Name: Title
  - Entity Type: @title
  - Required: Check
  - Redact in log: Check.
- Now we will add some custom parameter fulfillment messages. If the *author* parameter hasn't been collected by the virtual agent yet, the end user will get this agent response added to the response queue:

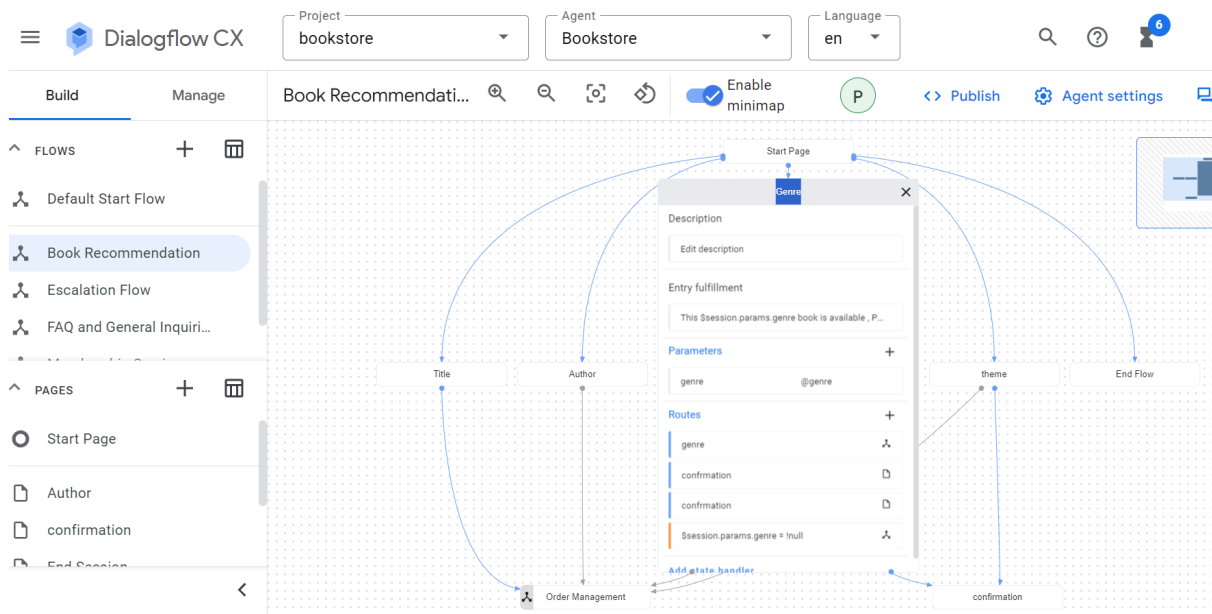
Add a second dialogue option that provides rich suggestion chips.

- Scroll down to the Reprompt event handler's section.

- Click Add event handler and select the event: No-match default.

Use the following event static *text fulfillment*:

Click Save



- Click the + in the Parameters block. Add the menu parameter:

- Display Name: Title
- Entity Type: @title
- Required: Check
- Redact in log: Check.

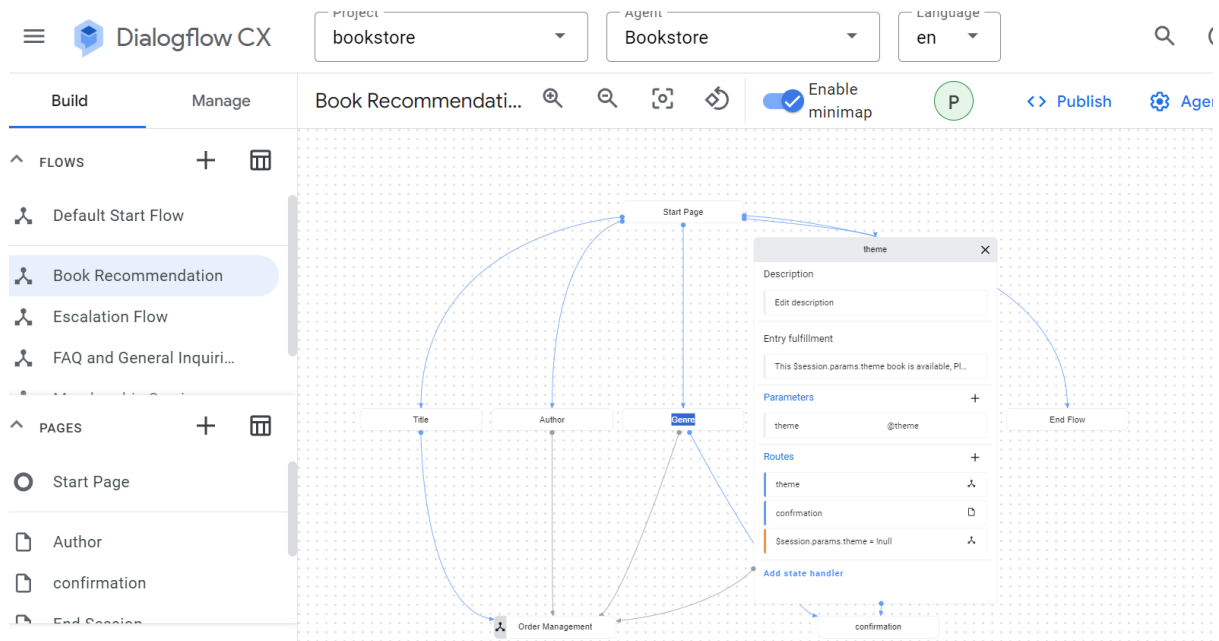
- Now we will add some custom parameter fulfillment messages. If the *author* parameter hasn't been collected by the virtual agent yet, the end user will get this agent response added to the response queue:

Add a second dialogue option that provides rich suggestion chips.

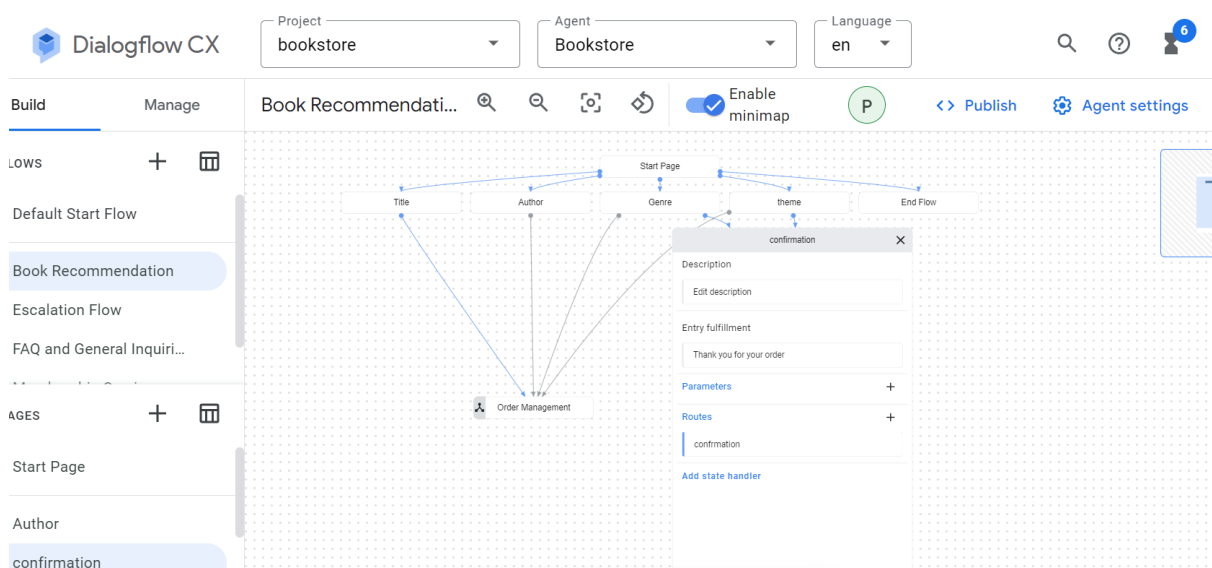
- Scroll down to the Reprompt event handler's section.
- Click Add event handler and select the event: No-match default.

Use the following event static *text fulfillment*:

Click Save



Need to confirm the order with going order management to pre check the book engagement of requests.



Price Page:

Let's also fix the Price TODOs. The price information will be static for now. Click on the Price Page in the *Book recommendation*, and use the following entry fulfillment:

- Delete the Agent Says entry fulfillment.

- Create a new Conditional Response:

if \$session.params.title != null

Any book cost \$30

else

book price \$10

endif

The screenshot shows the Dialogflow CX interface for a project named 'bookstore'. The 'Build' tab is active, and the 'cost' parameter is selected in the left sidebar. The main workspace displays a flow diagram with a 'Start Page' block connected to an 'End Flow' block. A 'cost' parameter is highlighted in the diagram. The right sidebar shows the 'Parameter' configuration for 'cost', including an 'Initial prompt fulfillment' section and a 'Parameter presets' table.

Parameter	Value
\$session.params.cost	"=\$30"

The bookstore chatbot's book flow begins with the start Flow block, serving as the entry point for the user's interaction. This block can be triggered by various events, such as a user clicking a button on a website or sending a message to the chatbot.

Initiating from the start Flow block, the flow diverges into two distinct paths: Book Recommendation and Escalation Flow. The Book Recommendation path is the primary trajectory, offering users the ability to explore and receive book recommendations based on their preferences. Conversely, the Escalation Flow path handles errors and exceptional cases.

Commencing the Book Recommendation path is the Start Page block, presenting users with a list of options. Users can choose to browse

books by genre, theme, or author. Alternatively, they can opt for a book recommendation tailored to their preferences.

If a user opts to browse books by genre or theme, the flow navigates to the relevant block. For instance, selecting the option to browse books by genre leads to the Genre block, which displays a list of genres for the user to choose from.

In the case of a user choosing to receive a book recommendation, the flow progresses to the Book Recommendation block. Here, the chatbot poses a series of questions about the user's preferences, such as favored genres and themes. Following the user's responses, the flow generates a personalized book recommendation.

The Book Recommendation block not only provides details about the recommended book, including title, author, genre, and theme, but also offers the option for the user to choose whether to read the recommended book or explore other options.

In the event of user queries or issues, they have the option to trigger the Escalation Flow path by clicking the Help button. This path seamlessly connects the user with a human agent capable of aiding.

In summary, the bookstore chatbot's book flow, depicted in the provided image, is a thoughtfully designed and comprehensive experience. It empowers users to effortlessly browse and receive book recommendations based on their preferences, while also providing an avenue for human assistance in the case of inquiries or concerns. The flow ensures a user-friendly and informative interaction, facilitating well-informed decisions about the books they wish to explore.

