

# **chatbot to shop for essentials during pandemic using Watson Assistant**

A chatbot is an artificial intelligence (AI) software that can simulate a conversation (or a chat) with a user in natural language through messaging applications, websites, mobile apps or through the telephone. Movie Ticketing Bot is proposed to facilitate display of movie list, different shows timings and book the tickets for the movie.

## **Background Study**

### **What is Chat Bot?**

A chatbot is an artificial intelligence (AI) software that can simulate a conversation (or a chat) with a user in natural language through messaging applications, websites, mobile apps or through the telephone.

### **Importance of ChatBot**

A chatbot is often described as one of the most advanced and promising expressions of interaction between humans and machines. However, from a technological point of view, a chatbot only represents the natural evolution of a Question Answering system leveraging Natural Language Processing (NLP). Formulating responses to questions in natural language is one of the most typical Examples of Natural Language Processing applied in various enterprises' end-use applications.

### **How Chatbot works?**

There are two different tasks at the core of a chatbot:

#### **1) User request analysis**

User request analysis: this is the first task that a chatbot performs. It analyzes the user's request

to identify the user intent and to extract relevant entities.

#### **2) Returning the response**

Returning the response: once the user's intent has been identified, the chatbot must provide the

most appropriate response for the user's request.

### **Major Objective of proposed system is**

- To Provide list of items available.
- To take order once item is selected
- To place order

## Services Used:

1. IBM Watson Assistant
2. Node-Red

## Implementation & Result Screenshot

In IBM Watson Assistant major components to build chatbot are Intent, Entities & Dialogs. There are four intents made in proposed system each of which will separately take care of each goal of bot.

### Intents

1. Greetings Intent:- It takes care of initial user responses
2. Welcome Intent:- It takes care of informing user what this chatbot does.
3. Enquiry Intent:- It takes care of shopping items enquiry
4. Order Intent:- It takes care of placement of order

### Intents

The screenshot displays the IBM Watson Assistant Lite interface. The chatbot is named 'shop for essentials'. The left sidebar shows navigation options: Intents, Entities, Dialog, Options, Analytics, Versions, and Content Catalog. The main area shows a table of intents.

Intents (4) ↑	Description	Modified ↑↓	Examples ↑↓
<input type="checkbox"/> #Enquiry		5 days ago	8
<input type="checkbox"/> #Greetings		5 days ago	3
<input type="checkbox"/> #order		5 days ago	2
<input type="checkbox"/> #welcome		5 days ago	3

Showing 1-4 of 4 intents

1 of 1 pages

Buttons: Create intent, Save new version, Try it, Show all

# Entities

shop for essentials

Intents

Entities

My entities

System entities

Dialog

Options

Analytics

Versions

Content Catalog

Entity (6) ↑	Values	Modified ↑
@Enquiry	items, Discounts	5 days ago
@Greetings	Good Afternoon, Good evening, Good Morning	5 days ago
@items	capsicum, gavar, bitter gourd, Brinjal, green peas, ginger, beet	4 days ago
@order	order	5 days ago
@payment	UPI, card	5 days ago
@welcome	Welcome	5 days ago

Showing 1–6 of 6 entities

1 of 1 pages

Create entity +

Show all

# System entities

shop for essentials

Intents

Entities

My entities

System entities

Dialog

Options

Analytics

Versions

Content Catalog

The following entities are prebuilt by IBM to recognize references to things like numbers and dates in user input. Turn on a system entity to start using it. You cannot edit system entities. [Learn more](#)

New system entities are available that are even better at detecting dates, times, and numbers. Go to [Options>System entities](#) to enable them.

Name (5)	Description	Status
@sys-number	Extracts numbers mentioned from user examples as digits or written as numbers. (21)	On
@sys-percentage	Extracts amounts from user examples including the number and the % sign. (15%)	Off
@sys-currency	Extracts currency values from user examples including the amount and the unit. (20 cents)	Off
@sys-date	Extracts date mentions (Friday)	Off
@sys-time	Extracts time mentions (at 10)	Off

Show all

# Dialogues

The screenshot shows the IBM Watson Assistant Lite interface. The top navigation bar includes 'Inbox (11,582) - jignasha@somai...', 'Student Dashboard', 'SPS-5516-chatbot to shop for e...', 'Report on Movie ticketing bot-P...', and 'IBM Watson Assistant'. The main header displays 'eu-gb.assistant.watson.cloud.ibm.com/eu-gb/cm/v1/bluemix/publicconversation/eu-gb-a~2Fa0b5eefd68e54cb6aa7faeda08ec0a56acc24a59-85a2-4a9d-97dd-cc9295846944:/...' and 'IBM Watson Assistant Lite Upgrade'. The left sidebar lists 'Intents', 'Entities', 'Dialog', 'Options', 'Analytics', 'Versions', and 'Content Catalog'. The 'Dialog' section is active, showing a list of dialog nodes: 'Welcome' (1 Responses / 0 Context Set / Does not return), 'Greetings' (3 Responses / 0 Context Set / Does not return), 'Enquiry' (2 Responses / 0 Context Set / Returns), 'order' (1 Responses / 3 Context Set / 4 Slots / Skip user input / Retu...), and 'Anything else' (anything\_else). The bottom taskbar shows the Windows search bar and various application icons.

## Creation of BOT Link

The screenshot shows the IBM Watson Assistant Lite interface for the 'Shop For Essentials' skill. The top navigation bar is identical to the previous screenshot. The main header displays 'eu-gb.assistant.watson.cloud.ibm.com/eu-gb/cm/v1/bluemix/publicconversation/eu-gb-a~2Fa0b5eefd68e54cb6aa7faeda08ec0a56acc24a59-85a2-4a9d-97dd-cc9295846944:/...' and 'IBM Watson Assistant Lite Upgrade'. The left sidebar lists 'Assistants', 'Shop For Essentials', and 'Integrations'. The 'Shop For Essentials' section is active, showing a description: 'This chatbot will be able to Give the list of items in the Store with prices and offers and discounts and place the order'. The 'Skill' section provides details: 'A dialog skill provides specific responses you've created. Choose one for your assistant. Learn more'. The 'Dialog' section shows the 'shop for essentials' dialog with details: 'LANGUAGE: English (US)', 'TRAINED DATA: 4 Intents | 7 Entities | 23 Dialog nodes', 'VERSION: ---', 'DESCRIPTION: ---', and 'VERSION CREATED: ---'. The 'LINKED ASSISTANTS (1): Shop For Essentials' is listed. The 'Integrations' section shows 'Web chat' and 'Preview link' as saved integrations. The bottom taskbar shows the Windows search bar and various application icons.

## Results And screen shots

Build your own assistant using  
[IBM Watson Assistant](#)

**Assistant preview**

Welcome, how can I help you

hi

Hi, I am shopping chatbot. I can display a list, discounts and take an order.

Items

**TODAY'S PRICE LIST**

English Gujarati

Vegetables	Fruit
Green Peas ₹ 120 kg	
Brinjal Green ₹ 30 kg	
French Beans ₹ 60 kg	
Bitter Gourd ₹ 40 kg	

Type something...

ic4sj20\_jignasha D...jpg Show all

Build your own assistant using  
[IBM Watson Assistant](#)

**Assistant preview**

Download Product List

list

order

Enter item name, pls check items list.

list of items

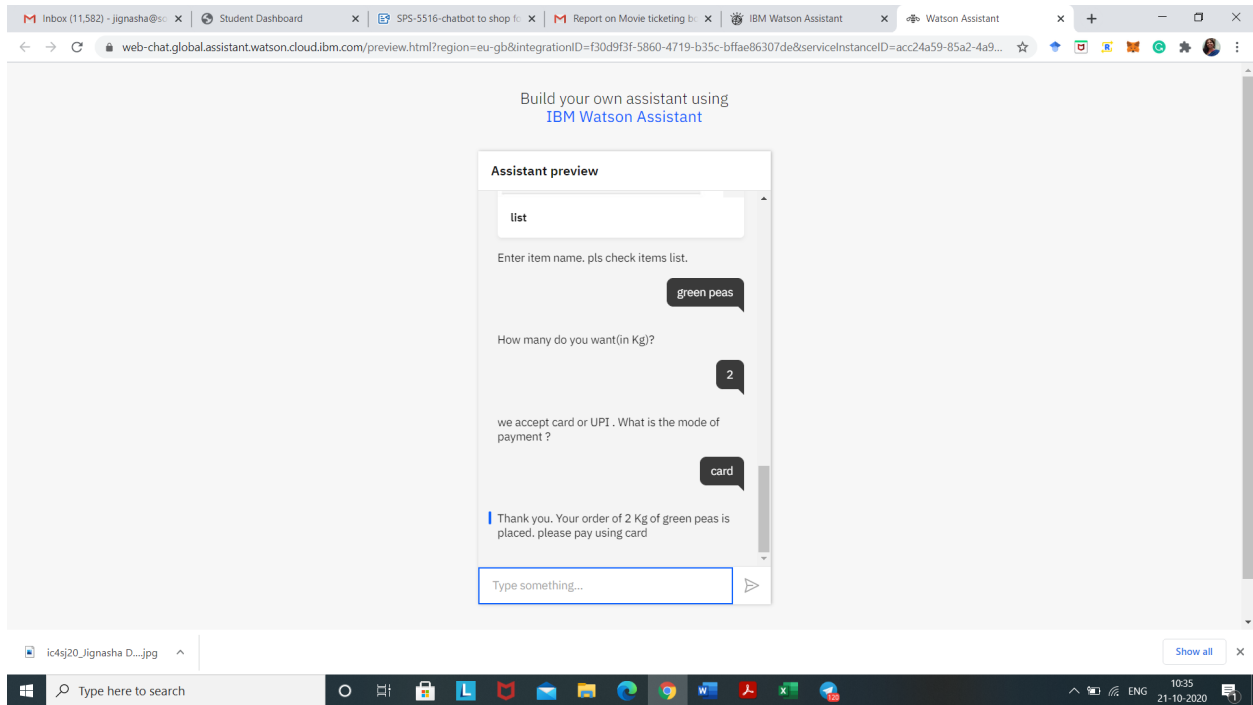
**TODAY'S PRICE LIST**

English Gujarati

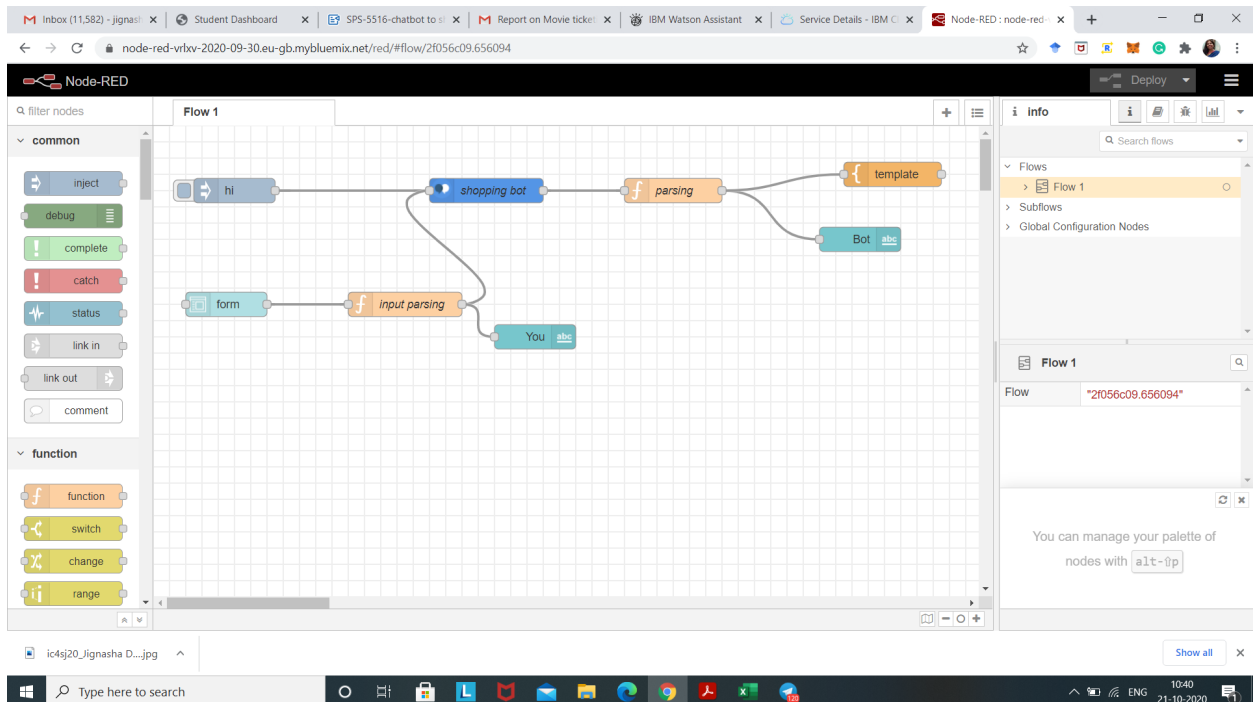
Vegetables	Fruit
Green Peas ₹ 120 kg	
Brinjal Green ₹ 30 kg	

green

ic4sj20\_jignasha D...jpg Show all



## Integration with Node-red



Shopping

Bot

You ga

Bot Good Afternoon

Enter your input \*

ga

SUBMIT CANCEL

ic4sj20\_jignasha D...jpg

DLCOA Term Test -I (SE Comp Div A Roll n...  
COMP\_SE\_A\_21\_DRISHTI\_JOBANPUTRA st...

Join

Type here to search

10:41  
21-10-2020

Shopping

Bot

You order

Bot Enter item name. pls check items list.

Enter your input \*

order

SUBMIT CANCEL

ic4sj20\_jignasha D...jpg

Show all

Type here to search

10:42  
21-10-2020

Shopping

Bot

You green peas

Bot How many do you want(in Kg)?

Enter your input \*

green peas

SUBMIT CANCEL

ic4sj20\_jignasha D...jpg Show all

Type here to search

10:43 21-10-2020

Shopping

Bot

You 2

Bot we accept card or UPI . What is the mode of payment ?

Enter your input \*

2

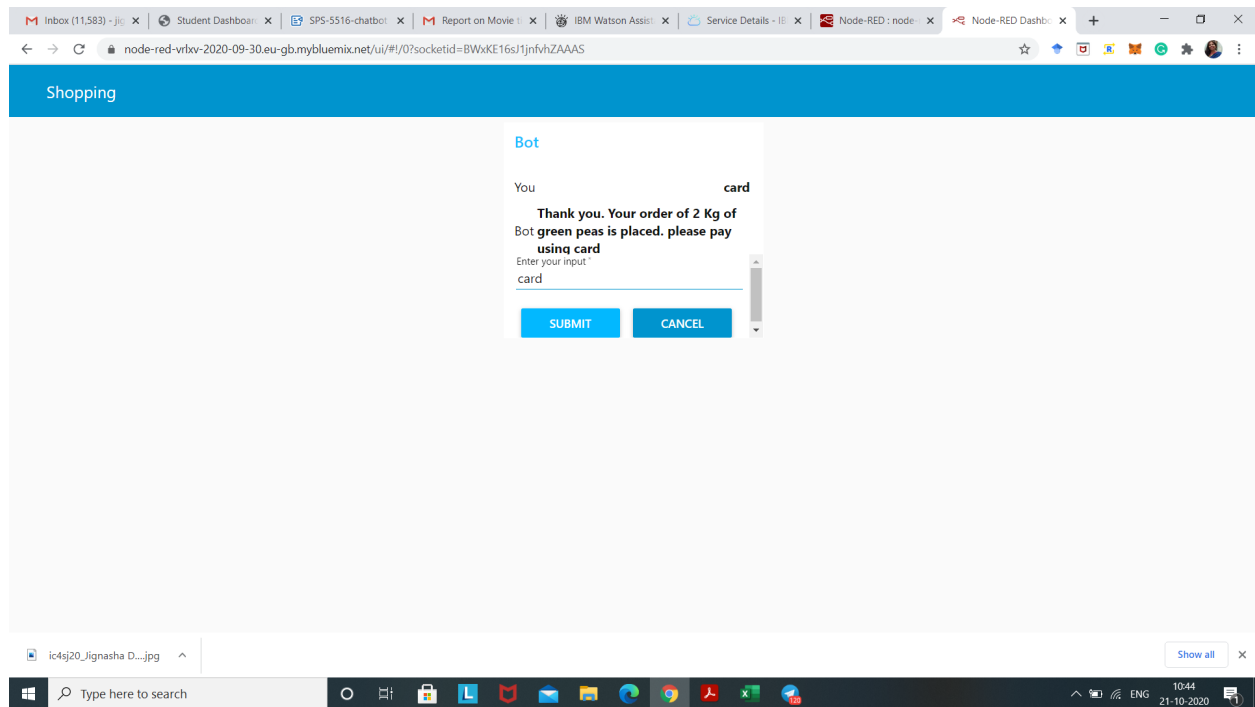
SUBMIT CANCEL

ic4sj20\_jignasha D...jpg Show all

Type here to search

10:44 21-10-2020





**Conclusion: This shopping BoT will help users to display list of items and place order.**