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Build-A-Thon

**Chatbot to shop for Essentials during
Pandemic using Watson Assistant**

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1. INTRODUCTION

1.1 Overview

The world has panicked over the latest pandemic caused by the Corona virus known as Covid-19. People have been forced to lock themselves up in their homes. This has led to confusion among people even in order to buy the essentials items necessary for their lives. It was not easy to stay safe and secure at home without visiting the supermarket. There is a great need in this situation, to have an important means of purchasing the essentials during the lockdown and pandemic. Chatbots are making it easy for online food and payments, so many retailers are showing interest in the trend.

1.2 Purpose

In the near future, consumers shopping for essentials without coming into direct contact with any individuals and goods is an perfect option. There is a great need for a digital solution that interacts with a digital agent. A chatbot that simulates human behaviour through text, will be a full digital solution to help both customers and business.

2. LITERATURE SURVEY

2.1 Existing problem

In India, many grocery shopping platforms depend on local shopkeepers / retailers for delivery of products. Local suppliers may not have delivery boys during the pandemic, fast reply to available essentials, solve problems, pay bill, have an updated comprehensive list of regular available essentials and many more are few such difficult cases to deal effectively with. Big Basket, Jio Mart and several more are the top businesses that offer home groceries. It would not be an simple and rapid solution to create an e-commerce or UI framework for mobile platforms.

2.2 Proposed solution

An perfect solution would be to build a chatbot for critical services in order to solve the above client-related problems. For human contact, the chatbot will be a substitute. The problems associated with shopping and delivery can be overcome very quickly.

The proposed chatbot is intended to buy the basics, i.e. vegetables and some essential products, which in any case will be an everyday necessity for everyone at any time. The chatbot is programmed with the offers given to list the vegetables available. A full solution without any hindrance for a client to ask, order and purchase the vegetables. The chatbot was also introduced to address a few questions relating to covid-19, such as symptoms and precautions.

3. THEORITICAL ANALYSIS

3.1 Block diagram

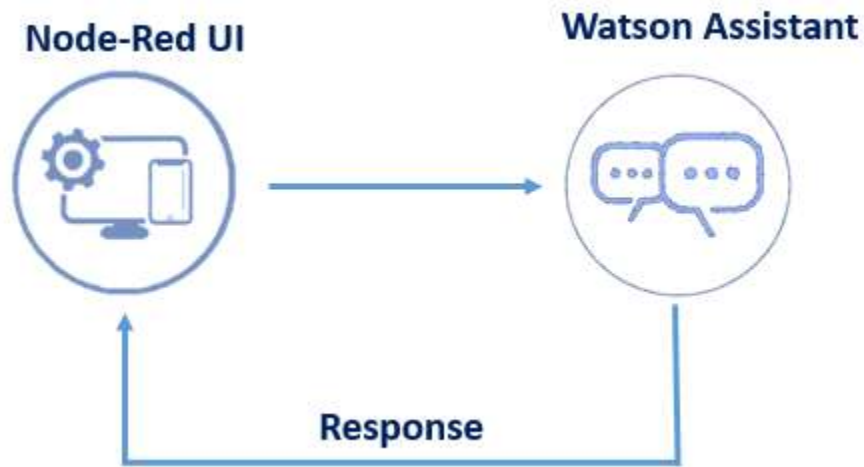


Figure 1: Architecture of Chatbot

As shown in Figure 1, Watson Assistant helps to implement the dialog of messages and the user interface is designed using Node-Red.

3.2 Hardware / Software designing

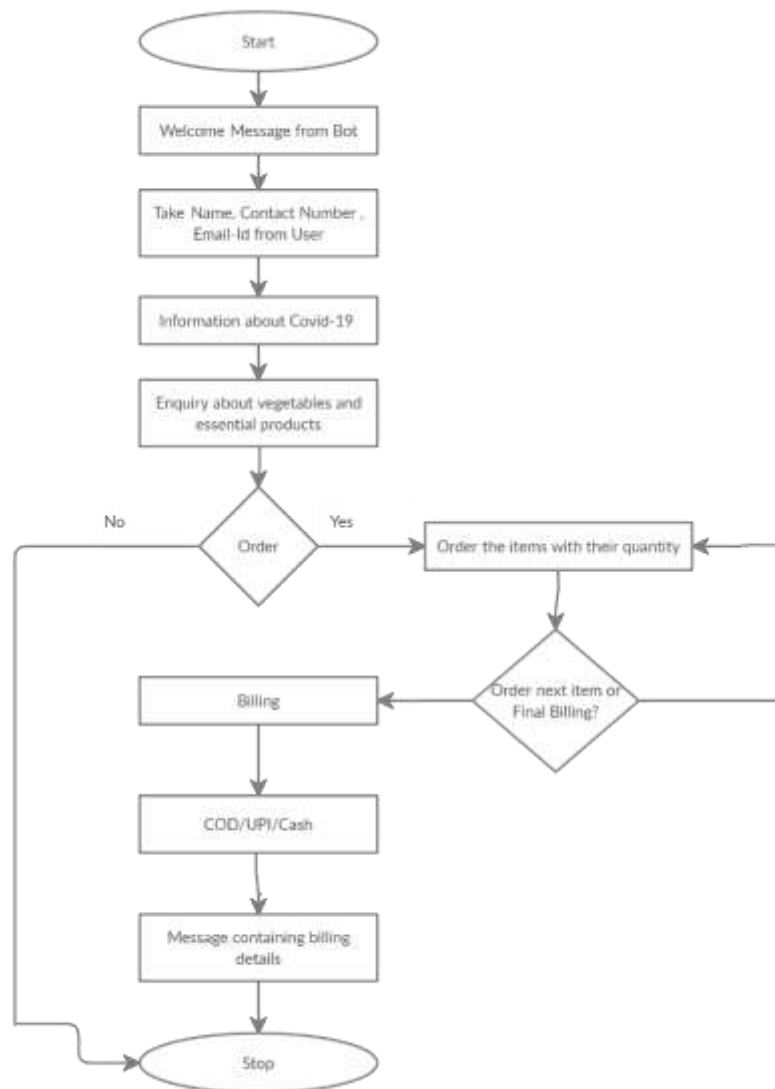
- a) IBM Watson Assistant
- b) Node-Red
- c) IBM cloud

4. EXPERIMENTAL INVESTIGATIONS

The following things will be done by the Chatbot:

- a) Take Name, Contact Number, Email-Id from user and save it for future reference.
- b) Show available vegetables and essential products
- c) Show existing offers
- d) Provide Q&A about Covid-19 disease.
- e) Send bill to the entered Email-Id

5. FLOWCHART



6. RESULT

Assistant preview

Hi! I am a Chatbot to help you shop for essentials during pandemic. Please enter your name.

rasika

Welcome rasika . Please enter your email id.

rasika@gmail.com

Thank you for giving your mail id rasika@gmail.com .Please enter your contact number.

1234567890

Assistant preview

Thank you for your contact number 1234567890 . Your details have been recorded. We have vegetables and grocery for shopping and also FAQ about Covid-19 for your information. How may I help you?

what is coronavirus

A coronavirus is a kind of common virus that causes an infection in your nose, sinuses, or upper throat.

what are the symptoms of covid?

Most common symptoms are fever, dry cough, tiredness.
Less common symptoms are aches and pains, sore throat, diarrhoea, conjunctivitis, headache, loss of taste or smell,a rash on skin, or discolouration of fingers or toes.

Assistant preview

How to prevent covid?

Clean your hands often.
Use soap and water, or an alcohol-based hand rub.
Maintain a safe distance from anyone who is coughing or sneezing.
Wear a mask when physical distancing is not possible.
Don't touch your eyes, nose or mouth.
Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
Stay home if you feel unwell.
If you have a fever, cough and difficulty breathing, seek medical attention.

Assistant preview

give me list of vegetables

Potato 1kg Rs.20 Coriander 0.25kg
Rs.30 Broccoli 0.5kg Rs.180 Cabbage 1kg
Rs.60 Tomato 1kg Rs.70 Cauliflower 1kg
Rs.90 Carrot 1 kg Rs.100 Fenugreek 0.5kg
Rs.80 Onion 1kg Rs.60

which grocery items are available?

Sugar 1kg Rs.50 Salt 1kg Rs.35 Rice 1kg
Rs.80 Wheat Flour 1kg Rs.50 Coffee 0.25kg
Rs.270 Soap 5 Rs.230 Shampoo 500ml
Rs.250 Handwash 1L Rs.200

I want to order items

Assistant preview

Provide an item from the lists above.

onion

Please mention the quantity.

1

Your order for onion of 1 kg is placed.

Select Action

Next item

Billing

Next item

Provide an item from the lists above.

Assistant preview

cabbage

Please mention the quantity.

0.5

Your order for cabbage of 0.5 kg is placed.

Select Action

Next item

Billing

Next item

Provide an item from the lists above.

salt

Assistant preview

salt

Please mention the quantity.

1

Your order for salt of 1 kg is placed.

Select Action

Next item

Billing

Billing

Assistant preview

Next item

Billing

Billing

Payment can be done using UPI, Cash or Card.
What is your mode of payment?

Card

Thank you rasika . Your order is placed and
receipt is sent to 1234567890 and
rasika@gmail.com . Please pay using Card .

thank you

| Welcome.

7. ADVANTAGES & DISADVANTAGES

Advantages:

- i. Application is customized as per customers.
- ii. Details of customers are captured.
- iii. Offers are shown
- iv. Q&A about Covid-19 is provided.
- v. Orders are placed

Disadvantages:

- i. There is no Email support provided
- ii. Entire cart cannot be viewed
- iii. Billing module to be implemented
- iv. Total billing amount is not shown

8. APPLICATIONS

This Chatbot can be used by any retailer for business of Essential products.

9. CONCLUSION

This Chat Bot is a simple virtual assistant for shopping for essentials such as vegetables and few grocery items. For customer service, custom messages are featured, with instant response to customer queries in the bot. The few features of the critical bot created above are simple bot applications that are suitable for running on any platform. The objective of taking input from Customers and replying with appropriate options is implemented successfully.

10. FUTURE SCOPE

Feature of live chat with human agent can be added. Billing module can be added to give the total cost of items purchased. Entire view of cart could be provided to Customers.