Chatbot of Movie Ticket Booking

Introduction

This is repository is aimed at helping anyone get started with understanding how to use Watson Assistant service to create a simple chat bot that will book seats to a movie for you. This will be done using a feature called Slots.

Aim of the chatbot:

1 The projects aims at creating a movie booking chatbot that can take users requirements at once and provide effective results by applying AIML.

2. To effectively predict user's location and recommend movies based on user input details like age, gender, location, etc.

3. To provide hassles booking service wherein user details are taken without any navigation along pages.

Watson Assistant

The Watson Assistant service available as a Platform as a Service (PaaS) on IBM Cloud provides a AI tooling that can easily allow creating converstaional solutions that fits one's business needs

Basic Concepts & Terminologies

Workspace

A workspace in Watson Assistant is a container for all artifacts that define the behaviour of your system, i.e. Chatbot.

Utterance

An utterance or user example is an input that a user provides when prompted, including questions and statements.

Intent

An intent is the purpose expressed by user input, which usually acts as a label for a group of utterances. For instance, if "Where can I find the gym?" is the question provided by a user, the Watson Assistant service understands that the user's intent is to ask about the location of something (in this case, the gym, which is called the entity).

Entity

An entity is usually a classification of objects aimed to help alert the response to an intent. Using the same example of the user asking "Where can I find the gym?", the Watson Assistant service understands that the entity being asked about is the gym. The entity could have been something else like the restaurant, to which the Watson Assistant service would have provided a different response, despite the intent being the same.

Context

Context is information gathered from an external source to customize responses.

Response

A response is what the Conversation service returns to the user's utterances based on

the detected intent, and entity can be in the form of text or an action like displaying map.

Dialog

A dialog defines the conversational flow, which is simply a logical flow that determines responses based on a met condition. The dialog flows in a top-to-bottom, left-to-right fashion.

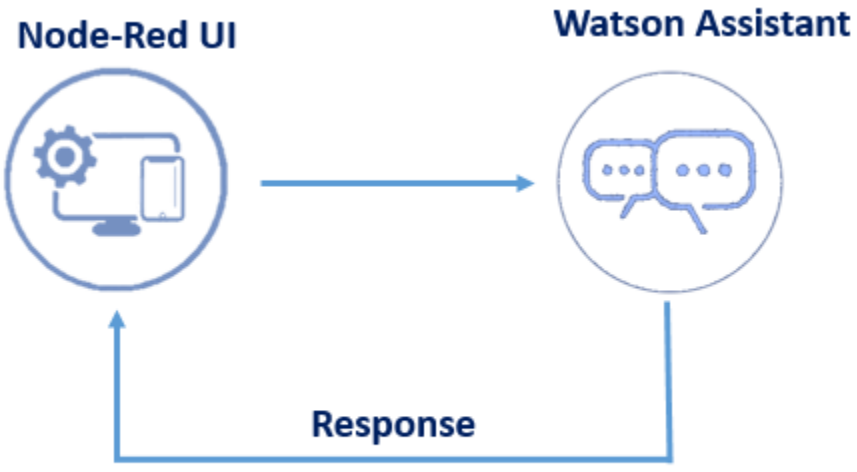
Dialog Node

A diaglog node is a single interaction in a conversation that is triggered when a condition is met and provides a response back to the user.

Slots

Slots are considered the easiest way to gather information from users, allowing what usually takes serveral dialog nodes to be consolidated into a single node.

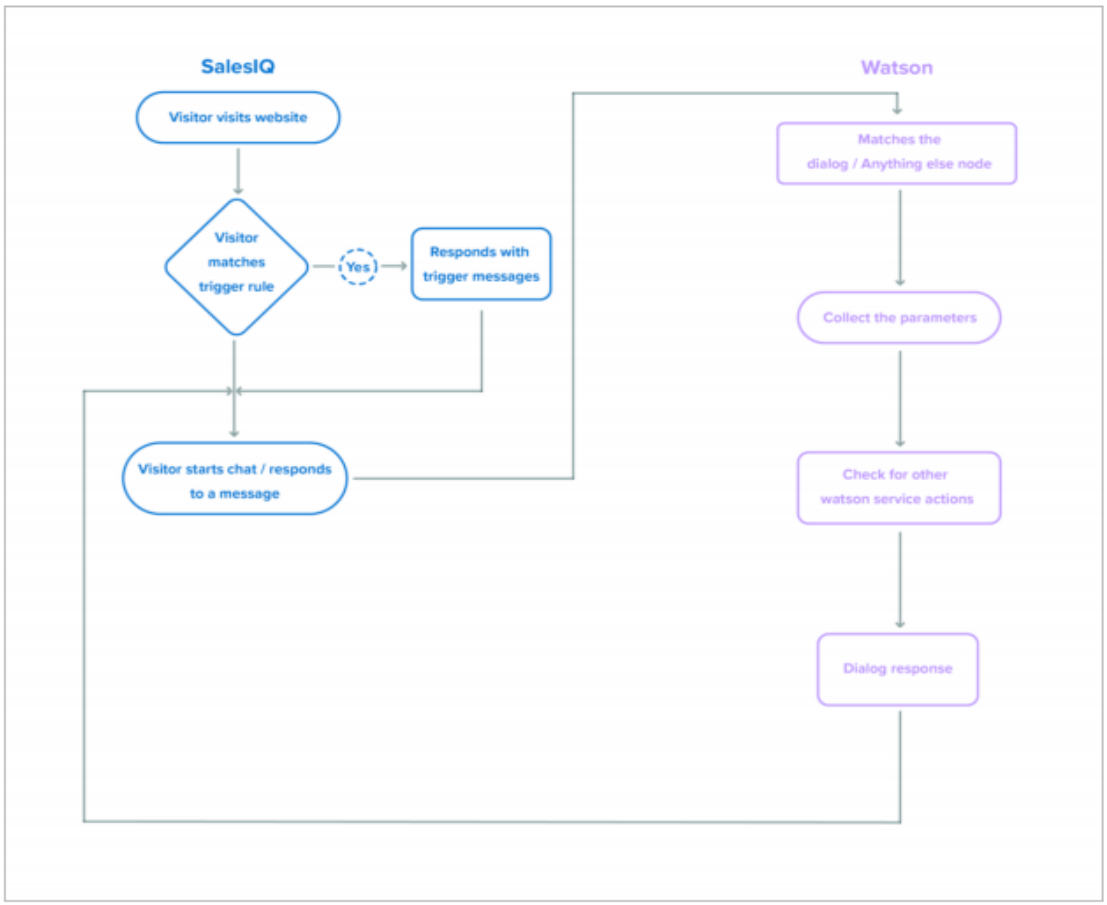
Block Diagram



Setup Watson Assistant

- **Create Watson Assistant service**
- **Create the skills**
    1. **Create Action Skills**
    2. **Create Dialog Skills**
        a. **Create Intents**
        b. **Create Entities**
        c. **Use System Entities**
        d. **Create Dialogs Building Node-Red Application**
- **Create Node-Red Service**
- **Integrate Node Red To Assistant**

Flow Chart



Process

Sign up on IBM Cloud

An IBM Cloud account - A lite account, which is a free of charge account that doesn't expire, can be created through going to [IBM Cloud](#).

Create a Watson Assistant service

1.Select Catalog found at the top right of the page.

2.Click on Watson from the menu on the left, which you can find under Platform services.

3.Select WWatson Assistant (formerly Conversation).

4.Enter the Service name or keep the default value and make sure to select your desired region/location, organization, and space.

5.Select Lite for the Plan, which you can find under Pricing Plans and is already selected. Please note you are only allowed one instance of a Lite plan per service.

6.Click on Create.

7.You will be taken to the main page of the service. Click on Launch tool.

Create a Workspace

1.Scroll down and click on Create a Workspace found under Get started now

2.Click on Create found in the dotted box that is titled Create a new workspace.

3.Give your workspace a Name and Description (optional) based on the purpose of the conversational solution (We will call the workspace Simple Movie Booking Bot).

4.Click Create. This will open the workspace, where you will define the Intents, Entities and Dialog.

Define Intents

For the intents, we can define 3 main intents that the user will have: greeting the bot (#greeting), thank the bot for accomplishing the task (#thankyou), and booking movie ticket(s) (#book_tickets).

1.Under the tab Intents, click on Add intent.

2.Enter the Intent name and Description (optional) and click on Create intent.

3.Under Add user examples, add the utterances that are expected to be mentioned based on the intent and click on Add example. Make sure to add atleast 5 user examples per intent to proper allow the Natural Language Classifier that is embedded in the Watson Assistant service.

Define Entities

For the entities, we can define 3 main entities that the user might use: terms related to the category of movies (@movie), examples of movie names (@movie-name), and example of cinema names found in Ujjain(@ujjain-cinema). For each entity, we will be defining a value and the different synonyms that a person might use by which he/she means the same value.

1.Under the tab Entities, click on Add entity that will be under the tab My entities (these are the user defined entities).

2.Enter the Entity name and click on Create entity.

3.Add the Value name and its corresponding Synonyms and click on Add value. Here, there are restrictions on the number of values and synonyms that can be added.

4.Under System entities, whcih are pre-defined entities that can be directly used, enable sys-date, sys-time, and sys-number. These will be used in the dialog to get the date and time of when the user wishes to see the movie and the number of seat he/she wishes to reserve.

Define Dialog Flow

1.Click on the tab Dialog, where you will see to pre-defined nodes: Welcome and Anything else. The Welcome has a special condition called welcome that is triggered when a converstaion is started by the system. The Anything else node has a special condition called anything_else that is triggered when the user input does not match any of the conditions in previous nodes.

2.Click on the Welcome node and modify the responses that will determine how the bot first greets the user, as seen in the diagram below.

3.Also, click on Set to random, so that the response change everytime the user tries out the bot.

4.Click on Add node to add a node under the Welcome node.

5.Call the node Greetings and set the condition under If bot recognizes to #greeting. This means that, after the welcoming message, if the bot detects that the user is greeting it, it will respond with whatever is added under Then respond with: and wait for user input, which is indicated under And finally.

6.Create a new node and call it Thank You, whcih is triggered when #thankyou is

detected. Complete the rest of the details as follows.

7.Click on the Greetings node and click on Add node.

8.Call the node Movie Booking Details. As a name suggests, this is where we will be gathering details about the booking, which will be done through slots.

9.Beside the name of the node we just defined, there is a Customize button. Click on it, enable Slots and click on Apply.

10.Set the triggering condition under If bot recognizes: to #book_tickets and fill the conditions to be checked afterwards under Then check for: as follows:

1.Check for: @movie-name
Save it as: $moviename
If not present, ask: There are only 2 movies available (Spider-Man: Homecoming and Star Wars:The Last Jedi). Please enter the name of the movie you would like to watch

2.Check for: @dubai-cinema
Save it as: $movielocation
If not present, ask: Please enter the location of your preference in Dubai

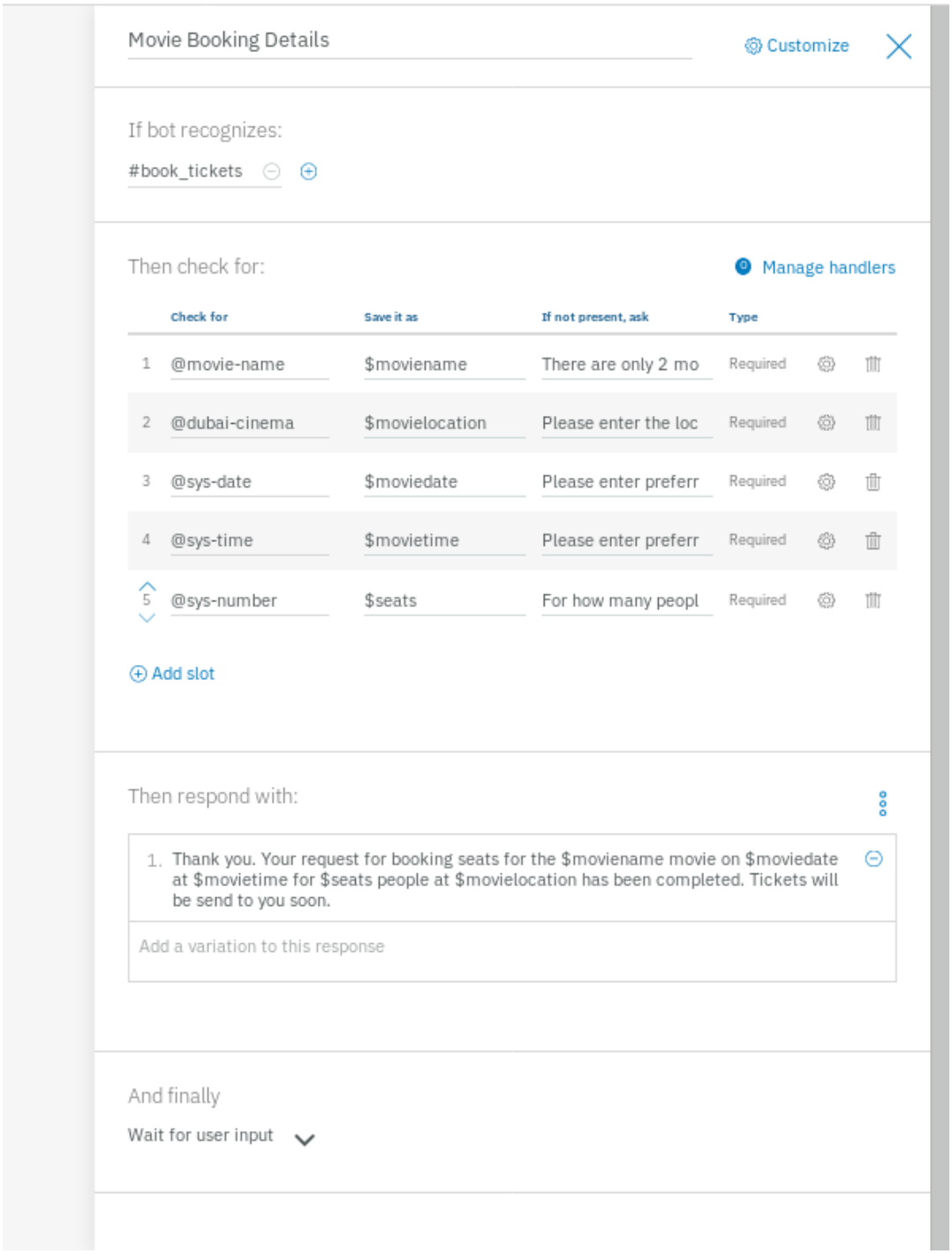
3.Check for: @sys-date
Save it as: $moviedate
If not present, ask: Please enter preferred date of booking

4.Check for: @sys-time
Save it as: $movietime
If not present, ask: Please enter preferred time of booking

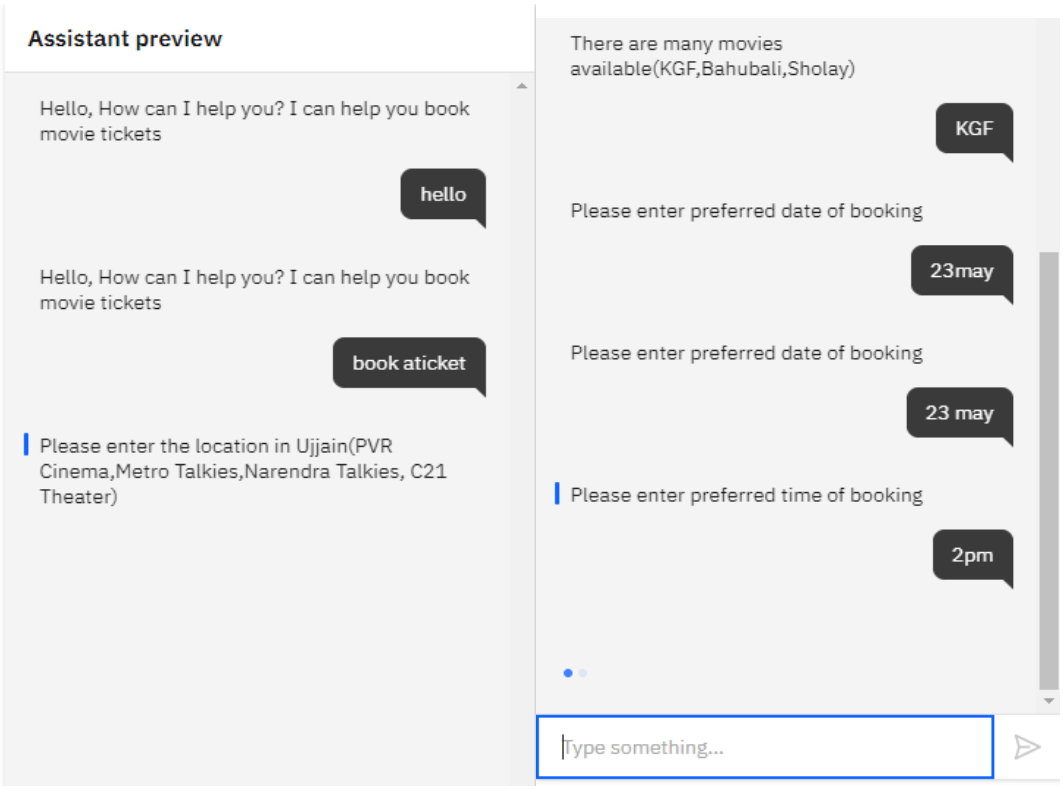
5.Check for: @sys-number
Save it as: $seats
If not present, ask: For how many people should I book?

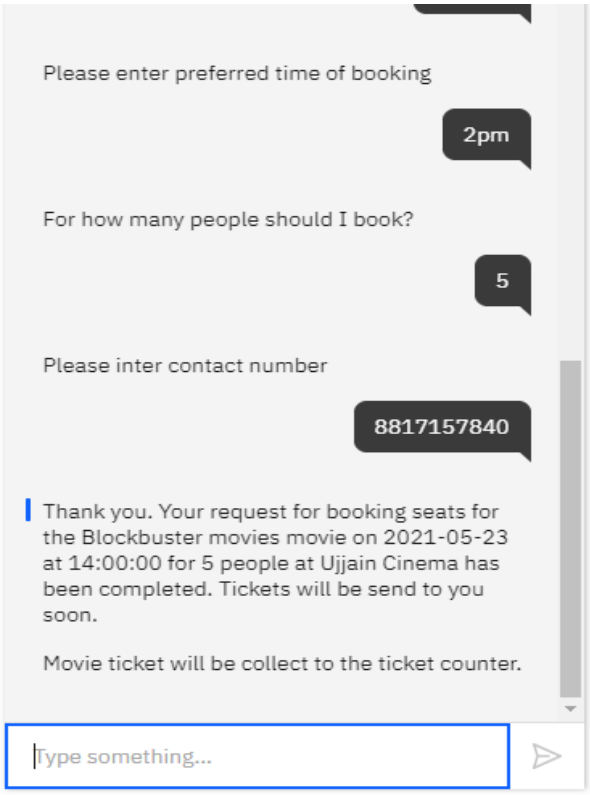
All of this information can be gathered from one user utterance, if provided by the user. Otherwise, the user will be asked about anything that is missing by presenting what is under If not present, ask. The information provided is saved in context variables, which

are defined under Save it as, that can be used at any point throughout the conversation.
11.Provide the user with a summary of the information he/she provided through the response under Then respond with (as seen below).

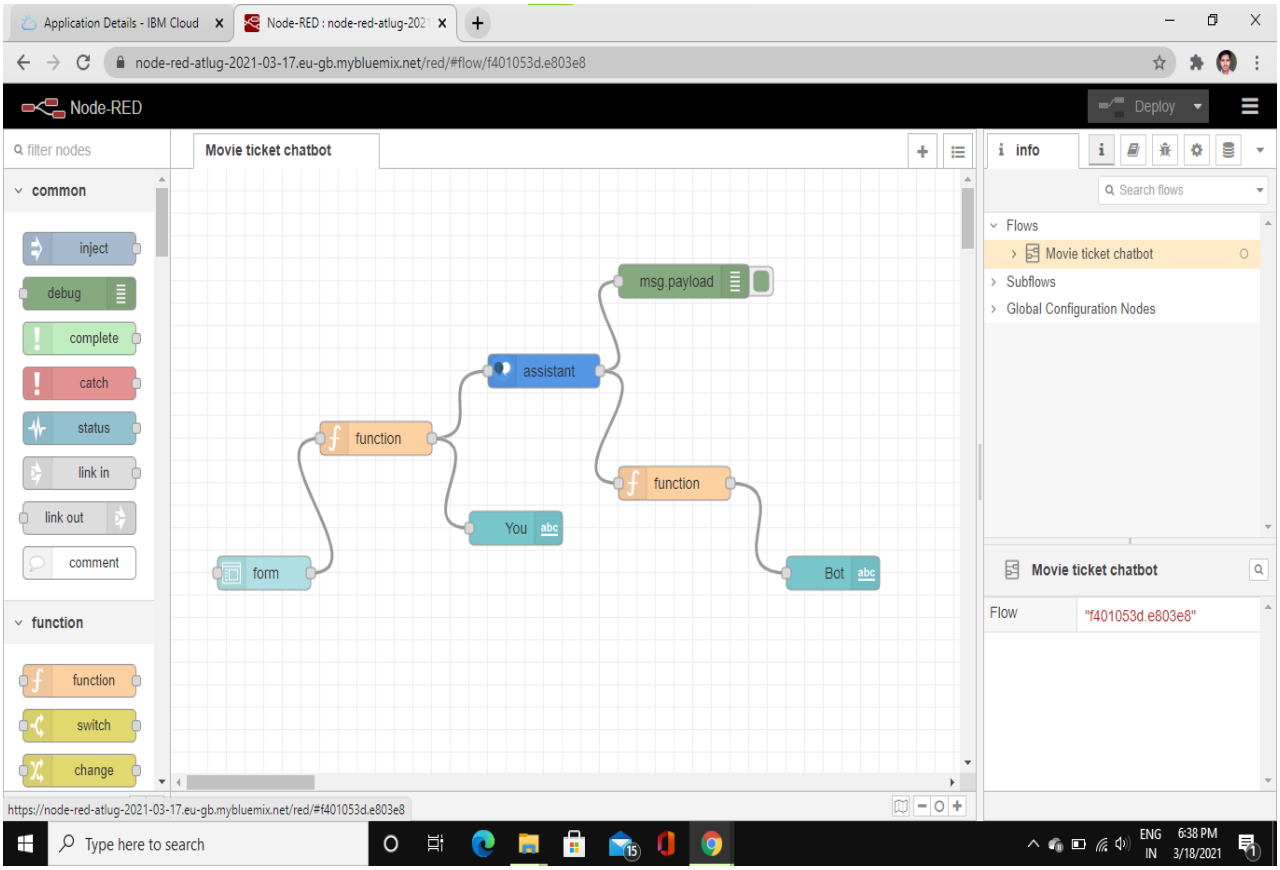


Result

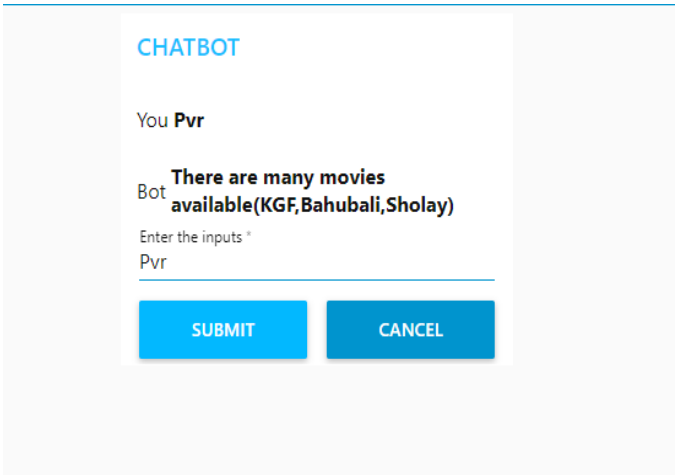

Assistant preview
Hello, How can I help you? I can help you book movie tickets
hello
Hello, How can I help you? I can help you book movie tickets
book aticket
Please enter the location in Ujjain(PVR Cinema,Metro Talkies,Narendra Talkies, C21 Theater)
There are many movies available(KGF,Bahubali,Sholay)
KGF
Please enter preferred date of booking
23may
Please enter preferred date of booking
23 may
Please enter preferred time of booking
2pm
Type something...


Please enter preferred time of booking
2pm
For how many people should I book?
5
Please inter contact number
8817157840
Thank you. Your request for booking seats for the Blockbuster movies movie on 2021-05-23 at 14:00:00 for 5 people at Ujjain Cinema has been completed. Tickets will be send to you soon.
Movie ticket will be collect to the ticket counter.
Type something...

Notered Flow



Notered Result



Applications

Chatbots are mainly used to answer customers' questions. However, there are still different types of chatbots that may be used in different situations.

- ***Chatbots Answer Questions And Inquiries.***

- ***Book Tickets To Events/Shows With Chatbots***

- ***Use Chatbots To Find Products, Check Inventory and Recommend Items.***

- ***Chatbots To Build Remarkable Customer Experience.***

- ***Chatbots Can Process Return and Exchange Requests***

Conclusion

This course will teach you how to create useful chatbots without the need to write any code. Leveraging IBM Watson's Natural Language Processing capabilities, you'll learn how to plan, implement, test, and deploy chatbots that delight your users, rather than frustrate them. True to our promise of not requiring any code, you'll learn how to visually create chatbots with Watson Assistant (formerly Watson Conversation) and how to deploy them on your own website through a handy WordPress plugin. Don't have a website? No worries, one will be provided to you. Chatbots are a hot topic in our industry and are about to go big. New jobs requiring this specific skill are being added every day, consultants demand premium rates, and the interest in chatbots is quickly exploding. Gartner predicts that by 2020, 85% of customer interactions with the enterprise will be through automated means (that's chatbots and related technologies). Here is your chance to learn this highly in demand set of skills with a gentle introduction to the topic that leaves no stone unturned.

Source Name - Smart Bridge Training

Project Name - Movie Ticket Chatbot

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