

Chatbot Deployment with IBM Cloud Watson Assistant

Problem Definition:

The project involves creating a chatbot using IBM Cloud Watson Assistant. The goal is to develop a virtual guide that assists users on messaging platforms like Facebook Messenger and Slack. The chatbot should provide helpful information, answer frequently asked questions (FAQs), and offer a friendly conversational experience. The project includes designing the chatbot's persona, configuring responses, integrating with messaging platforms, and ensuring a seamless user experience.

Design Thinking:

Empathize:

Begin by understanding the needs and preferences of your target users on Facebook Messenger and Slack. Conduct user research, surveys, and interviews to gain insights into their pain points, expectations, and communication preferences.

Define:

Identify the specific FAQs and information users seek, and set measurable goals for the chatbot's performance, such as response time and accuracy.

Ideate:

Brainstorm ideas for the chatbot's persona and design. Consider the chatbot's name, gender, tone of voice, and visual elements. Encourage creative thinking to craft a personality that resonates with users.

Prototype:

Create a preliminary design and user interface for the chatbot. Develop sample dialogues and responses to visualize how the chatbot will interact with users on the messaging platforms.

Test:

Gather feedback on the chatbot's prototype. Conduct usability testing with potential users to assess the chatbot's effectiveness and user-friendliness. Use this feedback to refine the chatbot's design and responses.

Build:

Develop the chatbot using IBM Cloud Watson Assistant, configuring intents, entities, and dialog flows based on user needs and feedback. Ensure that the chatbot's responses align with the defined persona and are informative and engaging.

Integrate:

Connect the chatbot to messaging platforms like Facebook Messenger and Slack. Ensure that the integration is seamless, allowing users to initiate conversations and receive responses without friction.

Test Again:

Thoroughly test the integrated chatbot to verify its functionality across messaging platforms. Check for any issues related to message delivery, response accuracy, and user experience.

Deploy:

Release the chatbot to the target messaging platforms for real-world use. Promote the chatbot's availability and provide clear instructions on how users can interact with it.

Monitor:

Implement monitoring tools to track the chatbot's performance and user interactions. Collect data on user engagement, frequently asked questions, and user satisfaction to inform future improvements.

Iterate:

Continuously iterate and improve the chatbot based on user feedback and performance data. Update responses, add new features, and refine the persona to enhance the chatbot's effectiveness and user experience.

Chatbot Persona:

- **Persona:** For a virtual guide, the persona should be friendly, helpful, and professional. It should aim to provide accurate and concise information in a conversational manner.
- **Tone:** Keep the tone polite, casual, and conversational, but adapt it to the formality expected on platforms like Slack and Facebook Messenger.

Conversation Flow:

➤ Welcome Message:

Start the conversation with a welcoming message, introducing the chatbot and its purpose.

➤ FAQs and General Inquiries:

Create an intent called "FAQ" to handle frequently asked questions. Configure dialog nodes for each FAQ.

➤ Example FAQs:

"How do I reset my password?", "What are the office hours?", "How can I contact support?"

➤ Information Lookup:

Allow users to ask for general information. Create intents like "Information Inquiry" or "Help Needed." Dialog nodes can provide information about the company, services, or products.

➤ Integration with Platforms:

Integrate your chatbot with Facebook Messenger and Slack. Configure the chatbot to respond to messages from these platforms.

➤ Fallback and Clarification:

Create a fallback node to handle cases when the chatbot doesn't understand the user's query. Offer suggestions or ask for clarification. For example, "I'm sorry, I didn't quite get that. Could you please rephrase your question?"

➤ User Feedback and Closing:

Allow users to provide feedback or rate their experience at the end of the conversation. Thank them for using the chatbot and invite them to return.

Entities:

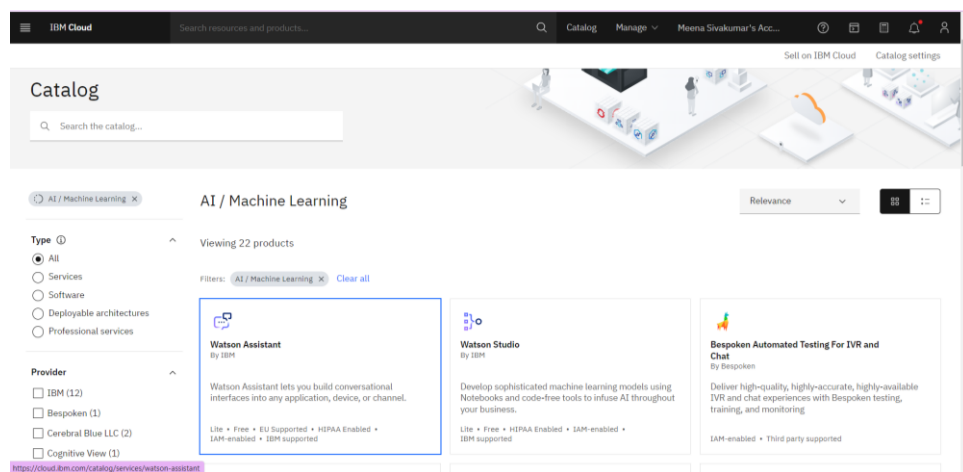
Define entities to extract specific information from user queries. Common entities may include dates, product names, or support ticket numbers.

Dialog Nodes:

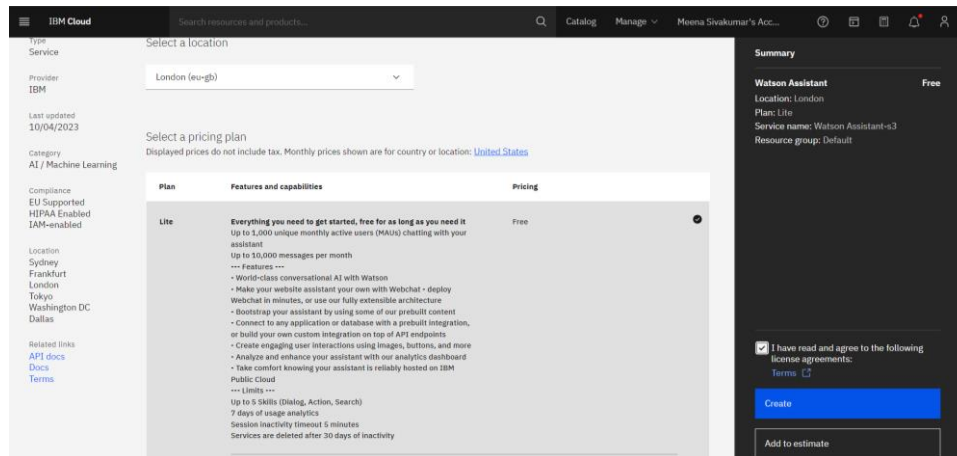
Configure dialog nodes for each intent and entity combination. Ensure the conversation flow is logical and provides accurate information. Use conditional responses to guide users effectively through their queries and issues.

Steps involved for creating Chatbot using IBM Watson Assistant:

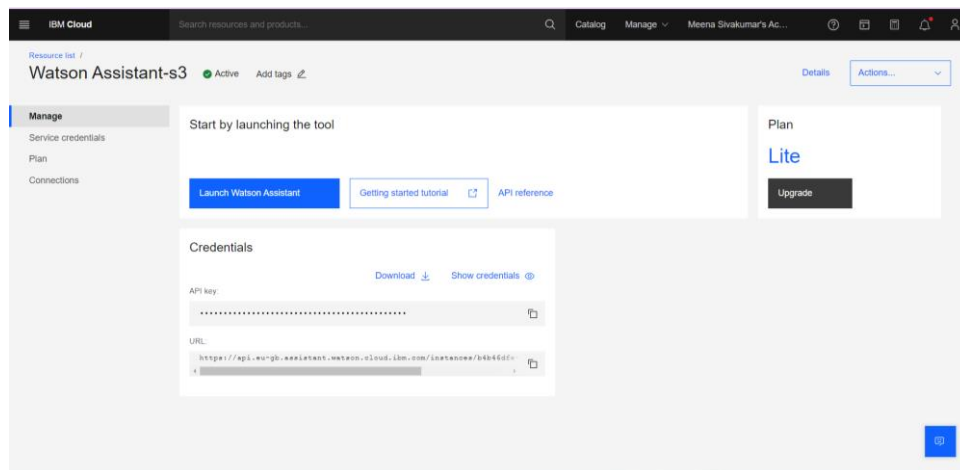
In IBM Cloud Account go to catalog select Watson Assistant for creating a chatbot.



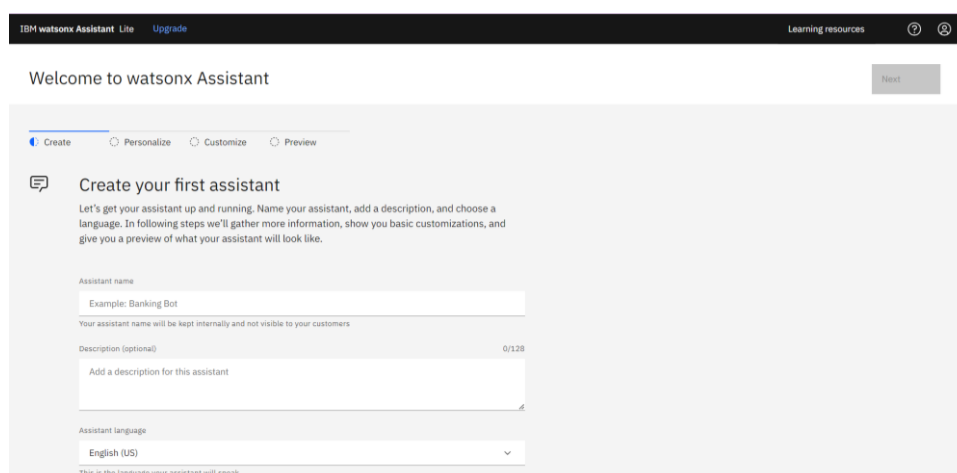
Next step creating our Watson Assistant by selecting free lite version then accept the conditions and click create. it takes some time for creating resource.



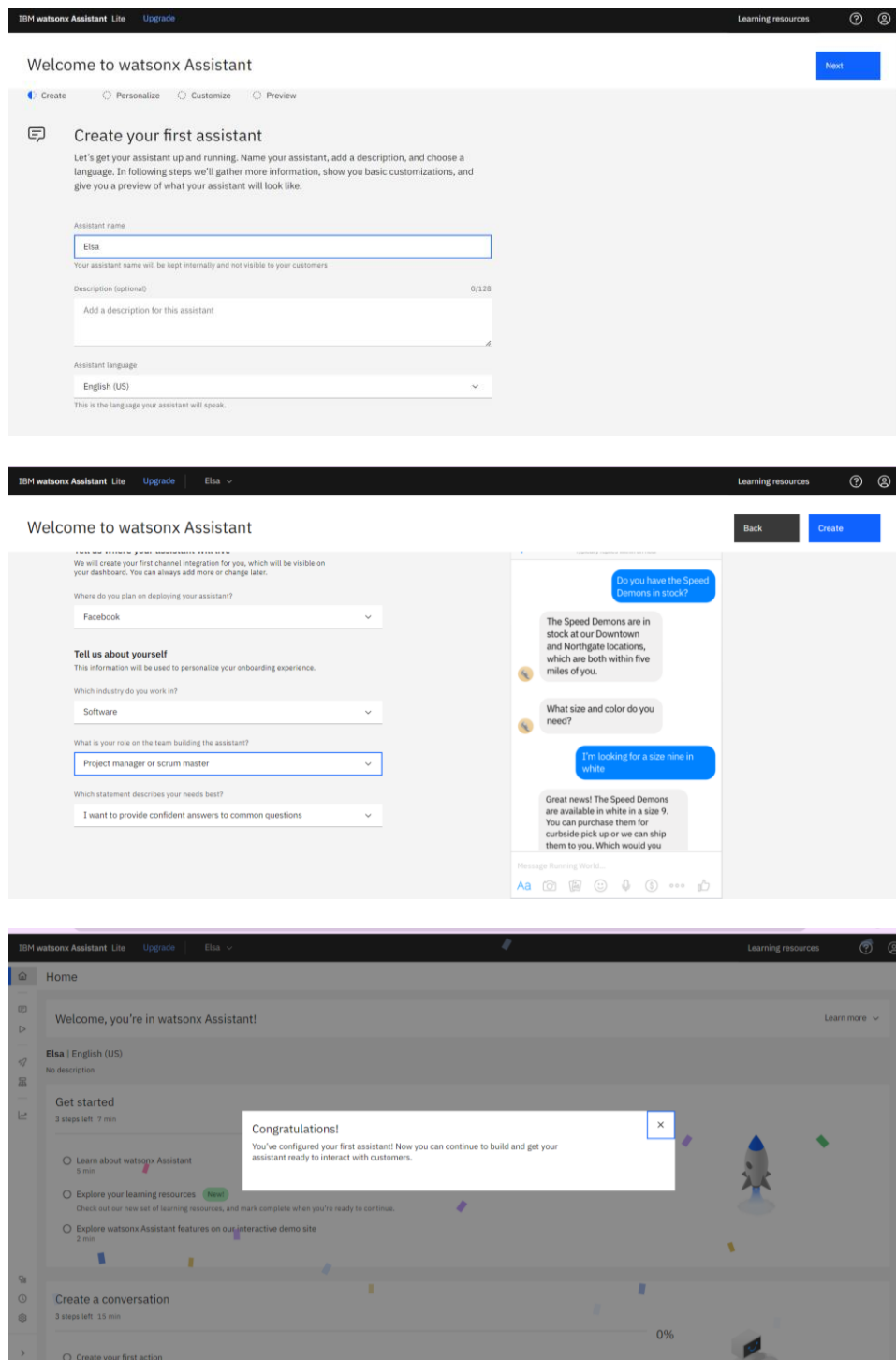
Here click Launch Watson Assistant



Here we are Creating our First Assistant. In Assistant name the chatbot name is given by us. We can give any name. The Language of assistant is English.



Now we have to personalize the chatbot. Selecting app for where it's going to be implemented, Selects the industry type of chatbot and describes chatbot persona.



Frequently Asked Questions and it's Answers:

- 1.How can I retrieve deleted messages on Facebook Messenger? - Facebook Messenger does not provide a straightforward way to retrieve deleted messages once they are removed.
- 2.Is it possible to use Facebook Messenger without the Messenger app? - While Facebook encourages the use of the Messenger app, you can access Messenger through a mobile web browser or on the desktop at messenger.com.

3. Can I change my Messenger username or ID? - As of my last knowledge update in January 2022, you cannot change your Messenger username or ID once it's set.
4. What is the storage limit for photos and videos in Messenger? - Messenger has a storage limit for photos and videos, and older media may be deleted to make space for new content. The exact limit may vary.
5. How can I prevent someone from knowing I've read their message in Messenger? - You can disable reading receipts by turning off "Send Read Receipts" in the Messenger settings, but this will also disable your ability to see when others have read your messages.
6. What does it mean when a message is "unsend" in Messenger? - "Unsend" allows you to remove a message you've sent within a certain time frame. However, a notification will inform the recipient that the message was removed.
7. Is there a way to see who has unfriended me on Messenger? - Facebook and Messenger do not provide a direct feature to see who has unfriended you.
8. How do I prevent someone from adding me to group chats in Messenger without my permission? - You can control who can add you to groups by adjusting your privacy settings in Messenger.
9. Can I use Messenger with a virtual phone number or a non-mobile number? - Messenger often requires a valid phone number for initial setup, but you may be able to use it with a virtual or non-mobile number.
10. How can I clear my Messenger search history and suggestions? - You can clear your Messenger search history by going to the settings, selecting "Privacy," and then "Clear Search History."
11. How do I set up Messenger for a group event or party? - To set up Messenger for a group event, you can create a group chat, add the event details, and invite friends to join the conversation.
12. Can I use Messenger to order food or make restaurant reservations? - Yes, you can use Messenger to order food and make restaurant reservations in some regions by interacting with specific restaurant chatbots.
13. What's the difference between a Messenger conversation and a group chat? - A Messenger conversation is a one-on-one chat, while a group chat allows you to chat with multiple friends in the same conversation.
14. How can I customize the emoji reaction options in Messenger? - You can customize emoji reaction options in a chat by holding down an existing reaction, selecting "More," and adding or removing reactions.
15. Is there a way to schedule messages to be sent at a later time in Messenger? - Currently, Messenger does not have a built-in feature to schedule messages for later.
16. Can I send voice messages in Messenger, and how long can they be? - Yes, you can send voice messages in Messenger. They can be up to one minute long.
17. How do I change the default thumbs-up reaction in Messenger? - You can change the default thumbs-up reaction by tapping and holding the reaction you want to set as the default.

18. What are "vanishing messages," and how do they work in Messenger? - Vanishing messages are messages that disappear after a set period. You can enable this feature in a chat by tapping the contact's name and selecting "Vanishing Messages."

19. Can I use Messenger for international calls, and are there any charges? - Messenger offers international calls, but charges may apply depending on your phone plan and the destination.

20. How can I export or save a chat from Messenger for backup purposes? - You can export a chat from Messenger by opening the conversation, tapping the contact's name, selecting "More," and choosing "Export Chat." You can save it as a file.

21. How do I set up notifications for specific contacts in Messenger? - You can customize notifications for individual contacts by opening the chat, tapping their name, and selecting "Custom Notifications."

22. What's the difference between a regular call and a Wi-Fi call in Messenger? - Regular calls use your mobile network, while Wi-Fi calls use an internet connection. Wi-Fi calls are often clearer if you have a good Wi-Fi connection.

23. Can I use Messenger for group video calls? - Yes, you can make group video calls by selecting multiple contacts and tapping the video icon.

24. How can I share my location in Messenger? - In a chat, tap the "More" option (it looks like three dots), then select "Location" to share your current location.

25. Is it possible to delete a conversation from both sides in Messenger? - No, you can only delete a conversation from your side. The other person will still have the conversation unless they delete it themselves.

26. How do I invite someone to join Messenger if they don't have it installed? - You can invite them by opening a chat, tapping their name, and selecting "Invite to Messenger."

27. What is the difference between the active status and last active on Messenger? - Active status shows when you're currently using Messenger, while "last active" displays the time of your last interaction on the platform.

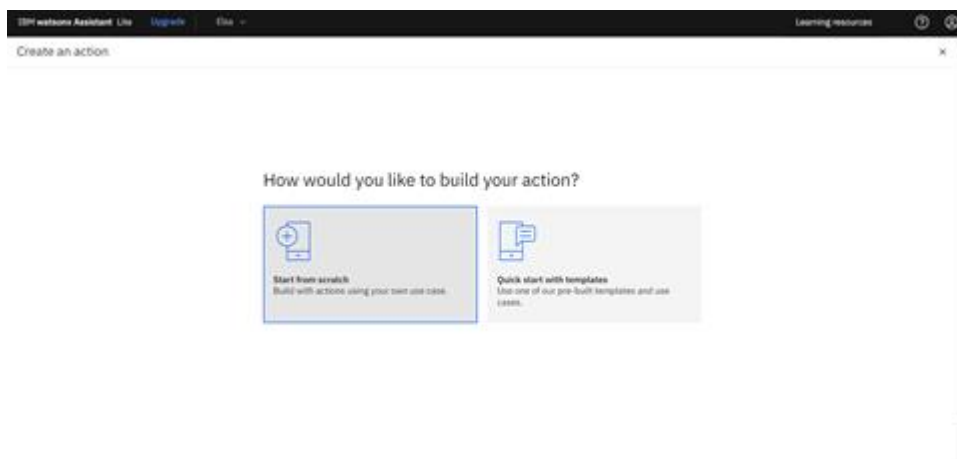
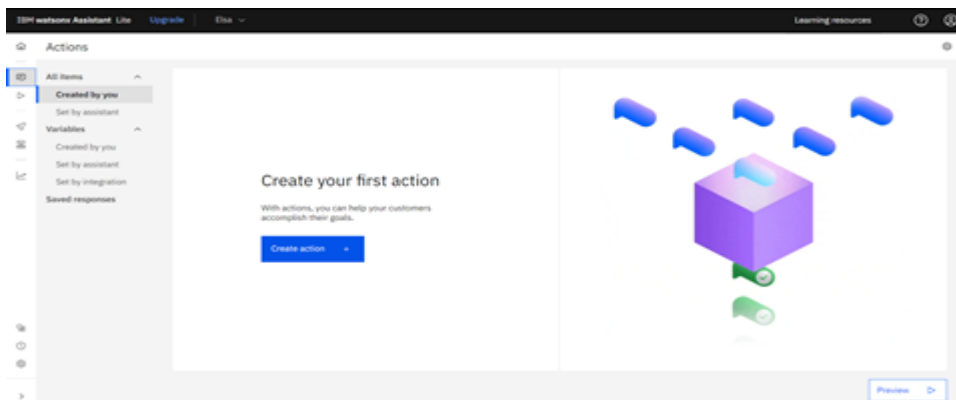
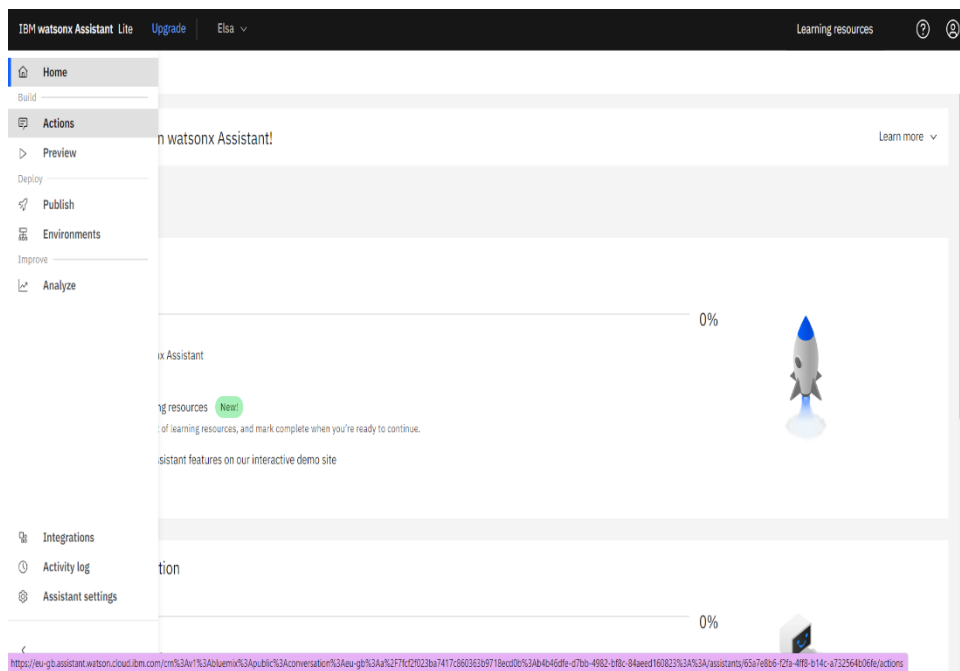
28. How do I create and send GIFs in Messenger? - In a chat, tap the GIF icon, search for a GIF, and send it to your friend.

29. Can I use Messenger for international calls or messages? - Yes, you can use Messenger for international communication, but data charges may apply depending on your plan.

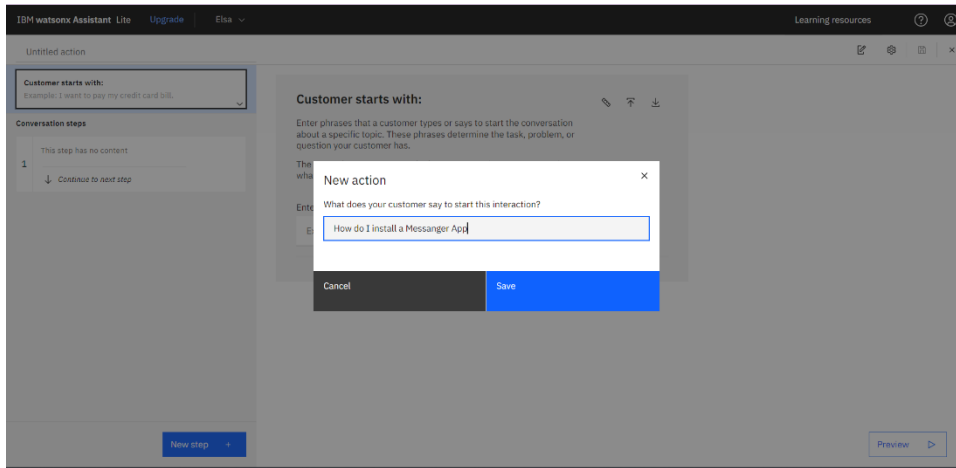
30. How do I access my archived messages in Messenger? - To view archived messages, go to your chat list, tap your profile picture, and select "Archived." These are the questions used to train chatbot.

Chatbot Trained with above FQS,

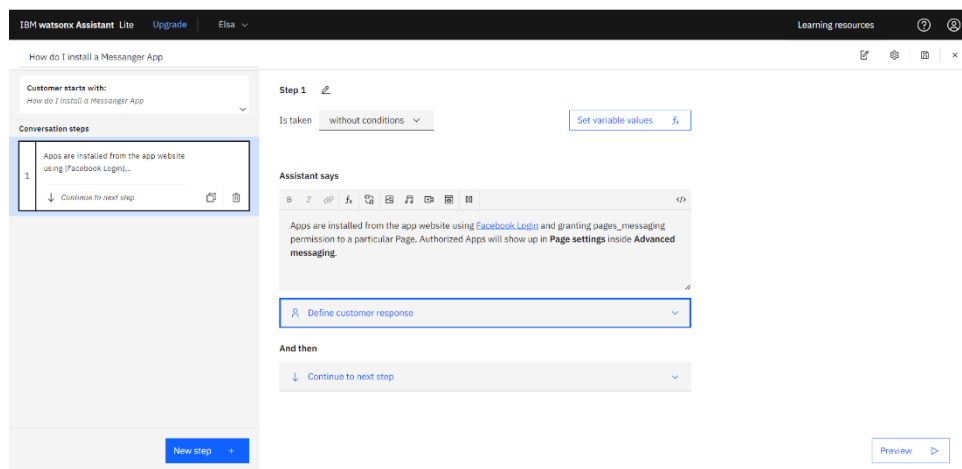
To create chatbot create new action from scratch,



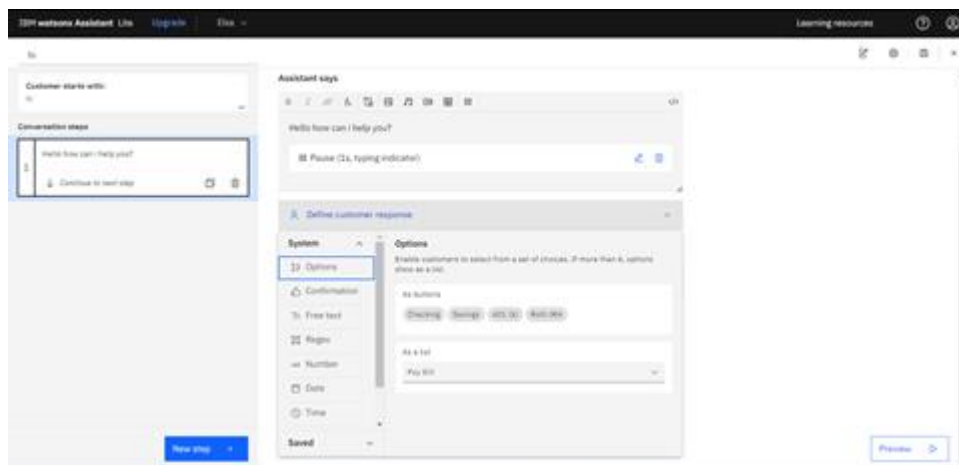
After that in new action give a question phrase which is asked by a user

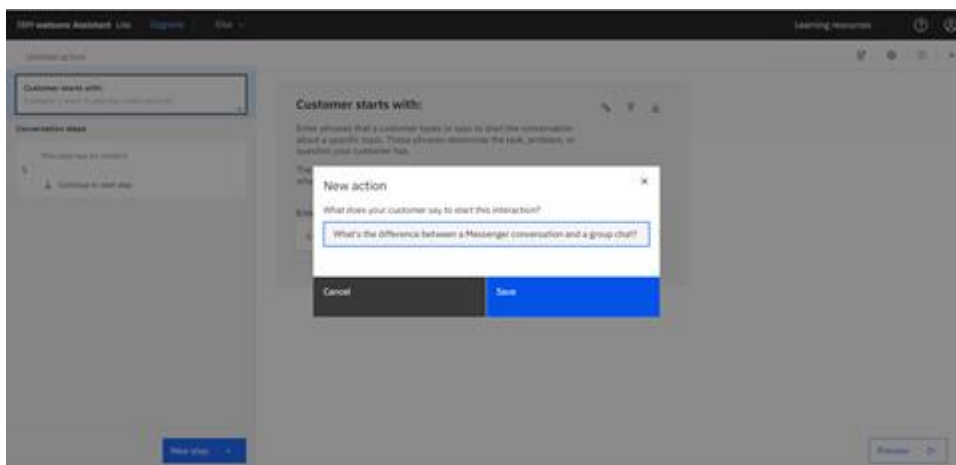
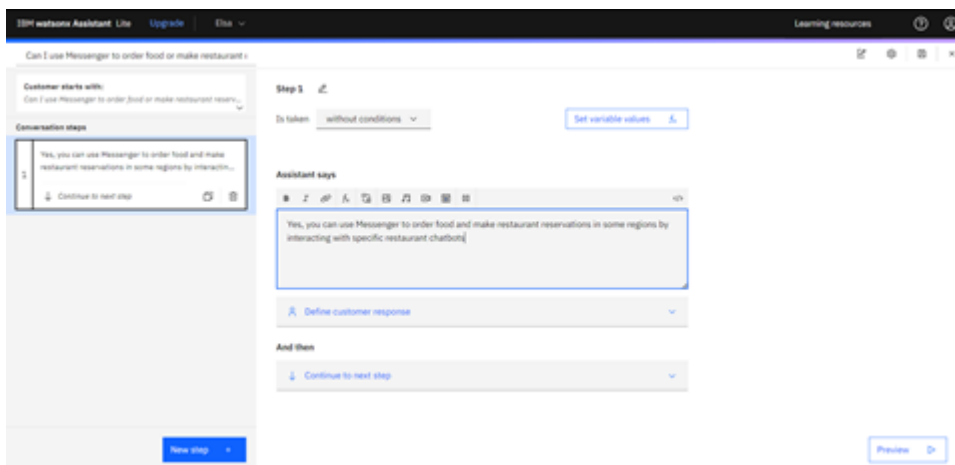
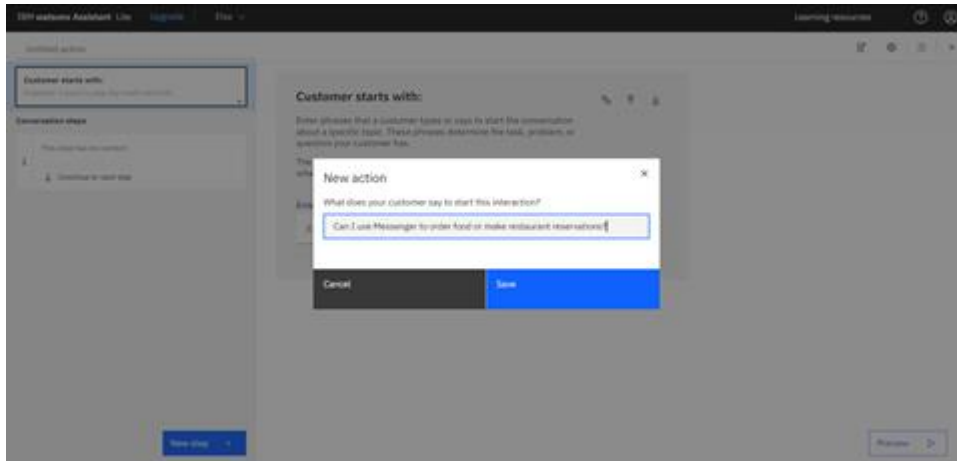


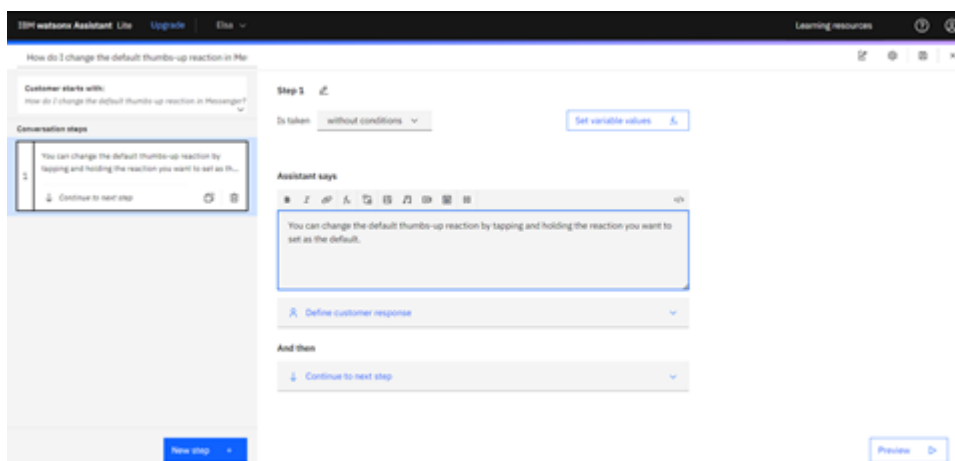
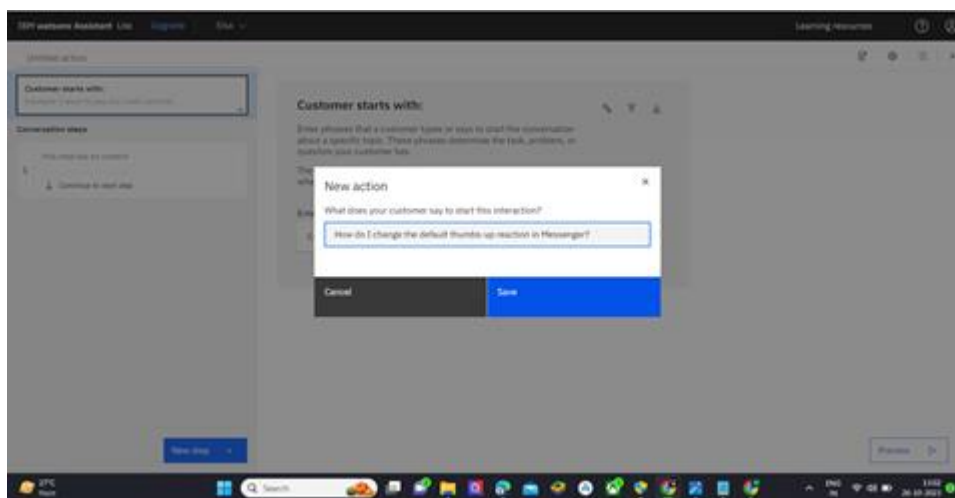
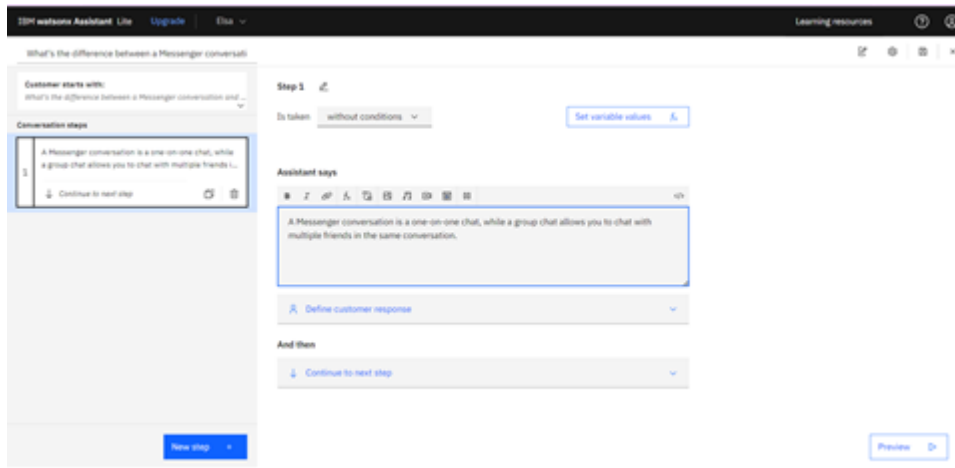
Then give Answer to that question in Assistant says box

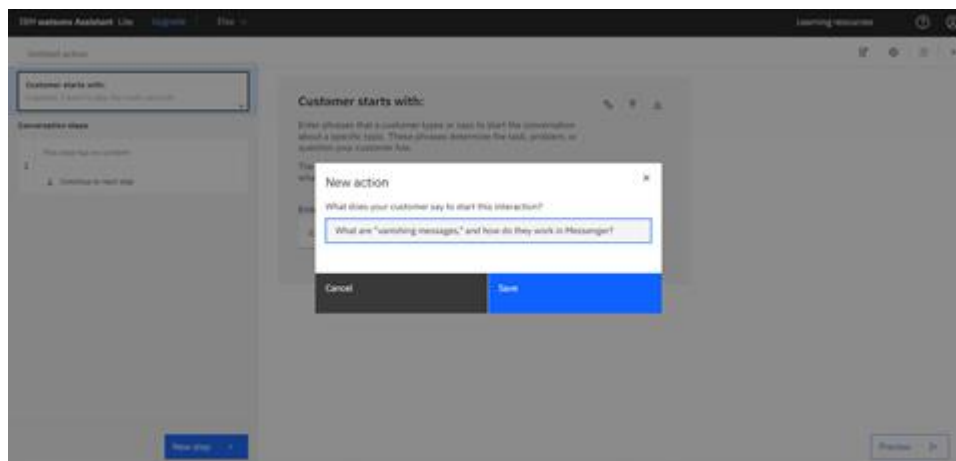
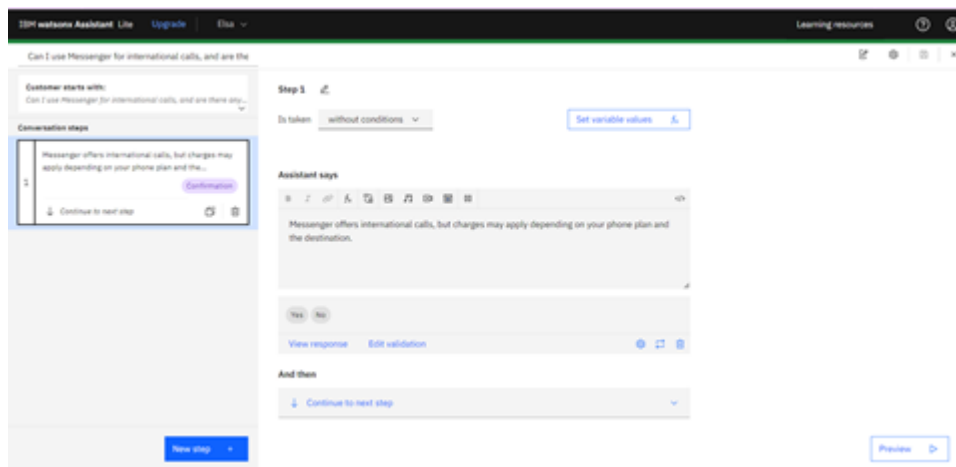
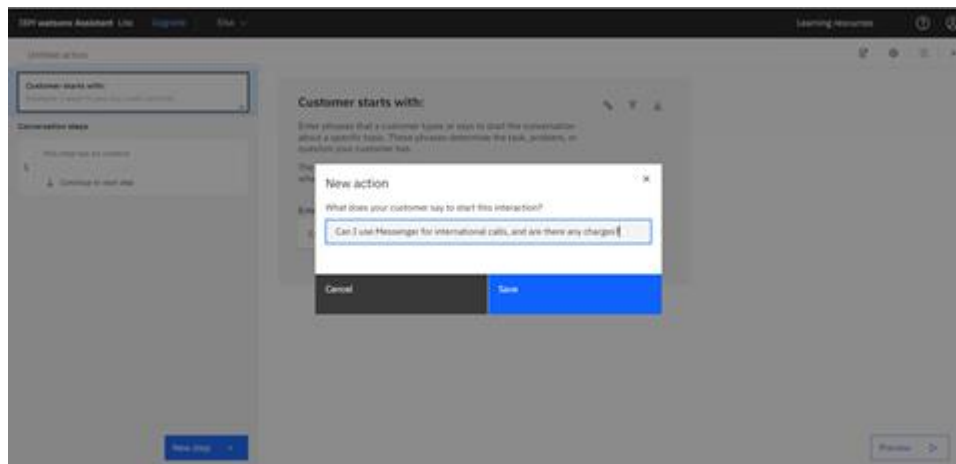


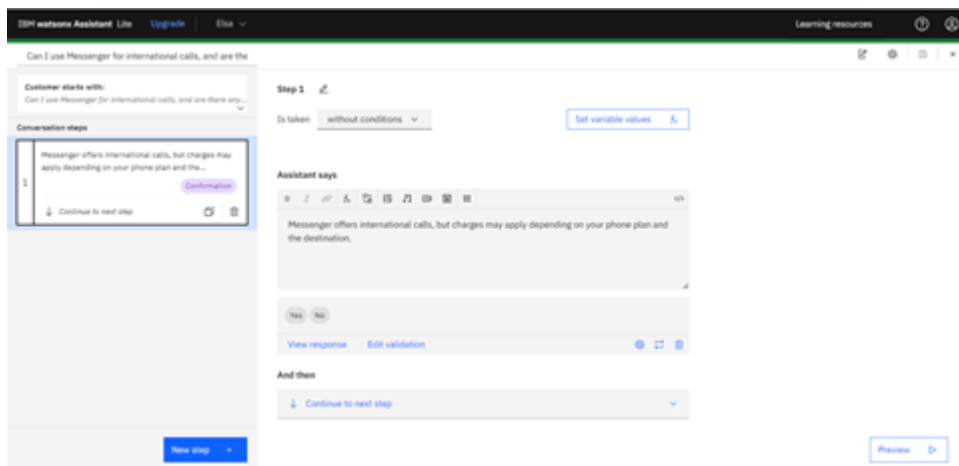
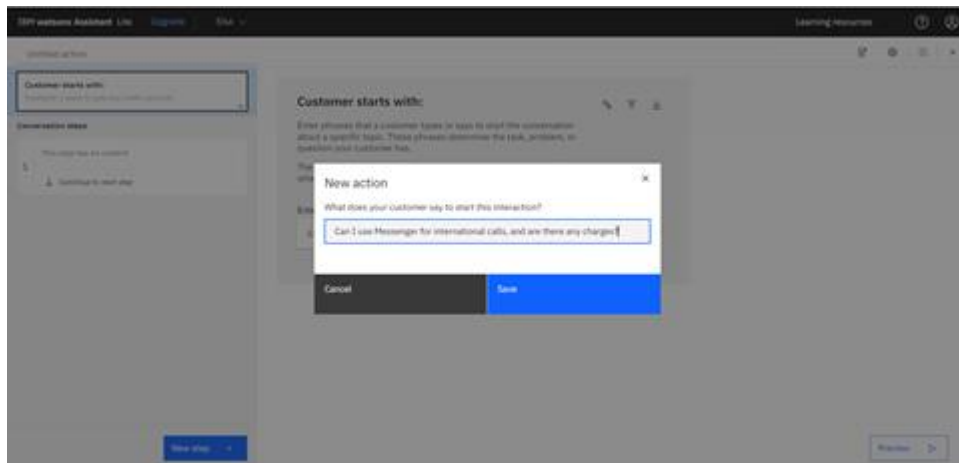
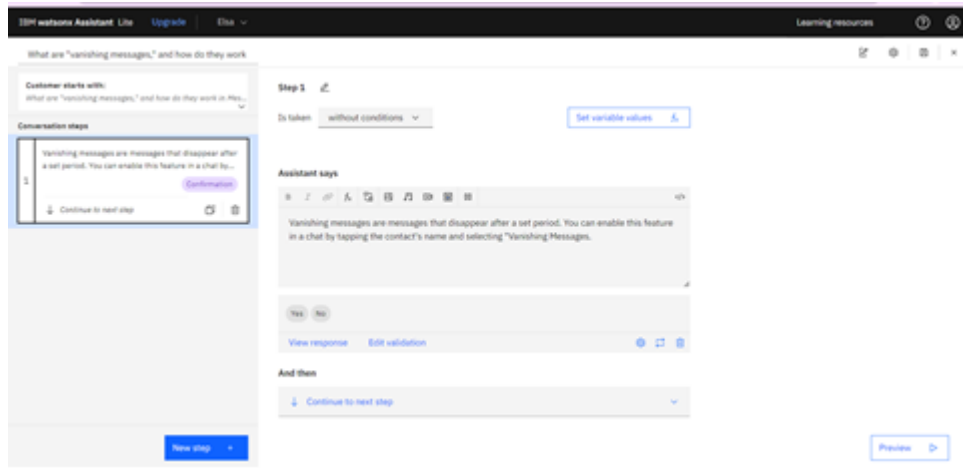
Here Select the Define Customer response for easy service to users











List of Questions that trained by us in Watson Assistant:

IBM Watson Assistant Lite Upgrade Exit Learning resources

Actions

All Items Created by you Set by assistant Variables Created by you Set by assistant Set by integration Saved responses

Created by you / Filter by name

Name	Last edited	Examples count	Steps
No	43 minutes ago	1	
How do I install a Messenger App	43 minutes ago	1	
How do I set up Messenger for a group event or party...	43 minutes ago	1	
What's the difference between a Messenger conver...	33 minutes ago	1	1
How can I customize the emoji reaction options in ...	33 minutes ago	1	1
Can I use Messenger to order food or make resta...	33 minutes ago	1	1
Is there a way to schedule messages to be sent at ...	28 minutes ago	1	1
Can I send voice messages in Messenger, and how I...	28 minutes ago	1	1

Items per page: 50 Showing 1-31 of 31 items

Preview

How do I set up Messenger for a group event or party?

IBM Watson Assistant Lite Upgrade Exit Learning resources

Actions

All Items Created by you Set by assistant Variables Created by you Set by assistant Set by integration Saved responses

Created by you / Filter by name

Name	Last edited	Examples count	Steps count	Status
How do I change the default thumbs up reaction th...	4 hours ago	1	1	
What are "sending messages," and how do they w...	4 hours ago	1	1	
How can I retrieve deleted messages on Facebook ...	4 hours ago	1	1	
Can I use Messenger for international calls, and are...	4 hours ago	1	1	
Is it possible to use Facebook Messenger without I...	4 hours ago	1	1	
How can I export or save a chat from Messenger for...	4 hours ago	1	1	
What does it mean when a message is "archived" in ...	4 hours ago	1	1	
Can I change my Messenger username or ID?	4 hours ago	1	1	

Items per page: 50 Showing 1-31 of 31 items

1 of 1 pages

Preview

IBM Watson Assistant Lite Upgrade Exit Learning resources

Actions

All Items Created by you Set by assistant Variables Created by you Set by assistant Set by integration Saved responses

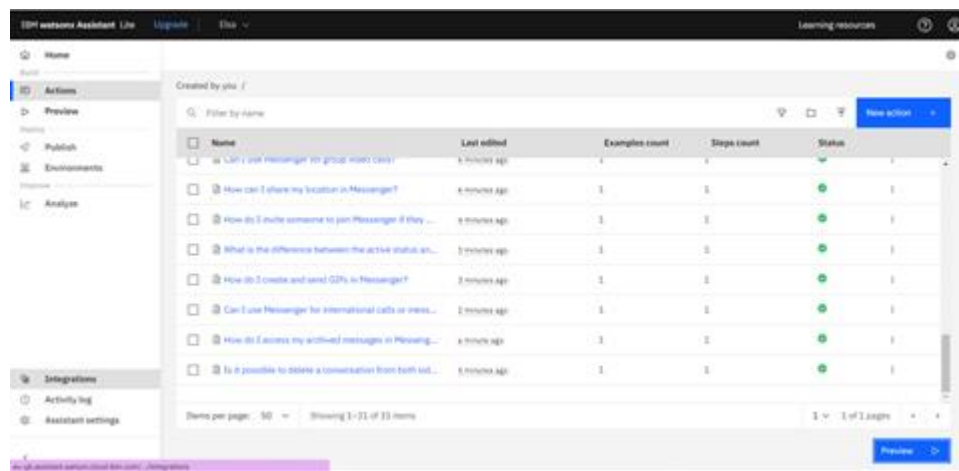
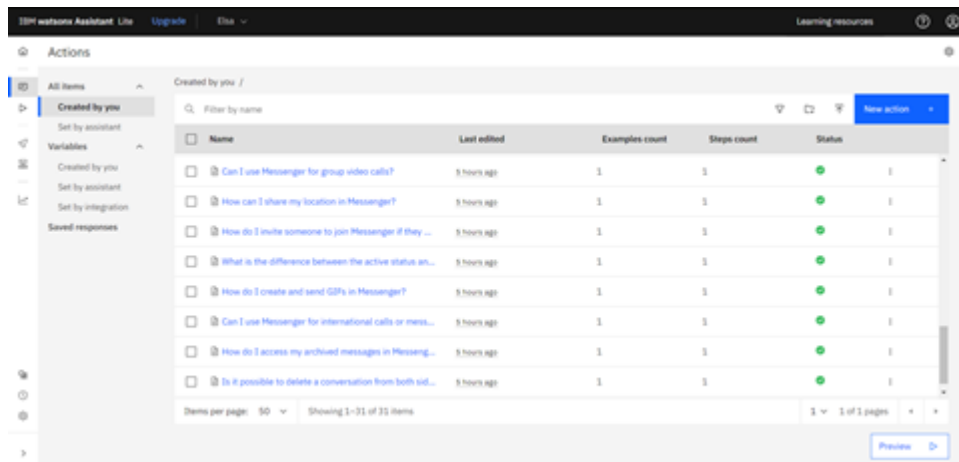
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Name	Last edited	Examples count	Steps count	Status
Can I change my Messenger username or ID?	4 hours ago	1	1	
Is there a way to see who has unfriended me on Me...	4 hours ago	1	1	
What is the storage limit for photos and videos in M...	4 hours ago	1	1	
How do I prevent someone from adding me to grou...	4 hours ago	1	1	
Can I use Messenger with a virtual phone number s...	4 hours ago	1	1	
How can I clear my Messenger search history and s...	4 hours ago	1	1	
How do I set up notifications for specific contacts...	4 hours ago	1	1	
What's the difference between a regular call and a...	4 hours ago	1	1	

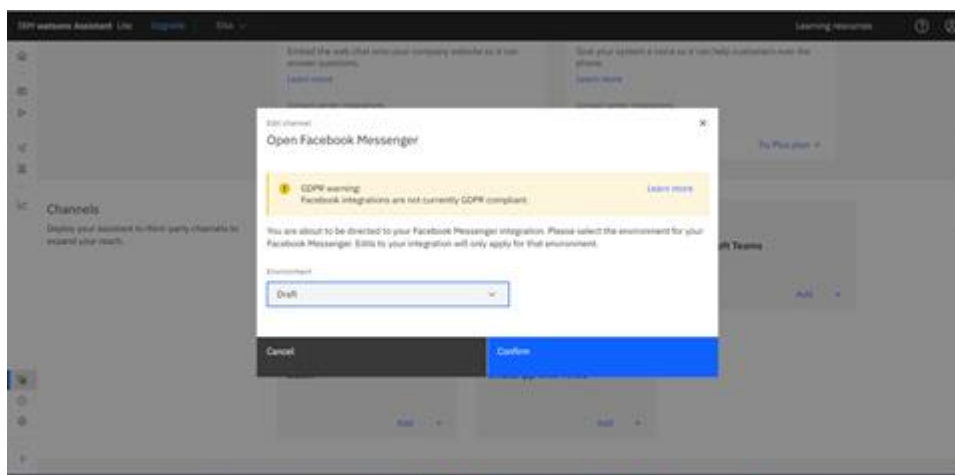
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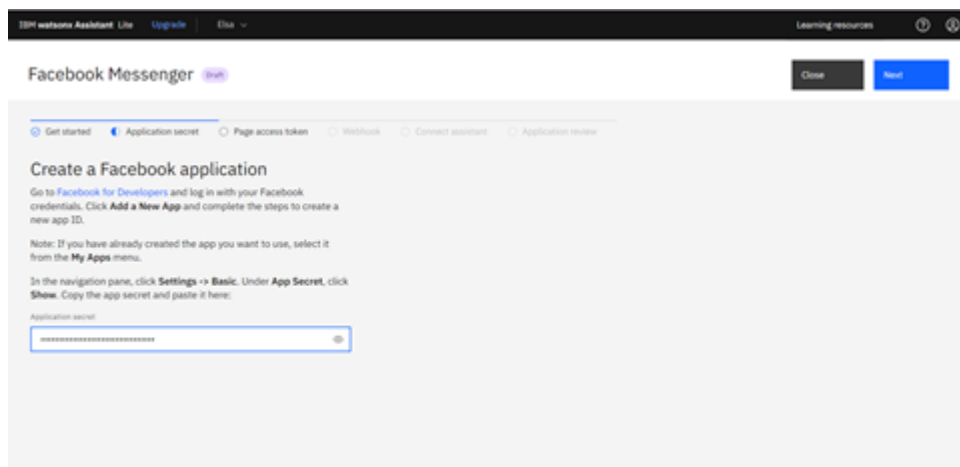
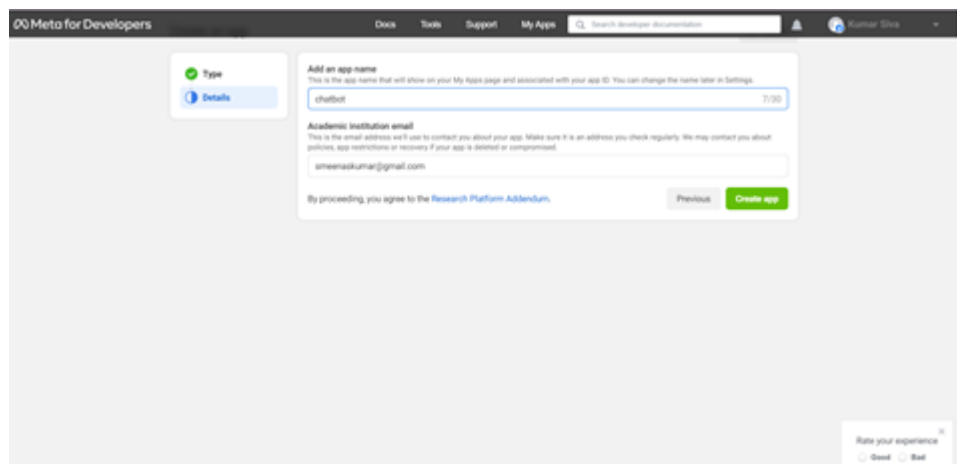
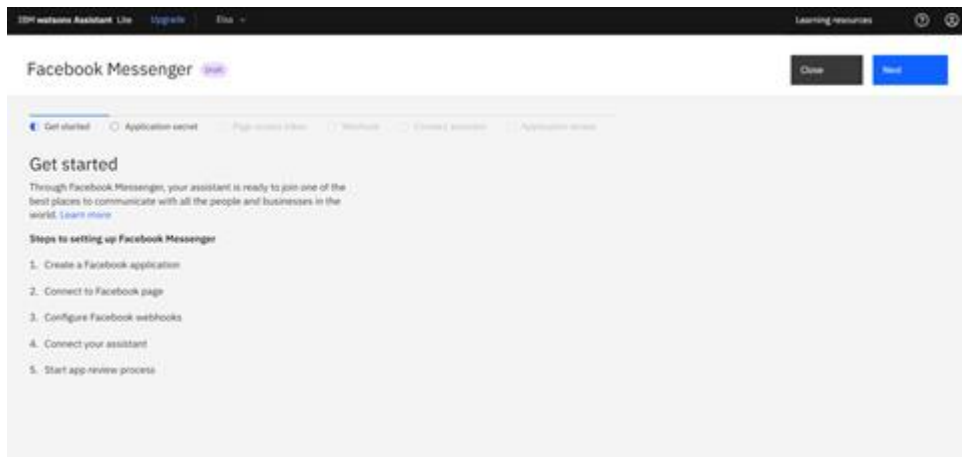
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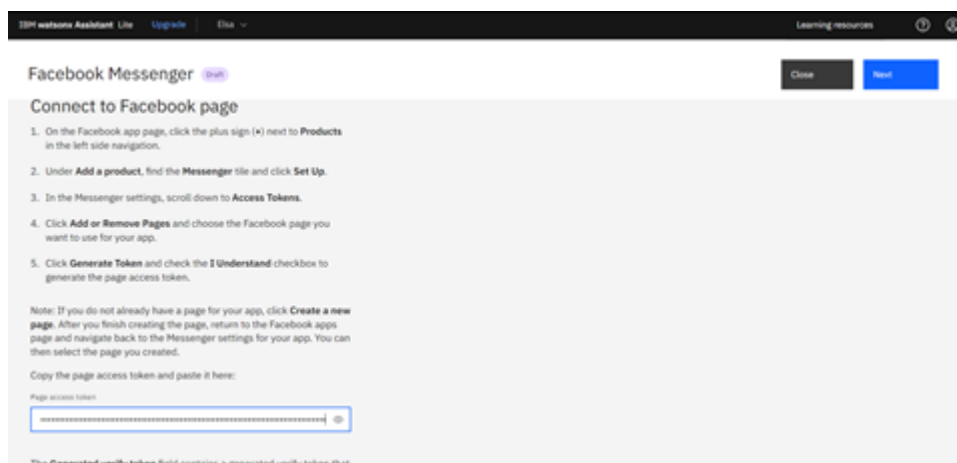
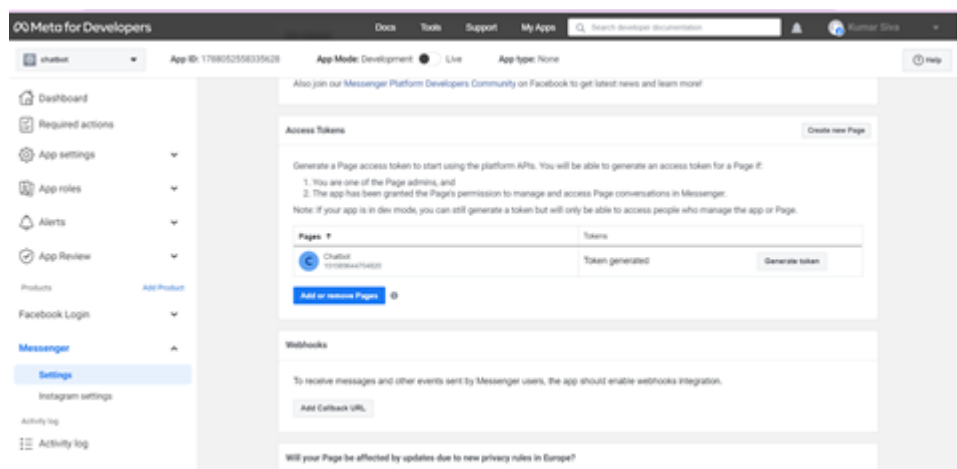
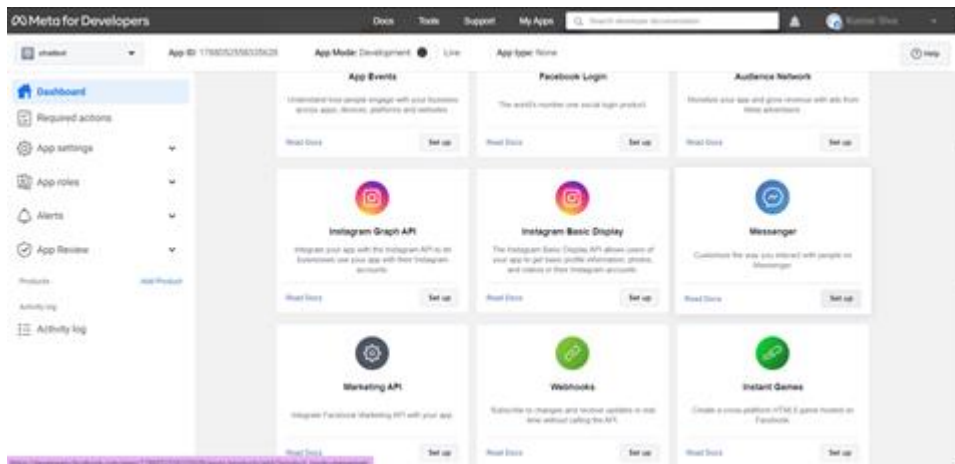
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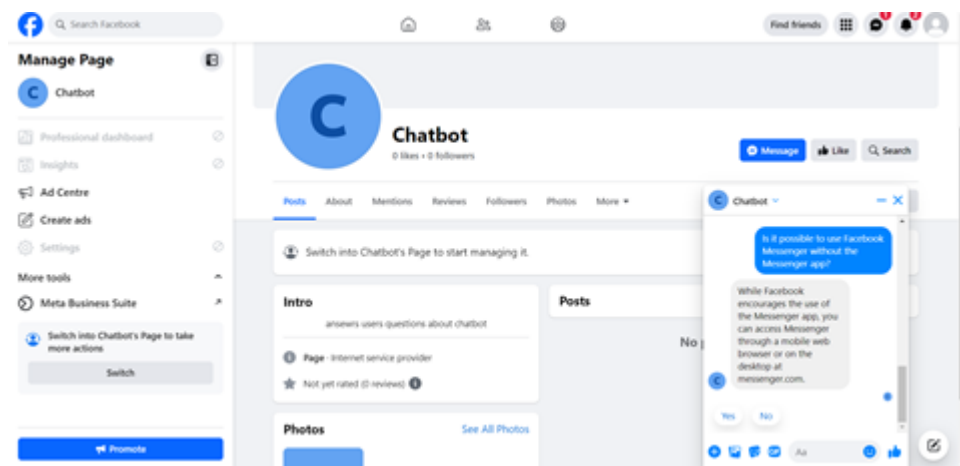
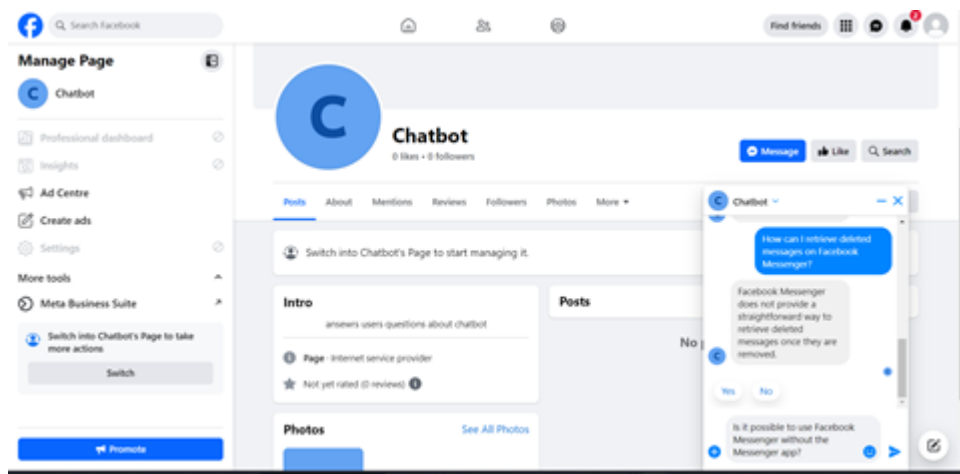
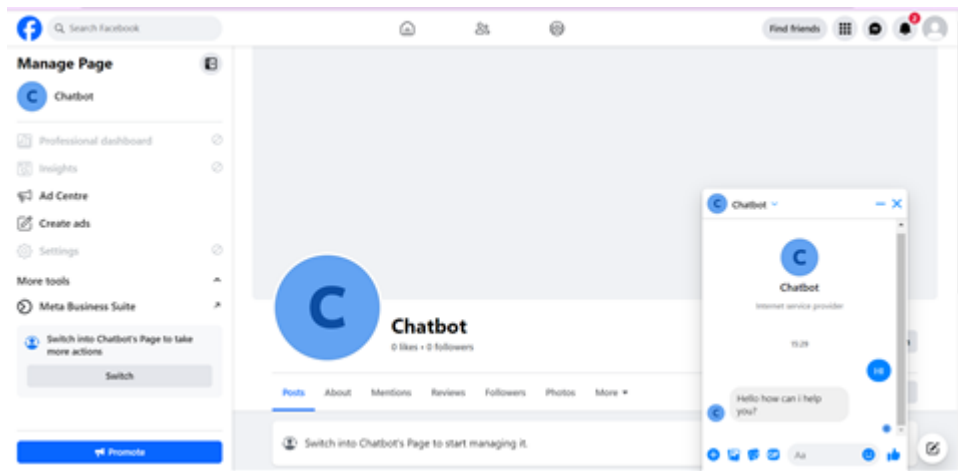


After that Integrate chatbot with Facebook Manager and Slack. Below steps shows the integration.

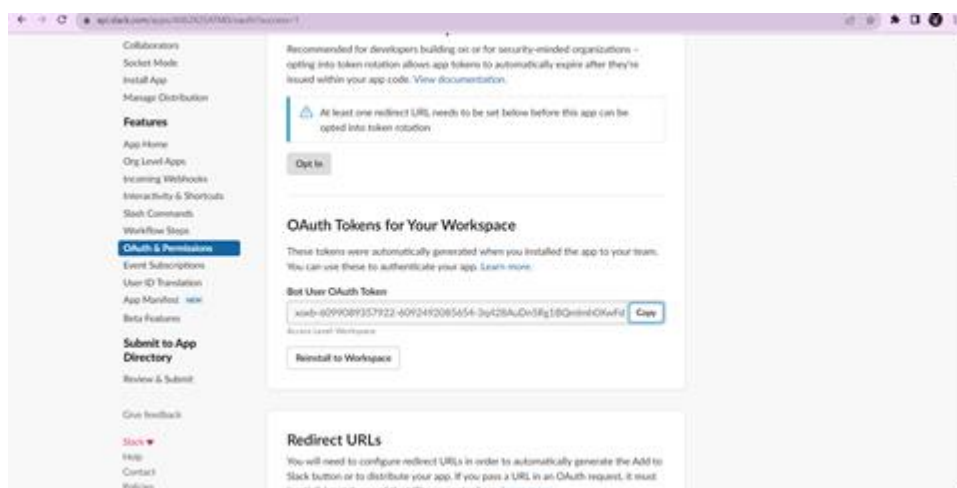
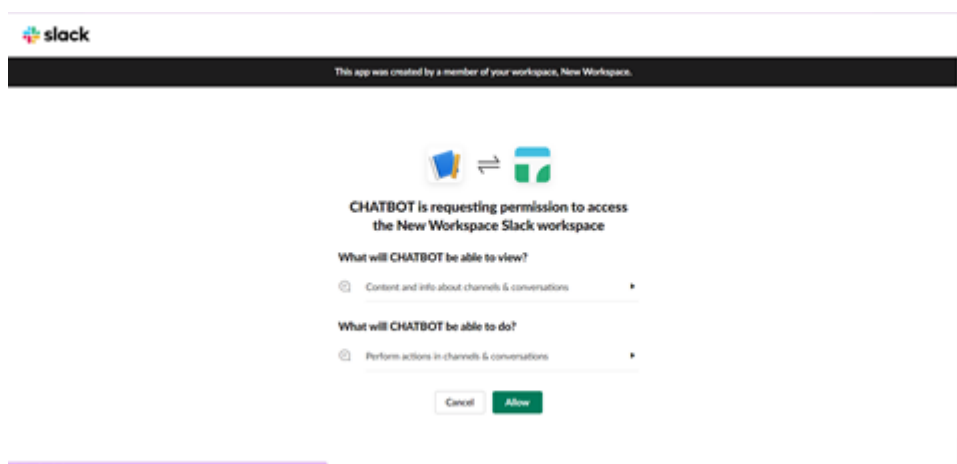
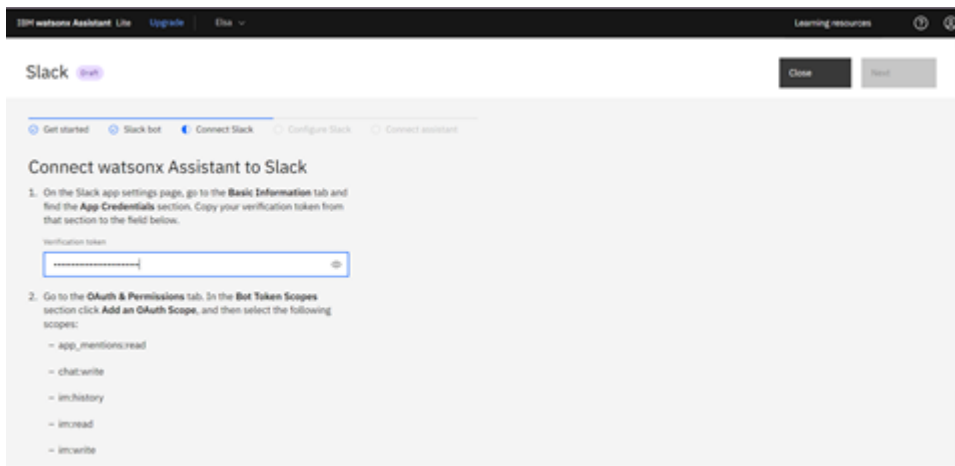


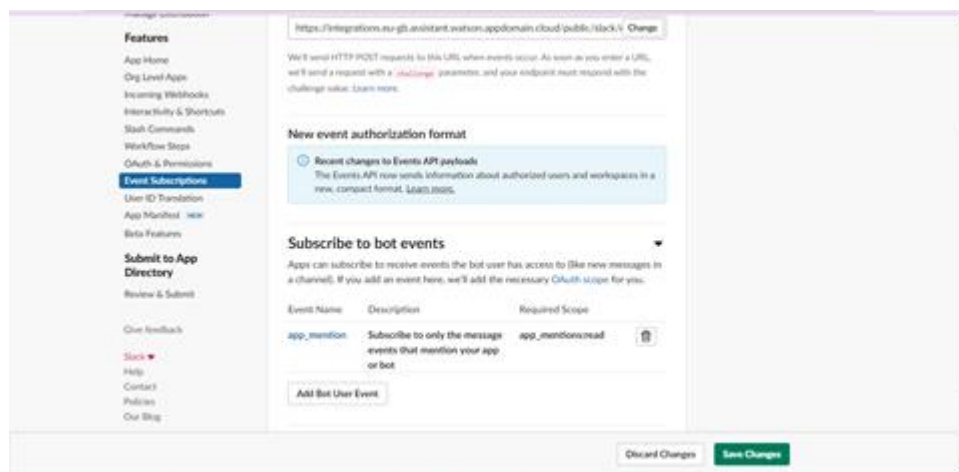
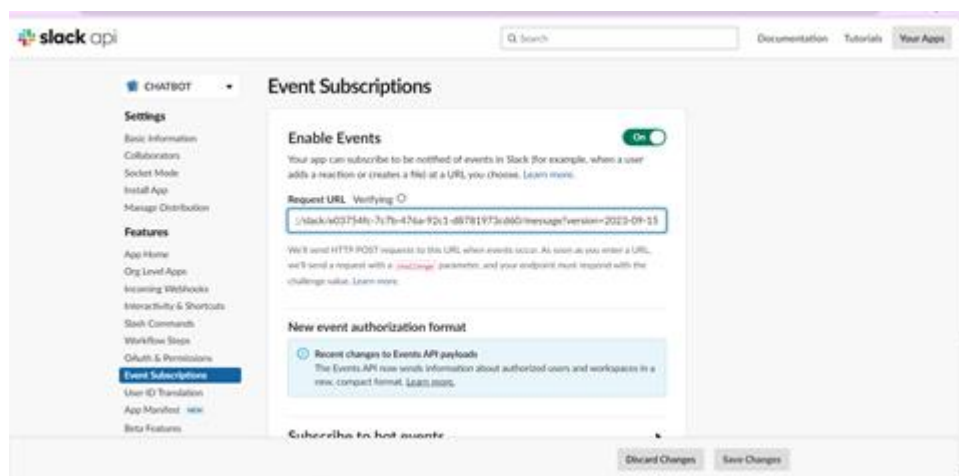
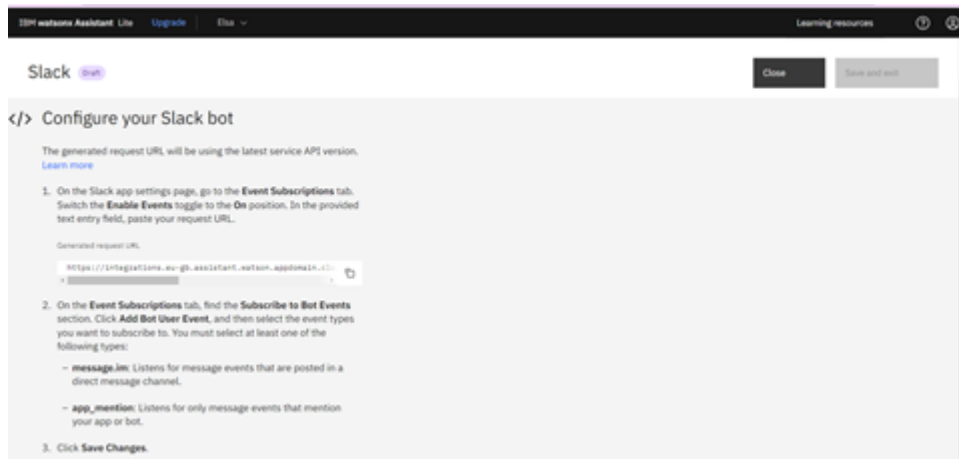


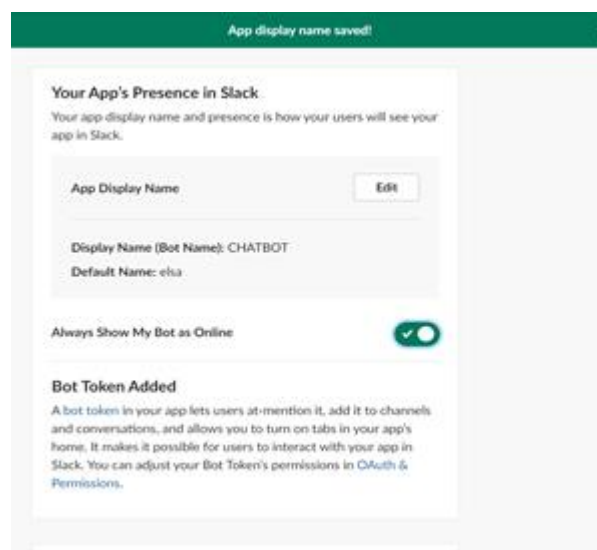
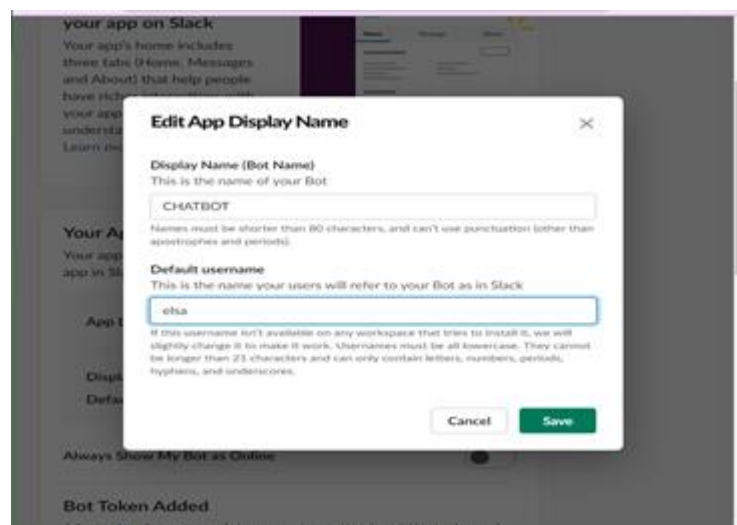
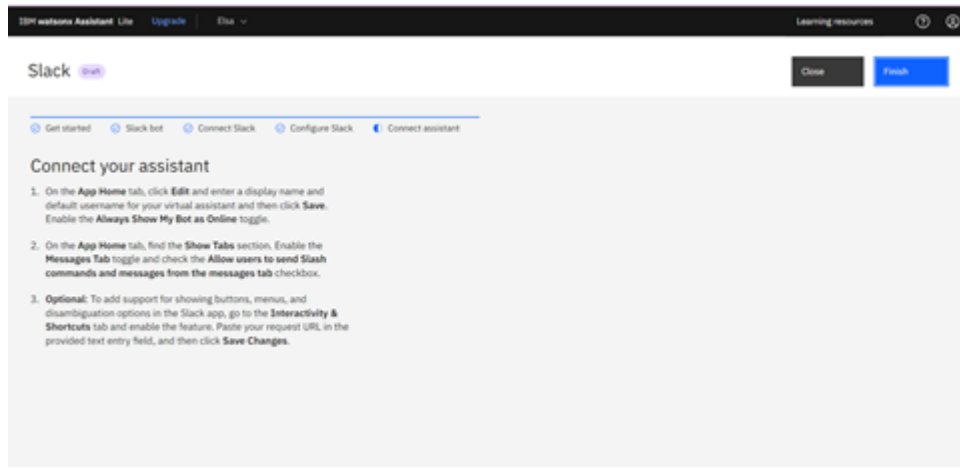




In slack also test the chatbot performance.







App display name saved!

Turn on the Home tab and/or Message tab to display in your app home.

Home Tab

Block Kit components you add to this tab let people easily interact with this app.

Helpful links

- App Home documentation
- How to use Block Kit
- Block Kit Builder tool

Messages Tab

Direct messages your app sends will show in this tab.

☒ Allow users to send Slash commands and messages from the messages tab

About Tab

Helpful info about what this app does will show in this tab. You can edit this info in the app's [basic information](#) section.

Display Information

This information will be shown in the Slack App Directory and in the Slack App. For more information, view our [App Detail Guidelines](#).

App name

CHATBOT

Short description

provides answers to users questions

App icon & Preview



CHATBOT app
provides answers to users questions

Background color

#000000

Long description

Add a long description that will show up on your App Detail page. You can format your description with bold text, lists and more.