Chatbot To Shop For Essentials During Pandemic

Using Watson Assistant

Introduction

1.1 Overview

Today, because of social distancing and other issues it can be risky for some people to shop for essential items in person. This project helps with this issue by giving people an online option to shop for essentials.

1.2 Purpose

It is proposed to build a chatbot with the following capabilities:

- 1. Give the list of items in the Store
- 2. Show the prices of vegetables
- 3. Display if there are any offers or discounts
- 4. Be able to take details like name, contact number, email address, and the items to place the order.

The following Services will be used to build the chatbot:

- 1. IBM Watson Assistant
- 2. Node-Red

Literature Survey

2.1 Existing Problem

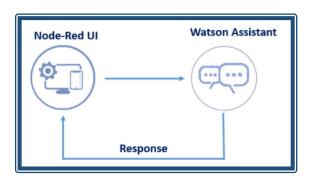
The Covid 19 pandemic has made Social Distancing a way of life. It is essential to minimise physical contact with strangers to control the spread of the disease. However, there are some situations where people are forced to go out – one of them being to shop for essentials. It is imperative that this problem be resolved to control the spread of the disease.

2.2 Proposed Solution

To avoid crowding in shops selling essential; items an online system is proposed which will allow people to buy all their essential items requirements online. The Grocery Chatbot is built with the intention of facilitating this process.

Theoretical Analysis

3.1 Block Diagram



3.2 Hardware/Software Designing

The following IBM services are used in software design of this project:

- 1. IBM Watson Assistant
- 2. Node-Red

Event Flow

- 1. Create account on IBM cloud and Smart Internz using institutional ID.
- 2. Using Watson Assistant services from IBM cloud, the bot implementation has been done which includes following:
 - i. Intents which are the user input. It includes #enquiry, #greetings and #order.
 - ii. Entities which are keyword extracted from intent. In my project I have implemented following entities: @email, @enquiry, @greetings, @items, @mobile and @order
 - iii. Dialog: Which is conversation by bot to user input. It has been implemented using various nodes as well as various child node.
- 3. This chat bot is integrated with Node-Red to create user interface.

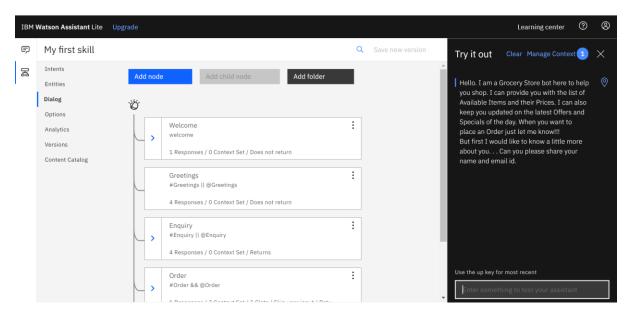
Result

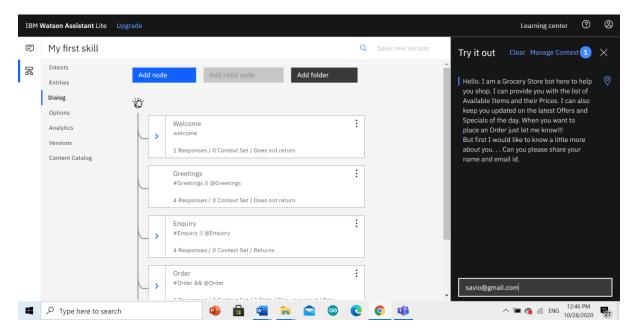
I. Using Watson Assistant

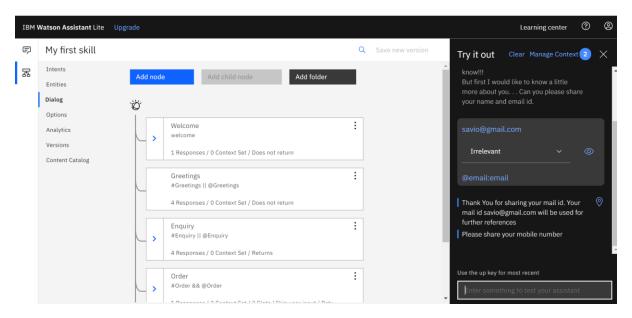
Test Link:

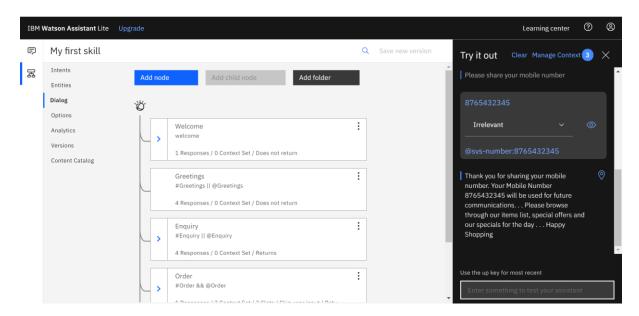
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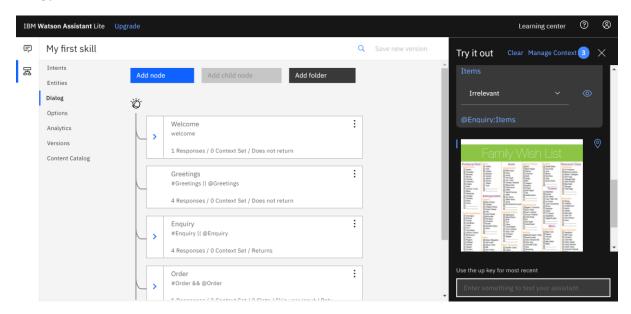
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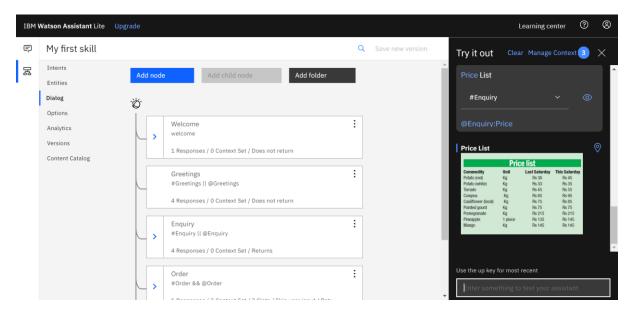


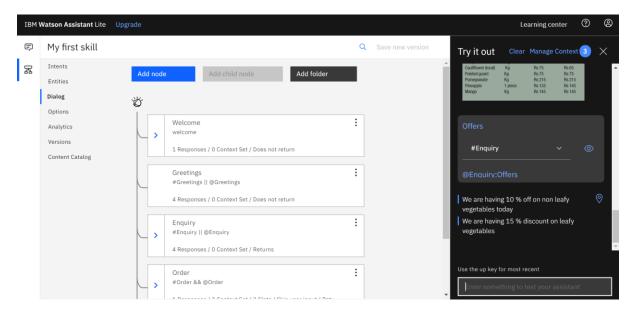


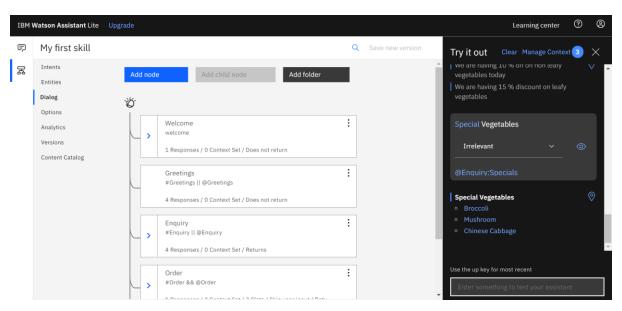


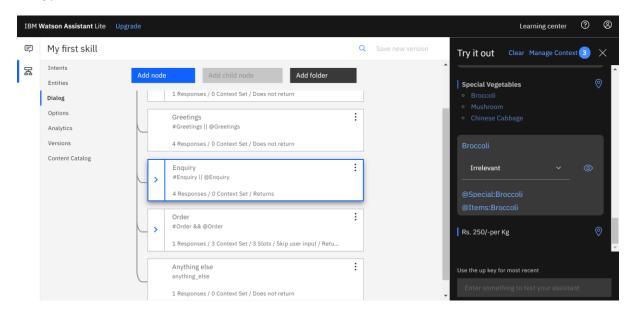


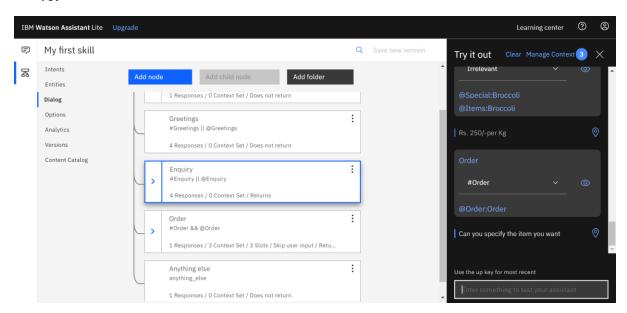


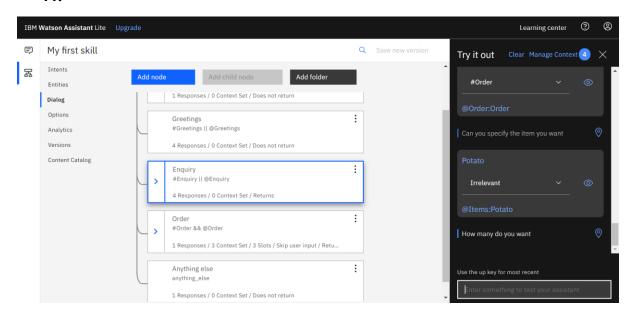


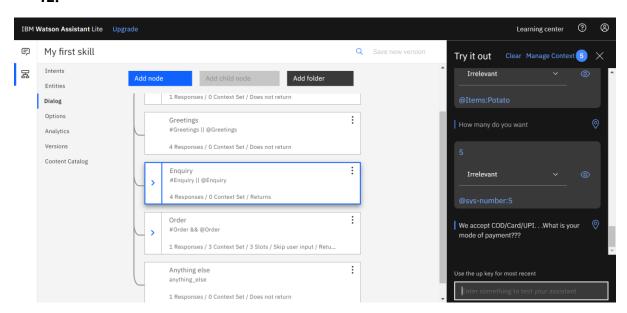


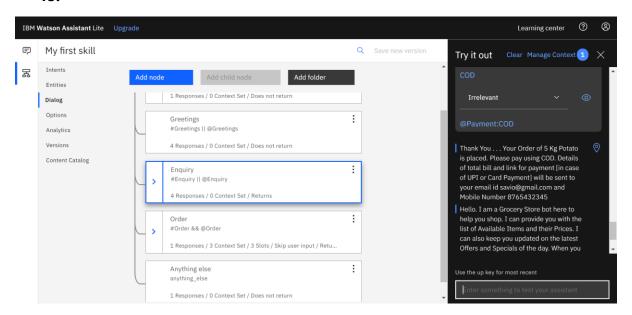






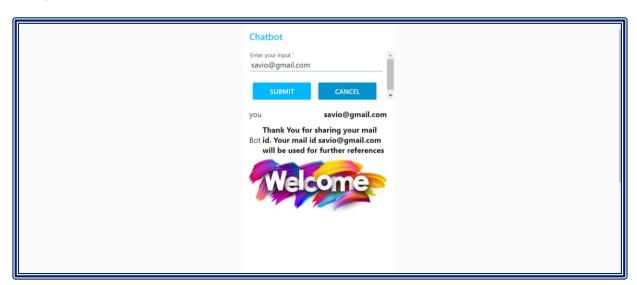






II. Using Node Red

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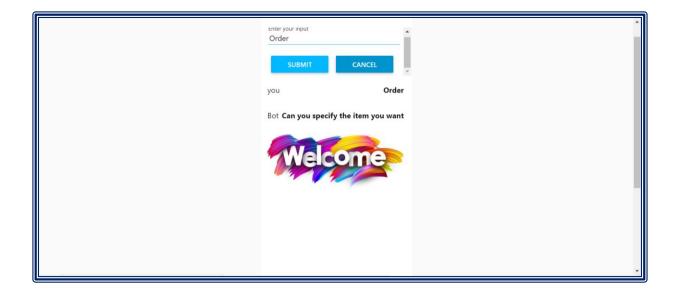


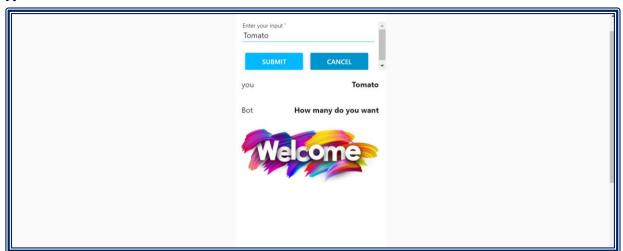




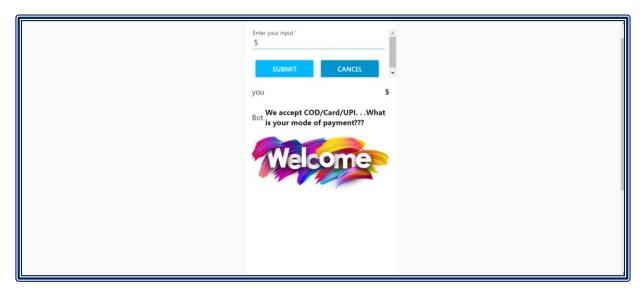


Resto Bot	
	SUBMIT CANCEL you offers Bot We are having 10 % off on non leafy vegetables today





8.





Advantages

- This system ensures minimum physical contact and hence ensures control in spread of the pandemic
- ❖ It offers the convenience of shopping from Home

Disadvantages

- ❖ It is necessary that the person should have same understanding of how to work online and with Apps.
- Security is still an issue and people need to be very careful with regards to cyber frauds

Applications

Many online portals now use a chat bot to converse with customers/clients. This saves on investing human resources for this activity. Only when the bot is unable to satisfactorily answer the queries the customer may be directed to the Human Interface.

Conclusion

The Chatbot for shopping of essentials has been successfully built using Watson Assistant and Node Red.

Future Scope

Chatbots are the way online interactions with various shopping portals will happen in the future. Many Banks and Service websites are already using chatbots. With an advancement in ML and AI we can expect chat bots to be fully integrated with many portals.

Bibliography

Web Resources

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- **♦** https://www.youtube.com/watch?v=tUBJZfnxeTw&t=14516s
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