

ONLINE SHOPPING BOT

J.N.Swathi

1.Introduction

1.1. Overview

Online shopping plays a great role in the modern business environment. The best option available for the customers in pandemic situations is to use chat bots for online shopping. To support customers in a better way, online shopping bot has opened a door of opportunity and advantage to the firms and customers for having a feel of buying items in a better way. The bot helps to introduce the online shop by listing the items available; it also shows the price of the items and takes order from the customer. If the customer wishes to see the items, the bot also provides the images of the items. This facility ensures the customer sees the products live and gives request to buy items.

1.2 Purpose

The online shop bot can help the customer to see the list of items available, images of the images, price of the items and also accepts order for the items. The purpose of this bot is to save valuable time and money of travel.

2 Literature Survey

In this section, we will discuss the existing solutions available for online shopping and the proposed solution to overcome the limitations.

2.1 Existing Problems and Solutions

In the past decade, people use internet as a daily service to access emails, perform online tasks, do shopping, etc. Naturally, people have widely started using internet at shopper stops too. This showed their willingness to do online shopping. This brings huge responsibility on the shop owners to keep up the buyer's faith on the particular website. The most important points that affect the customer attitude towards online shopping are customer convenience, collection of information, social contact, and customer diversity. There are several websites available currently to handle online shopping like Amazon, FlipKart, Big Bazaar, etc. Kotler, (2003) has described the Customer buying method in several sequential steps namely learning, information processing, information searching, evaluating the alternatives, decision making and post purchase behavior. When using such websites usability and trust also plays a major role and these issues to be handled carefully. With all these facilities available, still we could find some gap in existing website based online shopping solutions where the user has limited freedom to communicate or ask doubts regarding items and get a feel of having a discussion with shoppers. This limitation can be overcome in using chat bot for online shopping.

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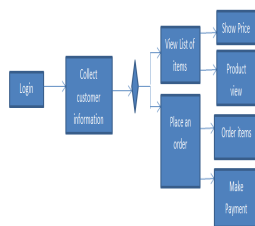
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2.2 Proposed Solution

In recent years, many organizations have shown tremendous interest in developing chat bots for online shopping. This chat bots help customers to handle their queries and to provide information on any kind of items requested. The willingness of the customers to use shopping bot also increased enormously due to the interest of shopping using internet in pandemic times.

3. Theoretical Analysis

3.1 Block diagram



3.2 Hardware /software requirements

- Processor: Intel i5
- Memory: 16GB
- System Type: 64 Bit Operating system
- IBM Watson Assistant
- Node RED UI Generator

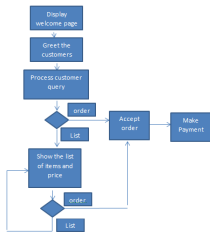
4. Experimental Investigations

The online shopping bot is developed using IBM Watson. The intents, entities and dialogs are used using the same platform. Once the system entities and relevant context variable are generated, the json file can downloaded.

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5. Flow chart



6. Result

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The screenshot displays the IBM Watson Assistant interface for an 'Online Shopping Bot'. The top section shows the skill's overview, including its name, a description, and a list of linked assistants. The 'Integrations' section on the right provides options to preview the link, integrate with a web chat, or add a channel for deployment. Below the overview, the 'Search' section is visible. The bottom section of the image shows a detailed view of the 'Online shopping store' skill, specifically the 'Intents' tab. This tab contains a table listing 7 intents, each with a description, a modified timestamp, and a number of examples.

Online Shopping Bot
In today's pandemic situation, our shopping bot helps the people by providing an online option to shop for essentials.

Skill
A dialog skill provides specific responses you've created. Choose one for your assistant. [Learn more](#)

Dialog

Online shopping store

LANGUAGE: English (US) TRAINED DATA: 7 Intents | 21 Entities | 81 Dialog nodes VERSION: --- DESCRIPTION: ---

VERSION CREATED: ---

LINKED ASSISTANTS (1): Online Shopping Bot

Integrations

Preview link

Add your assistant to your company website. [Integrate web chat](#)

Choose a channel to deploy your assistant. [Add integration](#)

Search [Plus](#)

Online shopping store

Intents

Intents (7) ↑	Description	Modified T1	Examples T1
<input type="checkbox"/> #cleaningItems		9 days ago	3
<input type="checkbox"/> #Dairyproducts		14 days ago	3
<input type="checkbox"/> #Drinks		9 days ago	4
<input type="checkbox"/> #Enquiry	This intent helps to provide the list of ite...	a day ago	7
<input type="checkbox"/> #Greetings	This intent gives a welcome message to 1...	16 days ago	5
<input type="checkbox"/> #order	Takes the order	8 days ago	6
<input type="checkbox"/> #snacks		9 days ago	4

Showing 1-7 of 7 intents

1 1 of 1 pages

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The screenshot displays the IBM Watson Assistant interface for a project named 'Online shopping store'. The left sidebar contains navigation options: Intents, Entities, My entities (selected), System entities, Dialog, Options, Analytics, Versions, and Content Catalog. The main area shows a table of entities with columns for Entity (with a checkbox), Entity name, Values, and Modified time. A 'Create entity' button is visible in the top right of the table area.

Entities (10 of 20):

Entity	Values	Modified
@address	street	a day ago
@biscuits	goodday, salt	7 days ago
@chocolates	5star, dairy milk	a day ago
@cleaningitems	floor cleaner, hand wash, sanitizer	9 days ago
@Dairyproducts	Ghee, Curd, Cheese, Butter, Milk	14 days ago
@drinks	Milkshake, Soft drink, Juice	9 days ago
@email	email	a day ago
@Enquiry	Drinks, catalog, enquire, snacks, items, menu, cleaning items, Dairy products	a day ago
@Greetings	hi, Good Afternoon, Good Morning, Good Evening, hello	16 days ago

Entities (10 of 20):

Entity	Values	Modified
@icecreams	butter scotch, choconut	7 days ago
@items	Sweet, vanilla, Milk, Biscuits, Black Forest, Butter, butter and salt, Butter scotch, ...	a day ago
@juice	Sapota, Pomegranate, Orange	7 days ago
@milkshake	strawberry, Dates, Lichi	7 days ago
@order	order	8 days ago
@pastries	Rainbow, Butter scotch, Black Forest	9 days ago
@payment	card, COD, UPI	8 days ago
@popcorn	Butter and Salt, Caramel	7 days ago
@snacks	Icecreams, Pastries, Biscuits, Chocolates, Sweet, Pop corn	9 days ago
@softdrink	pepsi, sprite, cococola	7 days ago
@thankyou	thanks	a day ago

Showing 1-20 of 20 entities

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The screenshot displays the IBM Watson Assistant Lite web interface. The browser's address bar shows the URL: <https://eu-gb.assistant.watson.cloud.ibm.com/eu-gb/cmv1/bluemixpublicconversationeu-gba-2f068a85d4d0d940f1a1a6935...>. The interface is divided into two main sections, each representing a different conversation topic.

#Enquiry

User example

Type a user example here

Add unique examples of what the user might say. (Pro tip: Add at least 5 unique examples to help Watson understand)

Add example

Showing 1-7 of 7 examples

Example	Time
<input type="checkbox"/> I want to see the catalog of items	2 days ago
<input type="checkbox"/> I wish to see the menu of items available	a day ago
<input type="checkbox"/> Is dairy products available?	2 days ago
<input type="checkbox"/> What drinks are available?	2 days ago
<input type="checkbox"/> What snacks are available?	2 days ago

1 of 1 pages

#order

User example

Type a user example here

Add unique examples of what the user might say. (Pro tip: Add at least 5 unique examples to help Watson understand)

Add example

Showing 1-6 of 6 examples

Example	Time
<input type="checkbox"/> I wish to buy few items	8 days ago
<input type="checkbox"/> I wish to place an order	8 days ago
<input type="checkbox"/> I wish to purchase some items	8 days ago
<input type="checkbox"/> place an order	8 days ago
<input type="checkbox"/> Take order	9 days ago

1 of 1 pages

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The screenshot displays two instances of the IBM Watson Assistant Lite interface, showing chatbot conversations. The top instance is for a chatbot named '@chocloates', and the bottom instance is for '@Dairyproducts'. Both interfaces show a 'Dictionary' tab with a list of values and synonyms.

Top Chatbot: @chocloates

Value: Synonyms:

Buttons: Add value, Recommend synonyms

Dictionary (2) Annotation (0) [Beta](#)

Values (2) ↑	Type
<input type="checkbox"/> Sstar	Synonyms
<input type="checkbox"/> dairy milk	Synonyms

Showing 1-2 of 2 values

Bottom Chatbot: @Dairyproducts

Value: Synonyms:

Buttons: Add value, Recommend synonyms

Dictionary (5) Annotation (0) [Beta](#)

Values (5) ↑	Type
<input type="checkbox"/> Butter	Synonyms
<input type="checkbox"/> Cheese	Synonyms
<input type="checkbox"/> Curd	Synonyms
<input type="checkbox"/> Ghee	Synonyms
<input type="checkbox"/> Milk	Synonyms

Showing 1-5 of 5 values

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The screenshot displays the IBM Watson Assistant interface, showing a list of values and a dialog flow for an online shopping store.

Values List:

Values (8) ↑	Type	
catalog	Synonyms	
cleaning items	Synonyms	germs free cleaners, sanitizers, stain remover, cleaner
Dairy products	Synonyms	dairy items, milk products, milk items, dairy
Drinks	Synonyms	juice, milk shakes, cool drinks, soft drinks
enquire	Synonyms	
items	Synonyms	
menu	Synonyms	
snacks	Synonyms	instant snacks, pastries

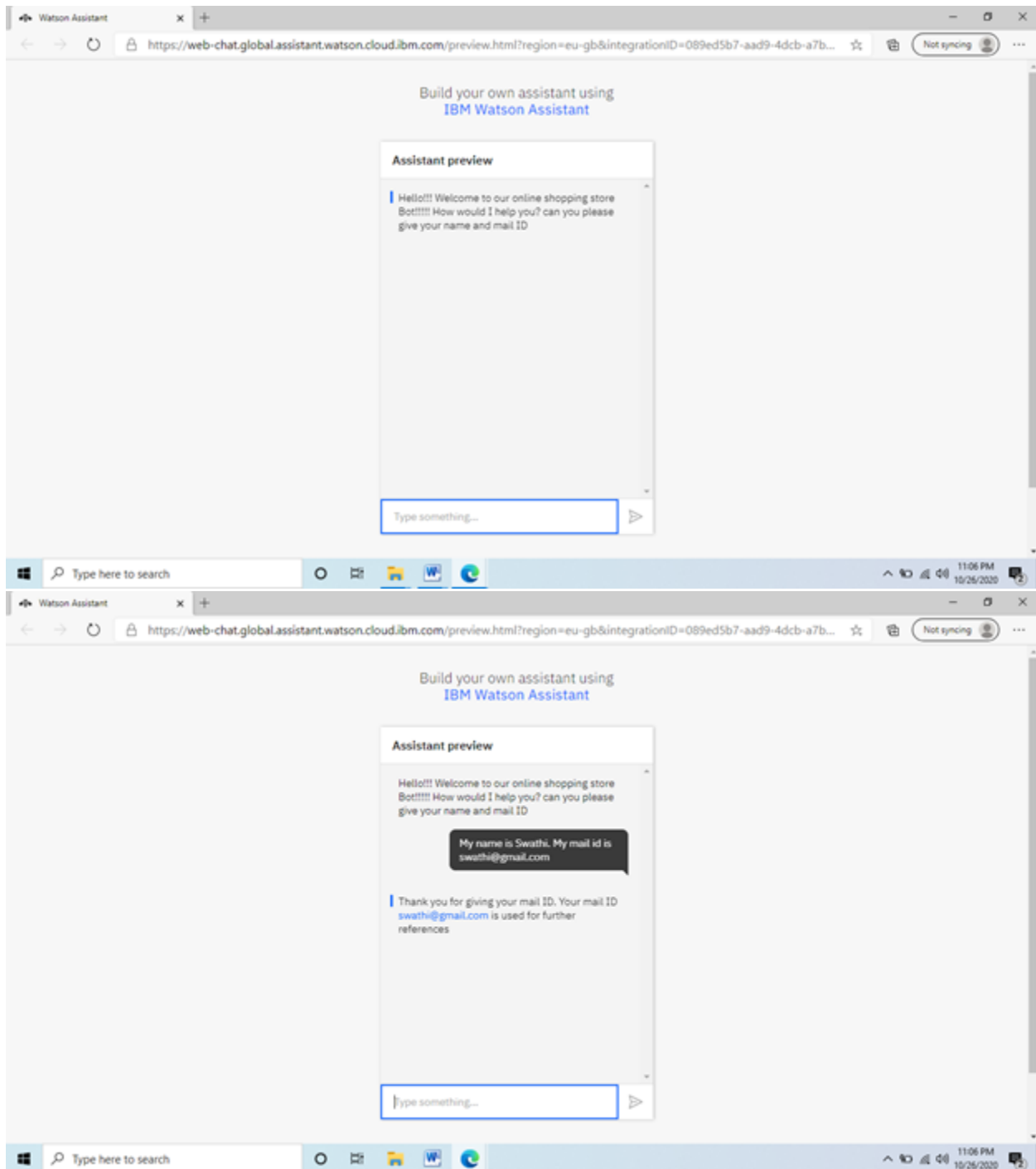
Showing 1-8 of 8 values

Online shopping store Dialog Flow:

- Welcome**
welcome
1 Responses / 0 Context Set / Does not return
- thanks**
@thankyou
1 Responses / 0 Context Set / Does not return
- order**
#order || @order:order
1 Responses / 3 Context Set / 3 Slots / Skip user input / Does...
- Greetings**
#Greetings || @Greetings
6 Responses / 0 Context Set / Does not return

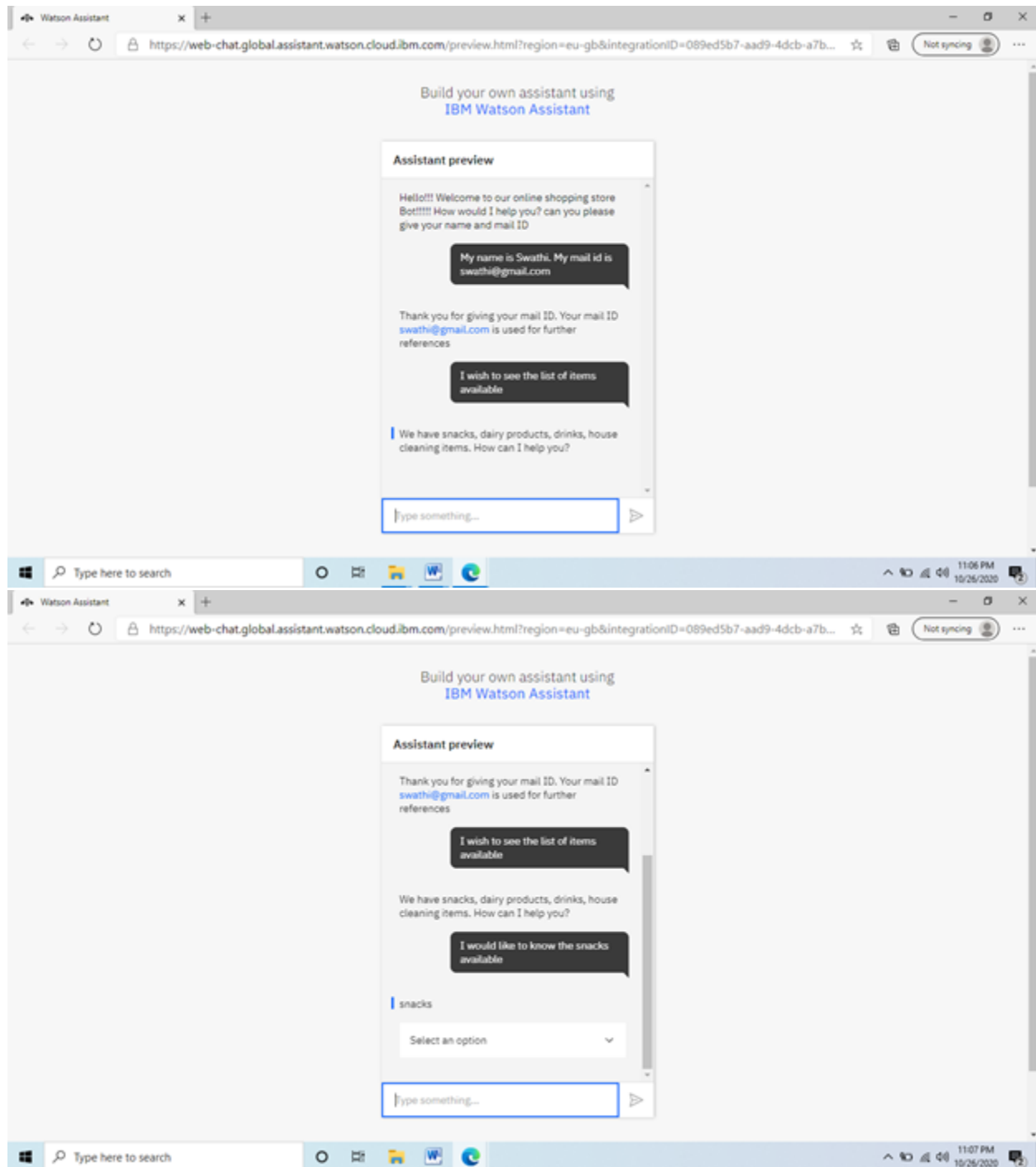
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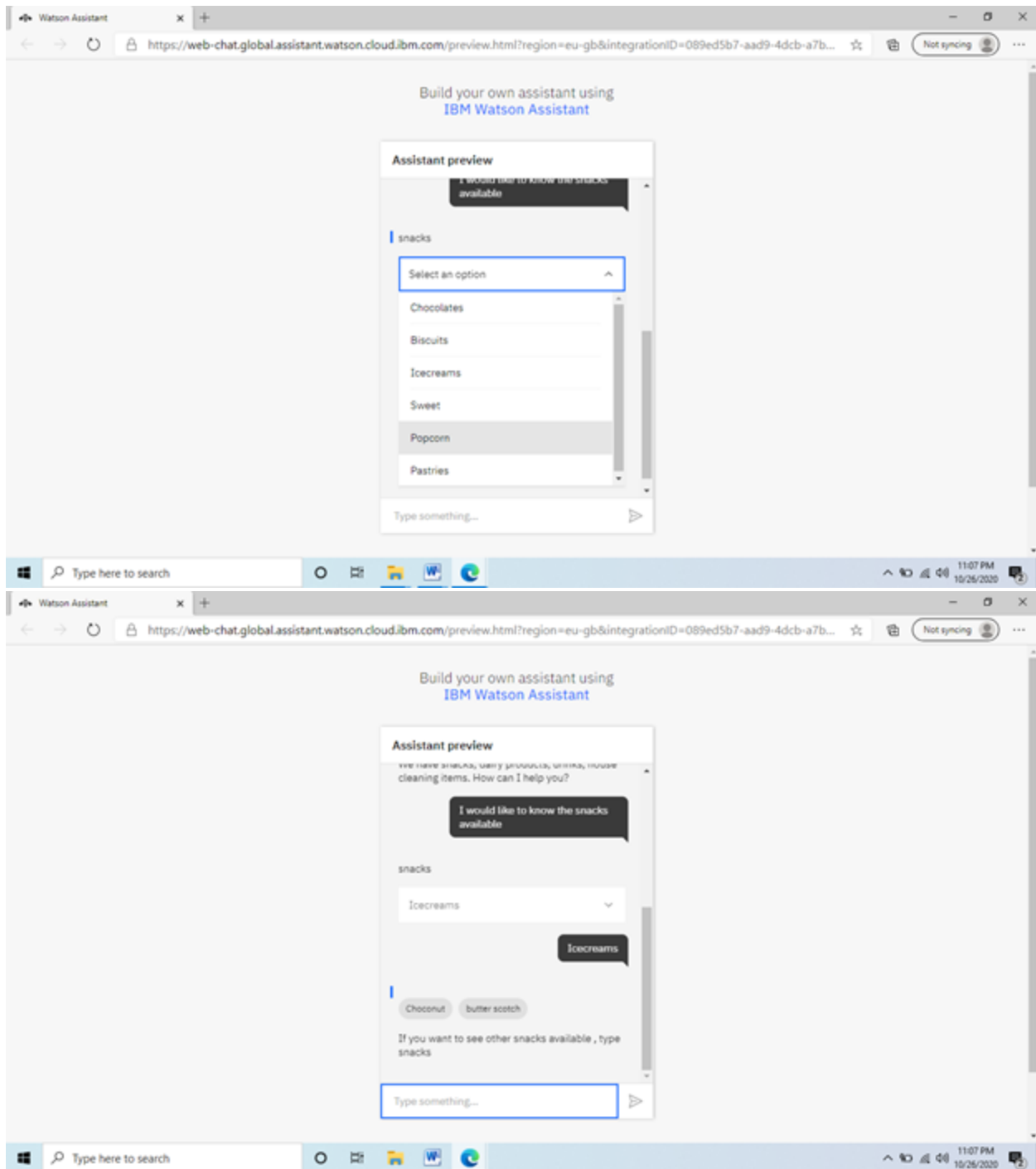
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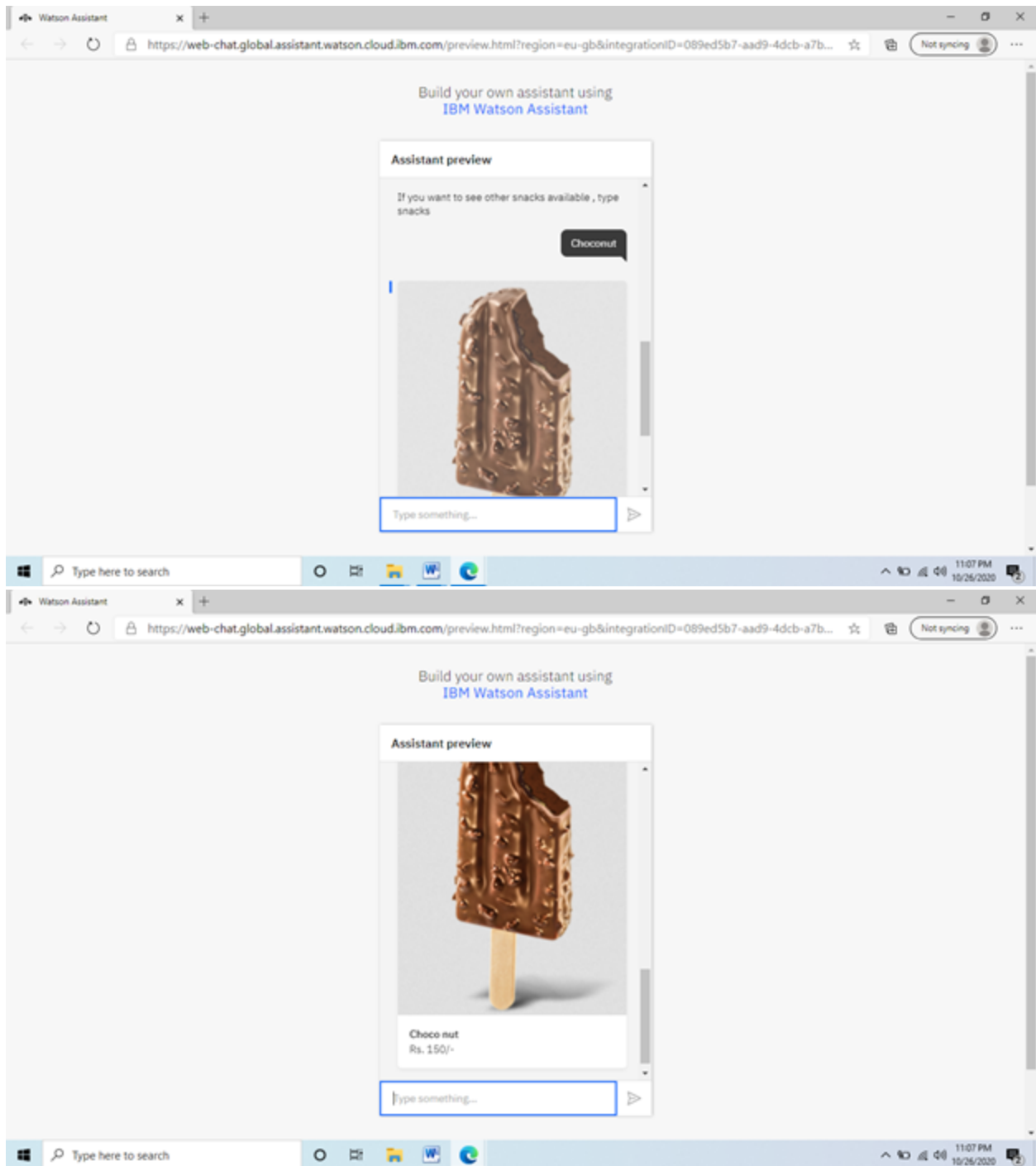
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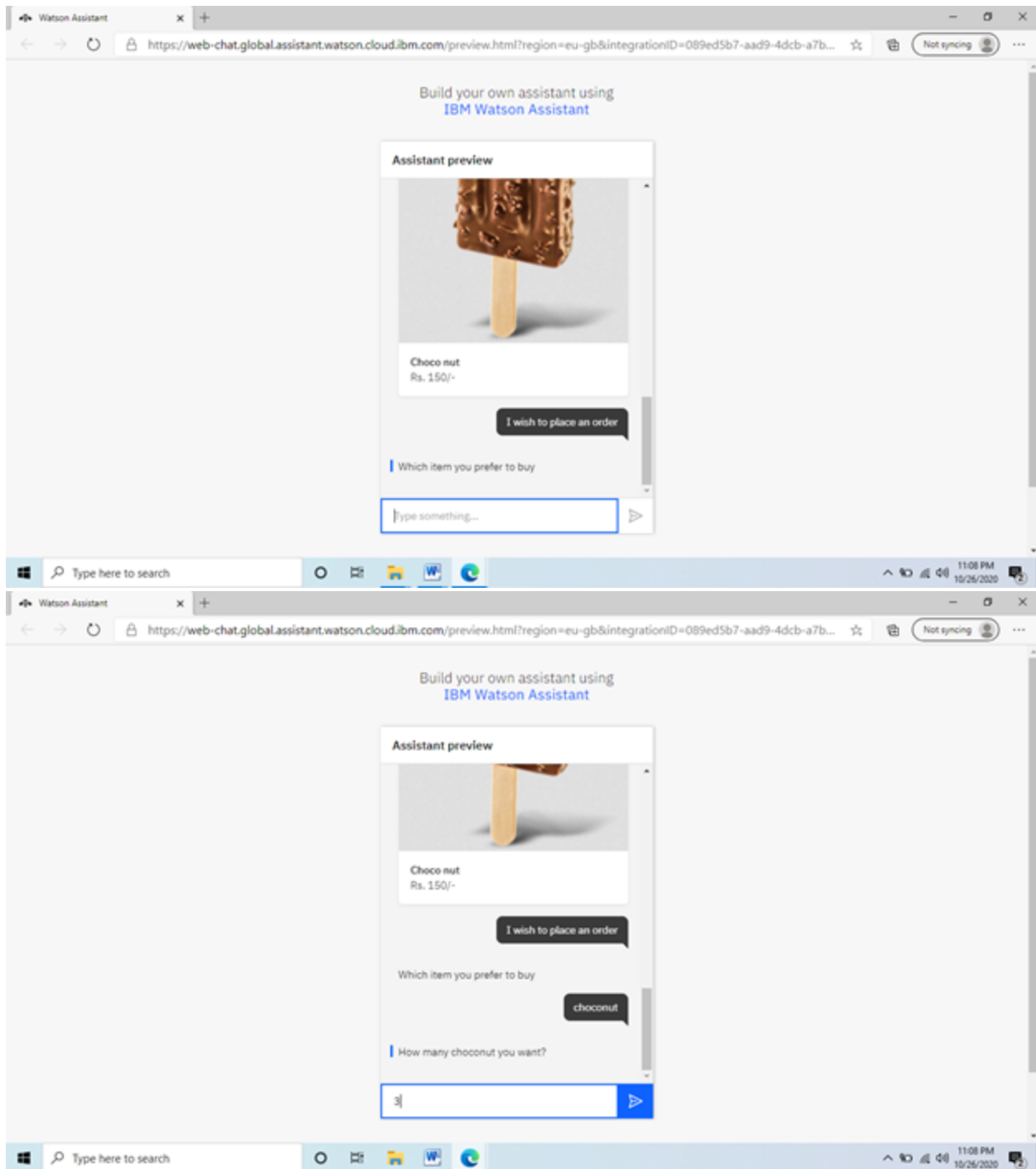
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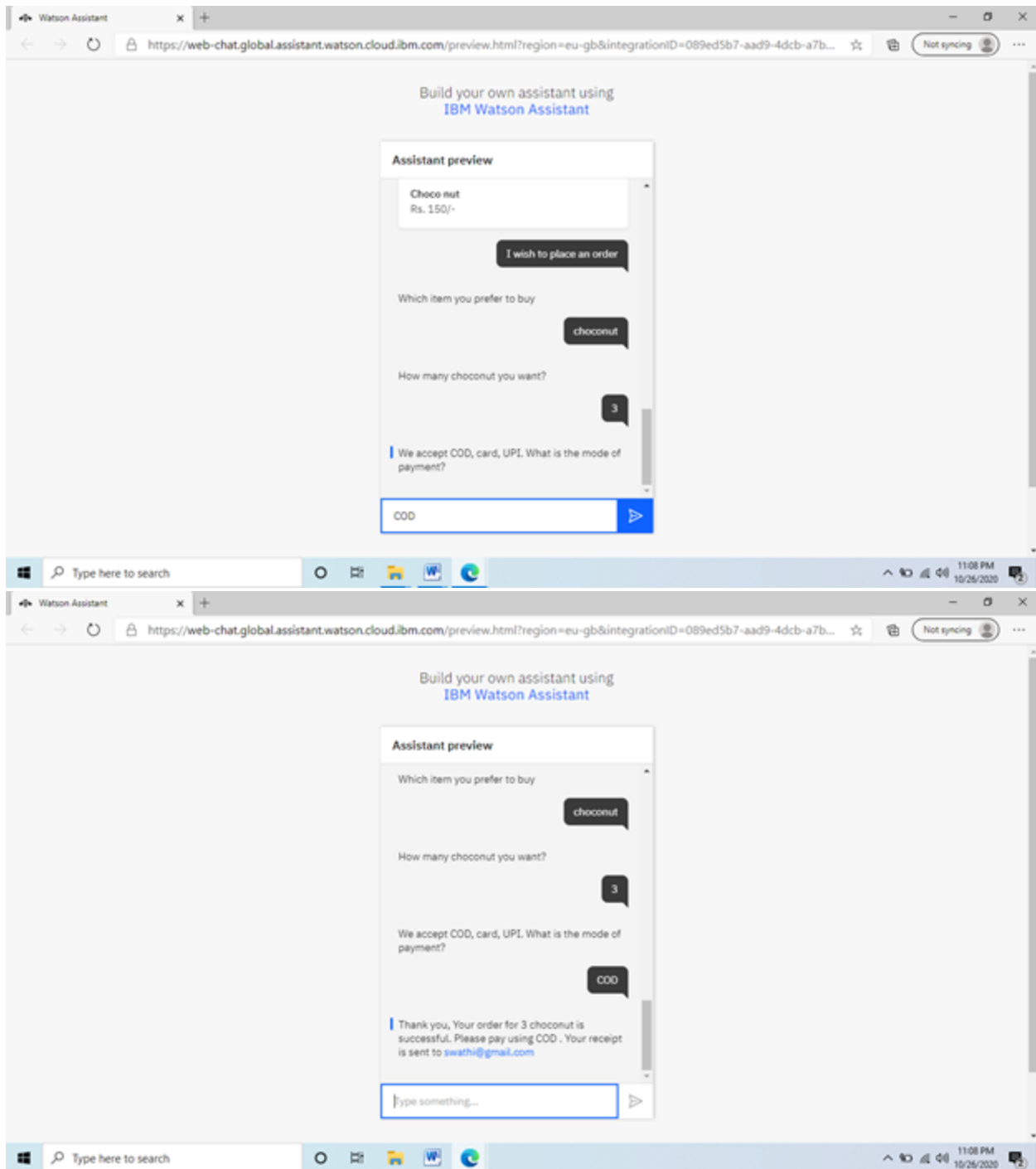
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Chatbot

Enter your input *

items


SUBMIT

CANCEL

you

items

**We have snacks, dairy products,
Bot drinks, house cleaning items. How
can I help you?**



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Chatbot

Enter your input *

order items

SUBMIT


CANCEL

you

order items

Bot

Which item you prefer to buy



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Chatbot

Enter your input *

popcorn

SUBMIT

CANCEL

you

popcorn

Bot

How many Pop corn you want?



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Chatbot


Enter your input *

4

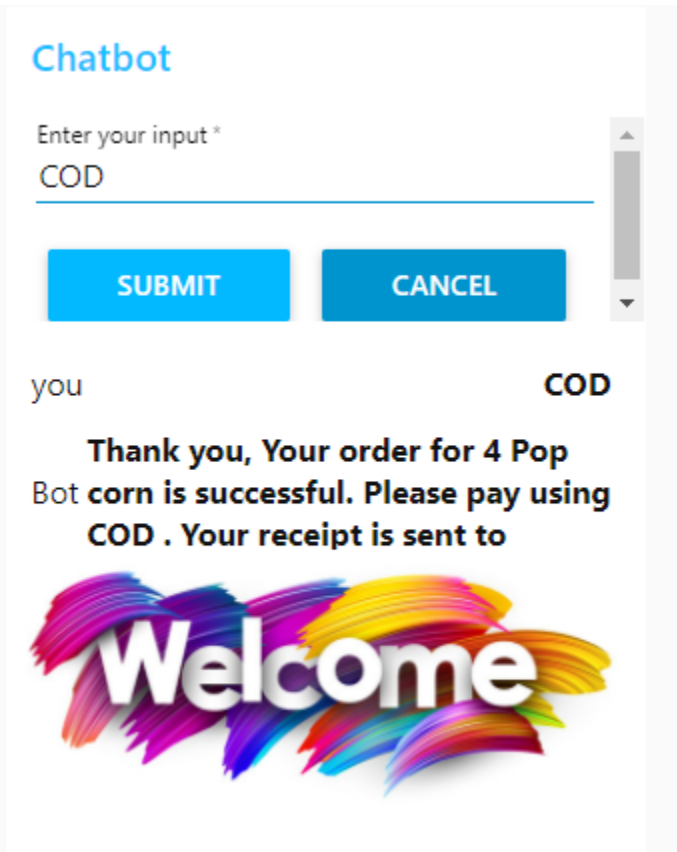
SUBMIT **CANCEL**

you 4

Bot **We accept COD, card, UPI. What is the mode of payment?**



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The screenshot shows a chatbot window titled "Chatbot". It has a text input field with the placeholder "Enter your input *" and the text "COD" entered. Below the input field are two buttons: "SUBMIT" and "CANCEL". To the right of the input field is a vertical scrollbar. Below the input field, the chatbot's response is displayed. It starts with "you" on the left and "COD" on the right. The main text of the response is: "Thank you, Your order for 4 Pop Bot corn is successful. Please pay using COD . Your receipt is sent to". Below this text is a large, colorful graphic that says "Welcome" in a stylized font, surrounded by vibrant, brushstroke-like colors.

7. Advantages and Disadvantages

1. Online shopping bot helps to see the list of items available for purchase.
2. The shopping bot provides the details of the items requested by giving its image and cost.
3. The shopping bot accepts the mail id to send the order receipt.
4. The shopping bot accepts the order by asking the item, quantity and mode of payment.
5. The shopping bot is interactive.
6. The shopping bot is simple.
7. The shopping bot is Usable.
8. The shopping bot is user friendly.
9. The shopping bot is available 24/7
10. The shopping bot is reliable.

Disadvantages

1. The shopping bot is currently not accepting address in chat bot.

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2. After receiving the receipt, the other interface like email to be used to share the address to the shopper.

8. Applications

The online shopping bot can be used for advertisement, recommendation and taking order from the customer when the customer is live in chat bot with the shopper.

9. Conclusion

The online shopping bot is the most useful feature for online shoppers to have a satisfied purchase. With all the possible features embedded in bot it can help the customer to have a successful and satisfactory shopping with less money and time.

10. Future Scope

- a. The shopping bot can be extended to get reviews
- b. The shopping bot can be added with features like showing offers.
- c. The shopping bot can give recommendations by showing the associated items

11. Bibliography

1. Kotler, P., "Marketing Management," 11th edition, Prentice-Hall International Editions, Englewood Cliffs, New Jersey, 2003.
2. <https://web.wechat.com/>
3. IBM Guru cool resources
4. Day 2 Youtube link: <https://youtu.be/tUBJZfnxeTw>

Appendix

Preview link:

<https://web-chat.global.assistant.watson.cloud.ibm.com/preview.html?region=eu-gb&integrationID=089ed5b7-aad9-4dcb-a7b0-e5346d9c4ca2&serviceInstanceID=1f473695-0000-432a-a37d-723cc7470a89>

Bot json file

https://drive.google.com/file/d/1HXnxgZNsosjCE_3xIJWsK_wA6UvNtst0/view?usp=sharing