MOVIE TICKETING BOT POWERED BY IBM WATSON ASSISTANT

A MINI PROJECT REPORT

ABSTRACT

The present work is intended to provide a solution through the development of a chatbot using the Watson assistant and Node-RED UI for booking movie tickets. It ensures error-free booking of tickets without human agent intervention smoothly even during peak hours. It saves time and makes the process much more easy for the customer as well as for the service provider by eliminating the elongated process starting from waiting in the queue of booking counter to getting the answers to repetitive queries. A web-based conversational flow is generated by only clicking on an URL from any electronic gadget with internet access. The website provides complete information regarding currently running movies on all the screens with details of show timings, available seats. Our system is one of the best opportunities for those who cannot afford enough time to get their tickets reserved standing in long queues.

Keywords

- Chatbots
- Movie ticketing bot
- IBM Watson assistant

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1.INTRODUCTION

1.1 **Overview:**

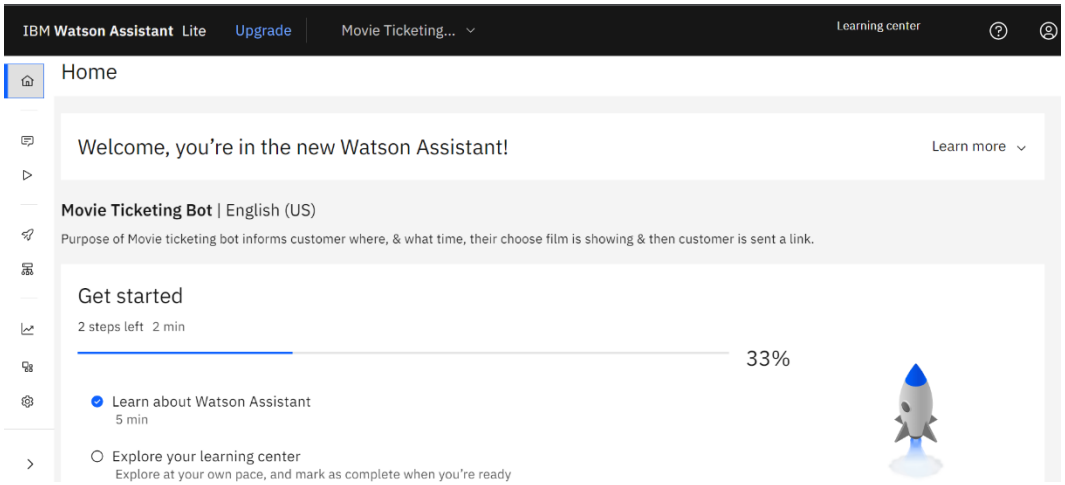
The main purpose of our ticket booking system is to provide an alternate and convenient way for a customer to buy cinema tickets. It is an automatic system. After data has been fed into the database, the staff does not need to do anything with the order once it is received through the system.

We enter into Web page by logging with User Name and Password. Then we select the Movie and later in which Theatre movie is running. Later choose Show Timings and enter no of tickets you want. Finally it displays thanking for the procedure and greet the customers for booking movie tickets using bot.

1. Users Login.
2. User Register.
3. Selection of Movie module.
4. Selection of Theaters module.
5. Selecting show-time module.
6. Number of Tickets booking module.
7. Enter mobile number module.
8. Thanking customers

1.2 **PURPOSE**

The purpose of movie ticketing bot informs the customer of nearby cinemas or where, and what time, their selected film is showing. Once a decision has been made, the customer is sent a link to a booking.



. 2.LITERATURE SURVEY

2.1 Existing Problem

Present System developed in asp. In asp there are some limitations**.**

It is scripting language

It is very code complexity

There is server controls in asp

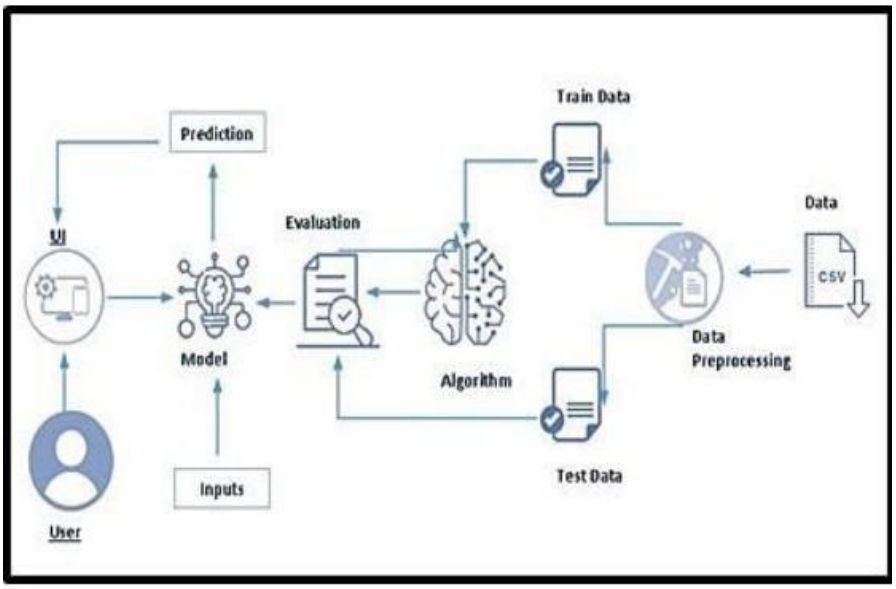
It Doesn’t Support language interoperability

2.2 Proposed Solution

After understanding the existing system and understanding the need for developing a new system different people involved in the related activities have been consulted. The data needed for the study has been collected from company records. The computerization of this system would avoid the wrong interpretation and bad calculation of data. The system help the user to see any documents, source code, tasks, activities, team information with details at the click of a button. The record data is maintained and backed up such a way that data is not loss. The speed of the system could also increase.

3.THEORITICAL ANALYSIS

3.1 Block diagram



3.2 Hardware/Software Designing

Software Requirements:

- Local Browser
- IBM Watson Assistant

Hardware Requirements:

- Operating system
- Processing
- RAM
- Operating system specifications
- Disk space.

4.EXPERIMENTAL INVESTIGATIONS

Milestone 1: Data Collection

ML depends heavily on data, without data, a machine can't learn. It is the most crucial aspect that makes algorithm training possible. In Machine Learning projects, we need a training data set. It is the actual data set used to train the model for performing various actions.

You can collect datasets from different open sources like kaggle.com, data.gov; UCI machine learning repository etc. The dataset used for this project was obtained from Kaggle.

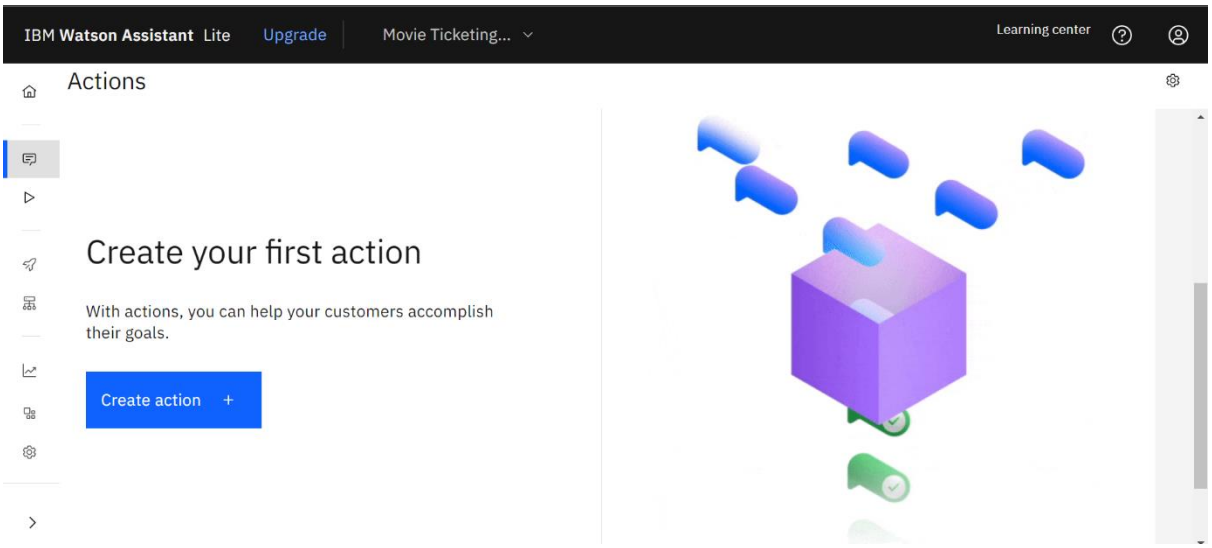
Milestone 2: Data Pre-processing

- Data Pre-processing includes the following main tasks
- Importing the dataset.
- Analyse the data.
- Create New Intents, dialogs
- Run the chat bot in local browser

4.1 Actions

An ***Action*** is a single conversation to fulfill an intent and capture the entities. An action as an encapsulation of an intent. Or the fulfillment of an intent. actions can be used as a standalone implementation for very simple applications. Such simple implementations may include customer satisfaction surveys, customer or user registration etc. Short and specific conversations.

- Firstly Create a New Assistant for creating Actions
- Add name of assistant you are building.
- Click create Actions in dashboard.
- Start interaction with Bot (“Hello”)



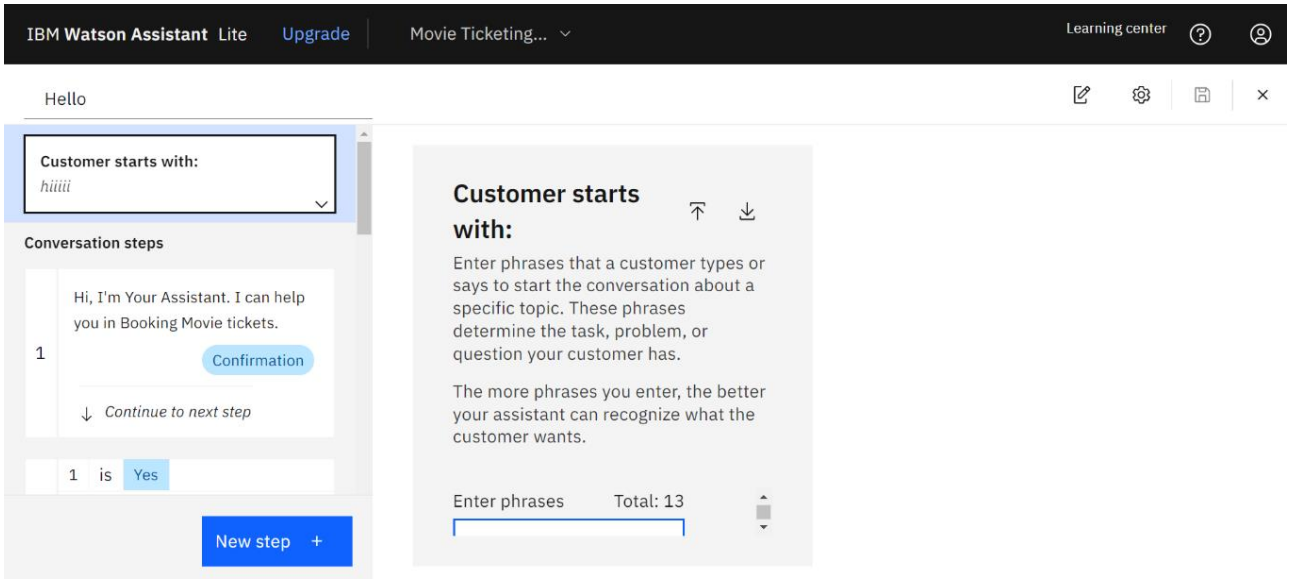
4.2 Intents

Intents are purposes or goals that are expressed in a customer's input, such as answering a question or processing a bill payment. By recognizing the intent expressed in a customer's input, the Watson Assistant service can choose the correct dialog flow for responding to it.

Here, for the Intents we can define 2 main action that the user will have: greeting the bot (#Hello), thank the bot for accomplishing the task (#thankyou).

1. Under the tab Action, click on New action.
2. Enter the action name(“Hello”) 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 at least 5 user examples per intent to proper allow the Natural Language Classifier that is embedded in the Watson Assistant service.

Details about the intent #Hello

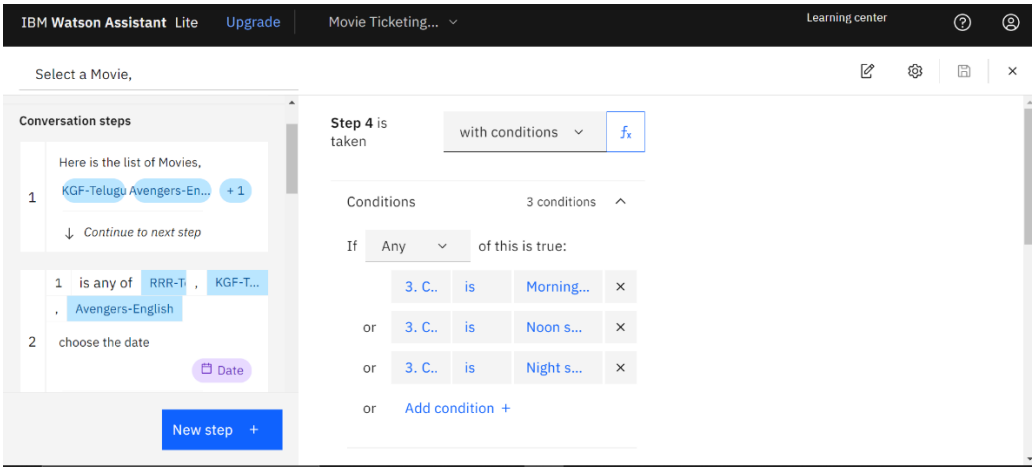


In this Hello Intent it consists of total 7 steps.

1. Hi, I'm your Assistant. I can help you in booking movie tickets.
2. In which locations are you looking for ?
3. You have ended process in middle Try again.
4. Choose a Theatre below. #Warangal
5. You have ended process in middle Try again.
6. Choose a Theatre below. #hyderabad
7. You have ended process in middle Try again.

- Intent example data should be representative and typical of data that your users provide. Examples can be collected from actual user data, or from people who are experts in your specific field. The representative and accurate nature of the data is important.
- Both training and test data (for evaluation purposes) should reflect the distribution of intents in real usage. Generally, more frequent intents have relatively more examples, and better response coverage.
- You can include punctuation in the example text, as long as it appears naturally. If you believe that some users express their intents with examples that include punctuation, and some users will not, include both versions. Generally, the more coverage for various patterns, the better the response.

Details about the intent #Select a Movie

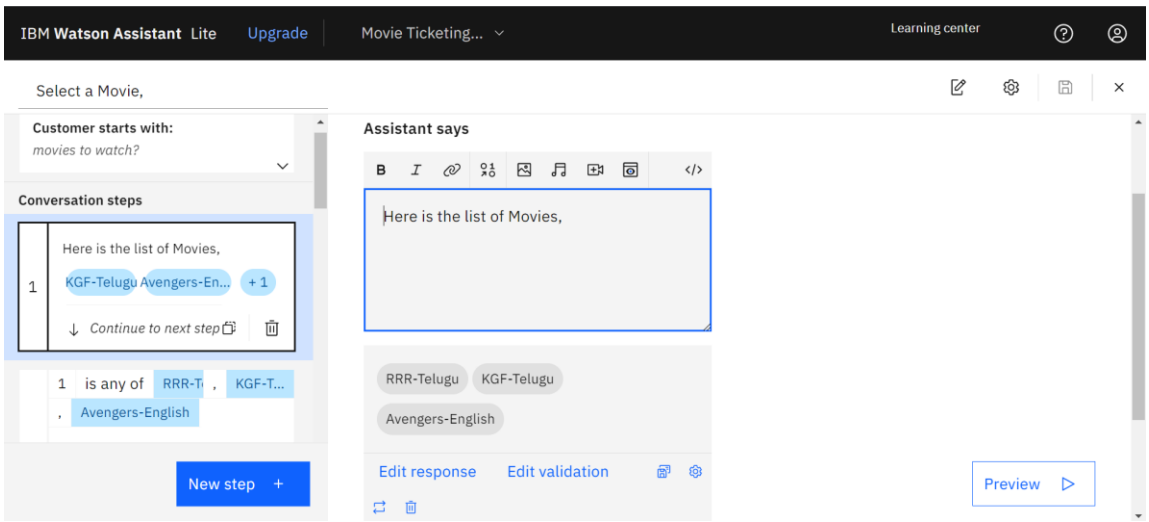


Here in this select a Movie intent, it consists of total 8 steps

1. Here is list of movies.
2. Choose the date.
3. Choose show timings.
4. How many seats would you like to book ?
5. Choose price of movie ticket.
6. Please enter your mobile number.
7. Check your Mobile for SMS, We sent you Movie Tickets Payment Link.
8. Thank You, Happy Movie Time.

Keep your training data current

As the subjects that your customers want to discuss change, you can use the intent and intent user example recommendations features to help keep your intents relevant over time. All the are interconnected with dialogue created with in Watson assistant.



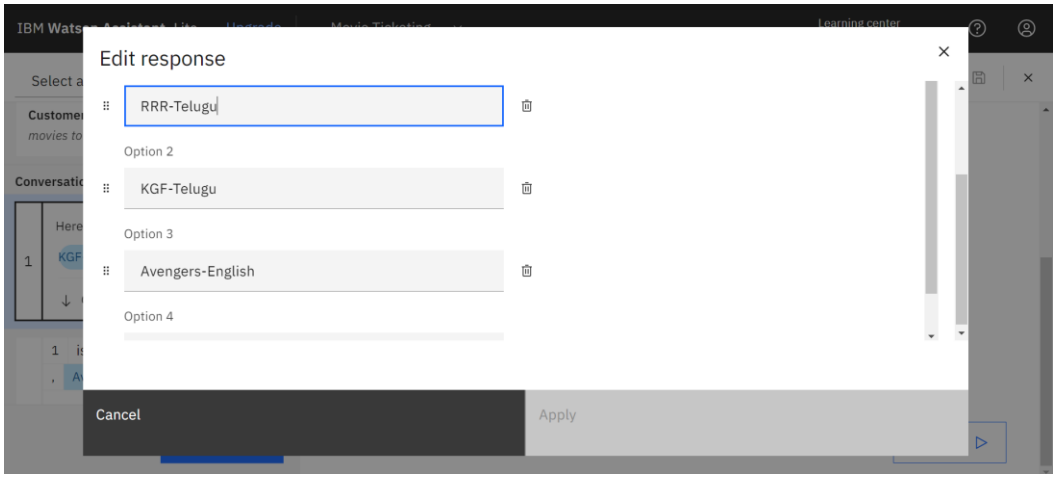
4.3 ENTITIES

Entities represent information in the user input that is relevant to the user's purpose. If intents represent verbs (the action a user wants to do), entities represent nouns (the object of, or the context for, that action).

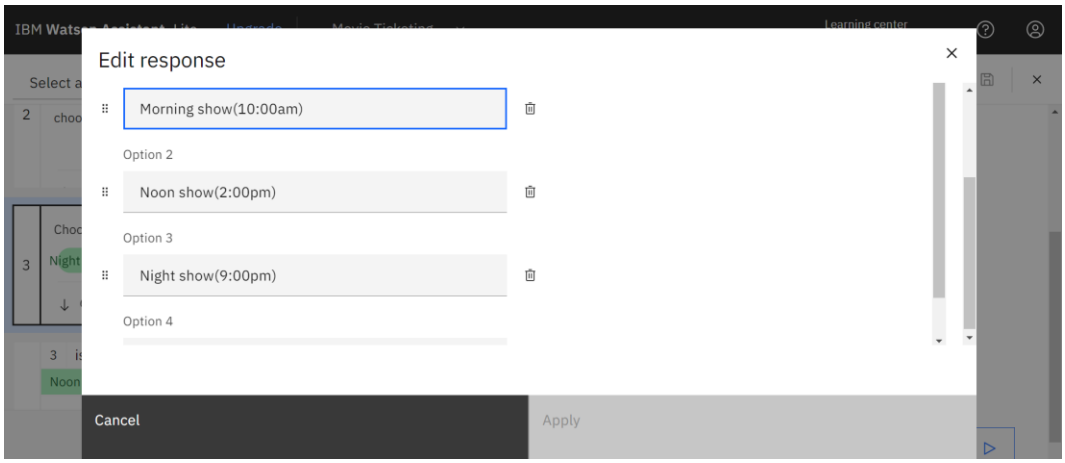
For the entities, we can define 3 main entities that the user might use: terms related to the category of movies (@movie), examples of movie names (@movie-name) For each entity, we will be defining a value and the different synonyms that a person might use by which he/she means the same value.

1. Under the tab Action, click on Add new Step.
2. Select Assistant says dialogue box.
3. Enter the Entity name and click on Create.
4. Define customer response, 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.

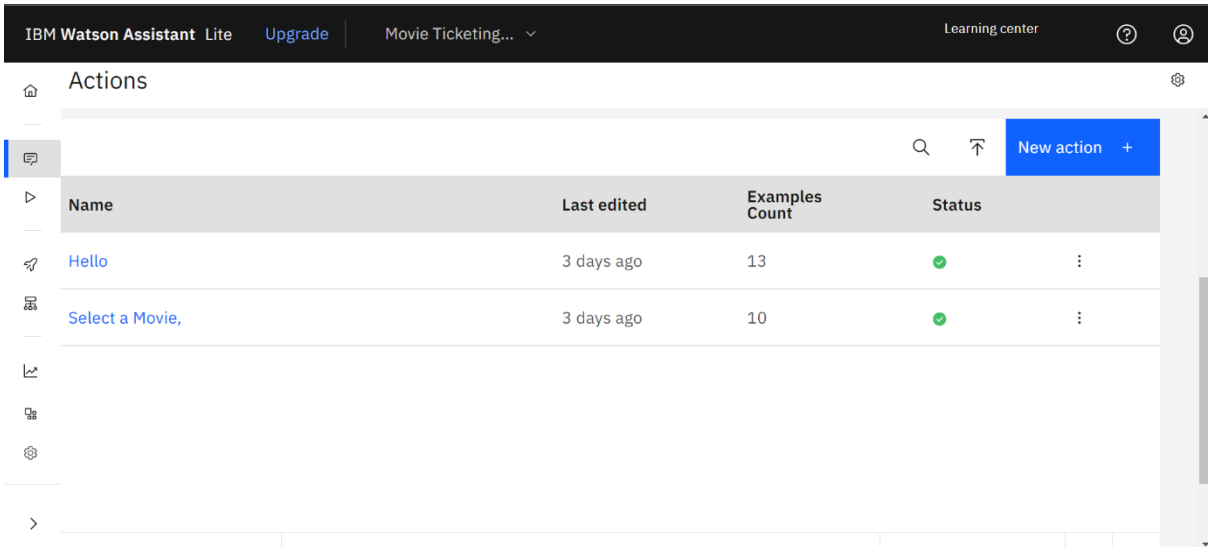
Details about the entity @movie

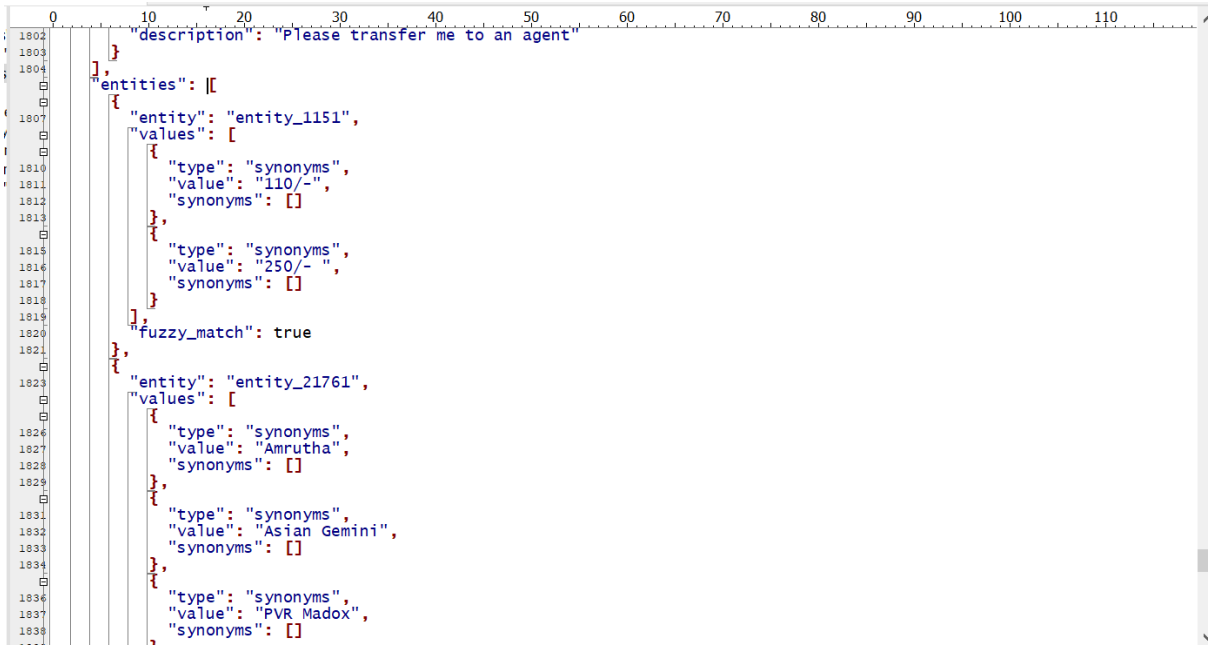


Details about the entity @movie show timings



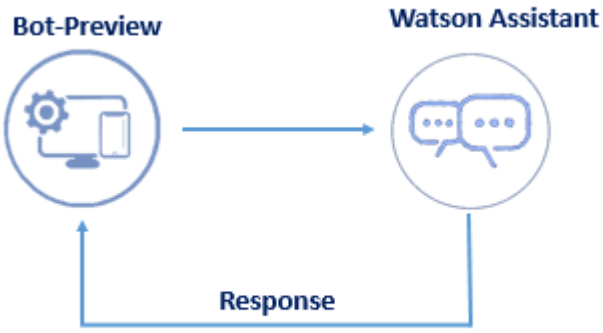
4. Under System entities, which are pre-defined entities that can be directly used, enable sys-date**,** sys-time, and sys-number. These will be used in the dialog to get the date and time of when the user wishes to see the movie and the number of seat he/she wishes to reserve.
5. Enter all the entities in dialogue box, add responses related to steps.
6. Right top we can find save button Save all Actions defined.



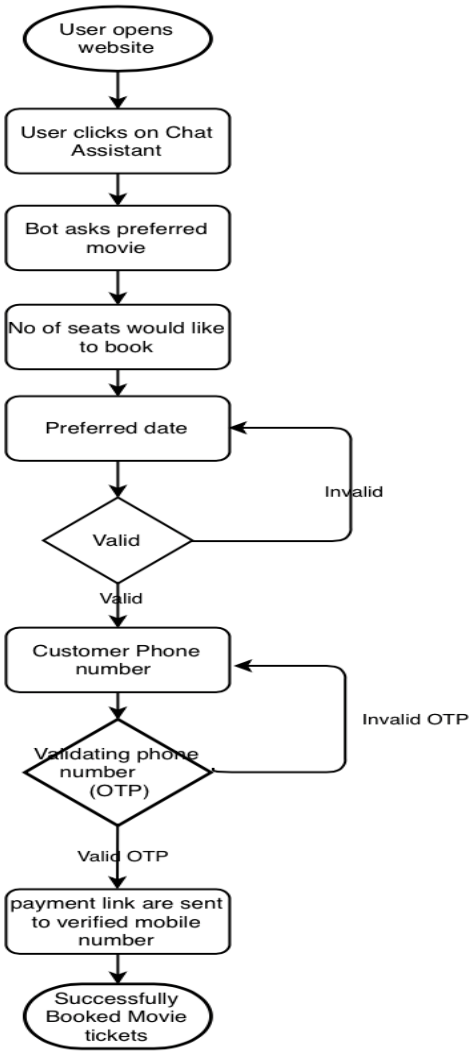


5.DESIGN

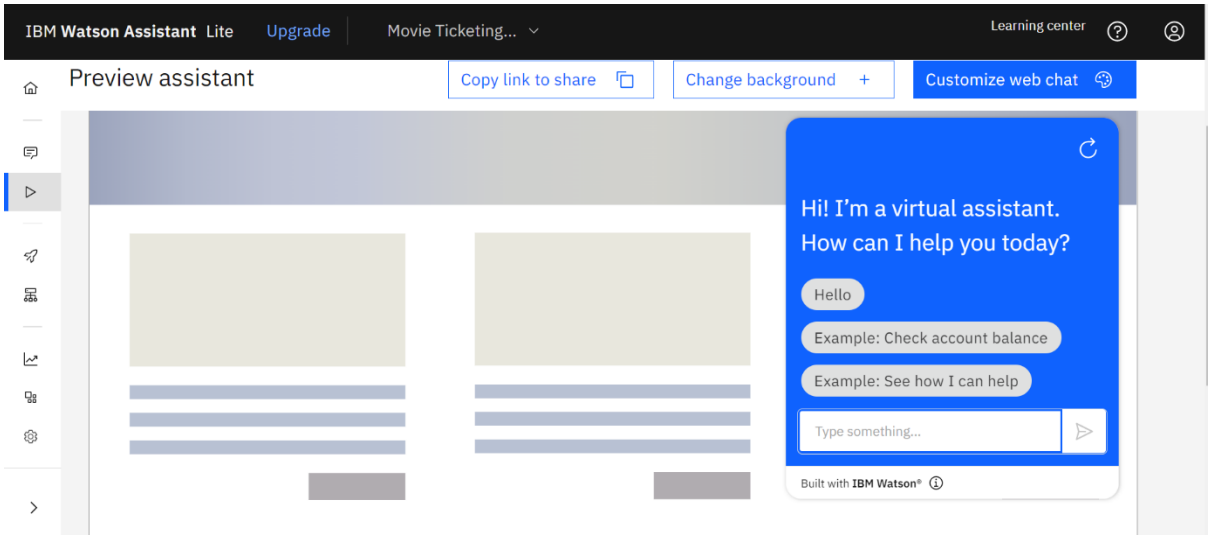
Technical Architecture:

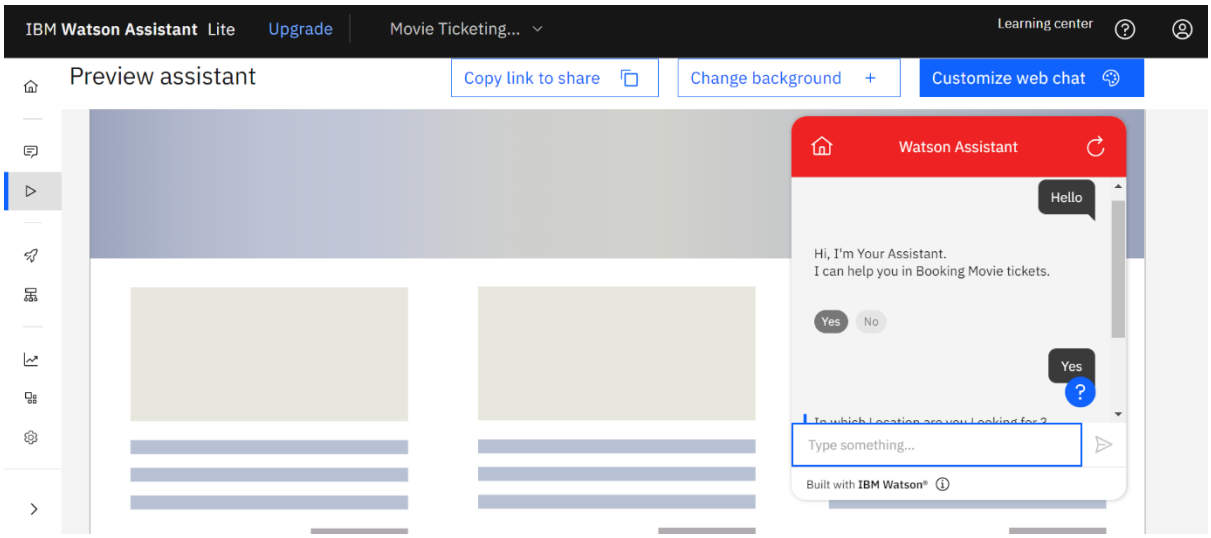


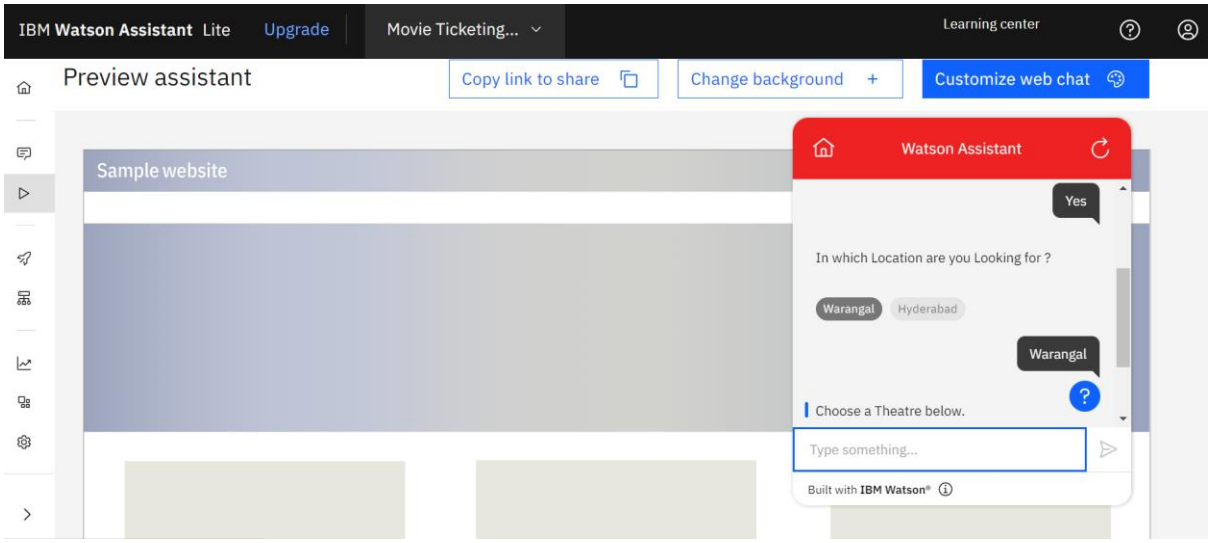
IBM Watson Assistant:

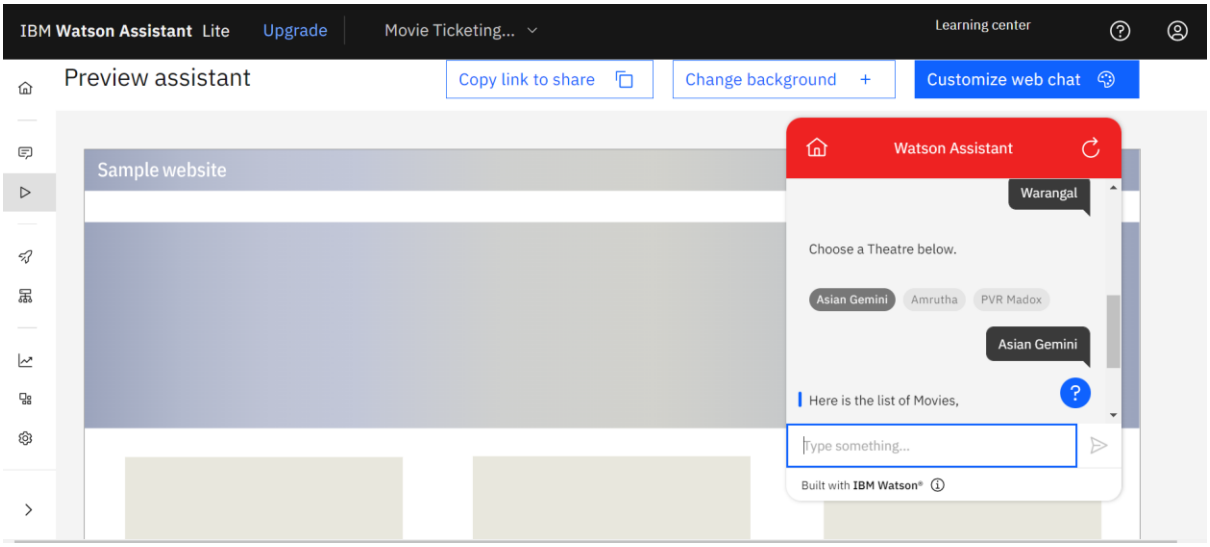


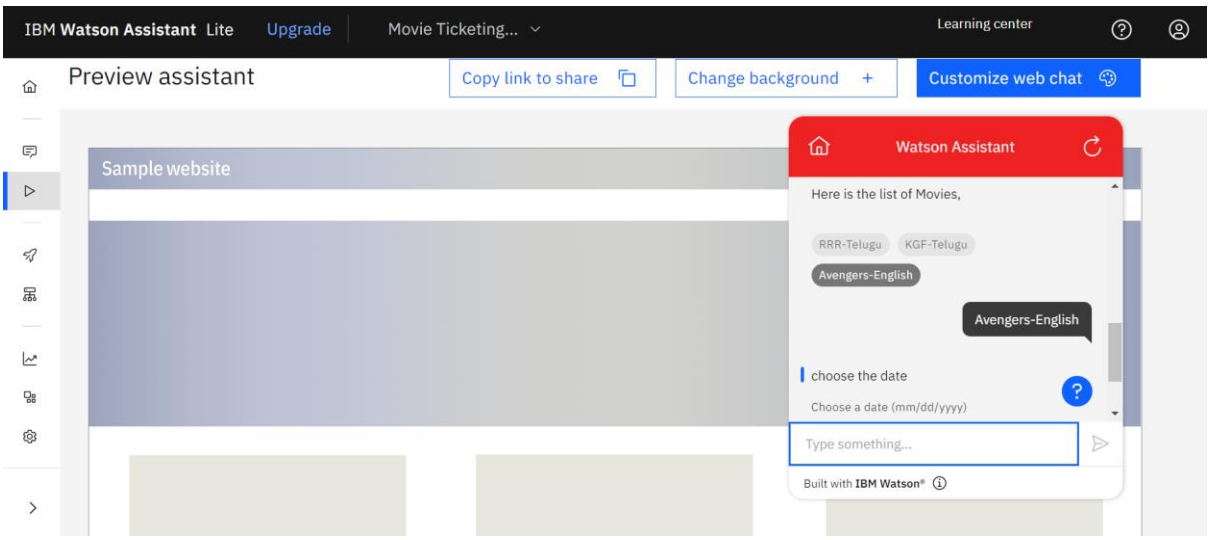
6.RESULT

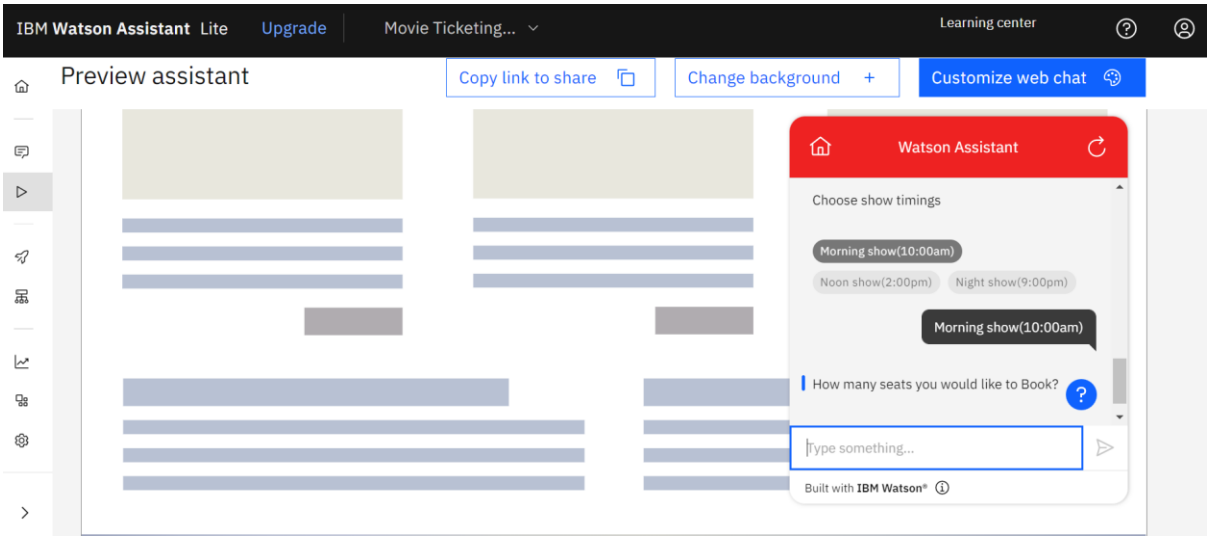

IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Hi! I'm a virtual assistant.
How can I help you today?
Hello
Example: Check account balance
Example: See how I can help
Type something...
Built with IBM Watson®

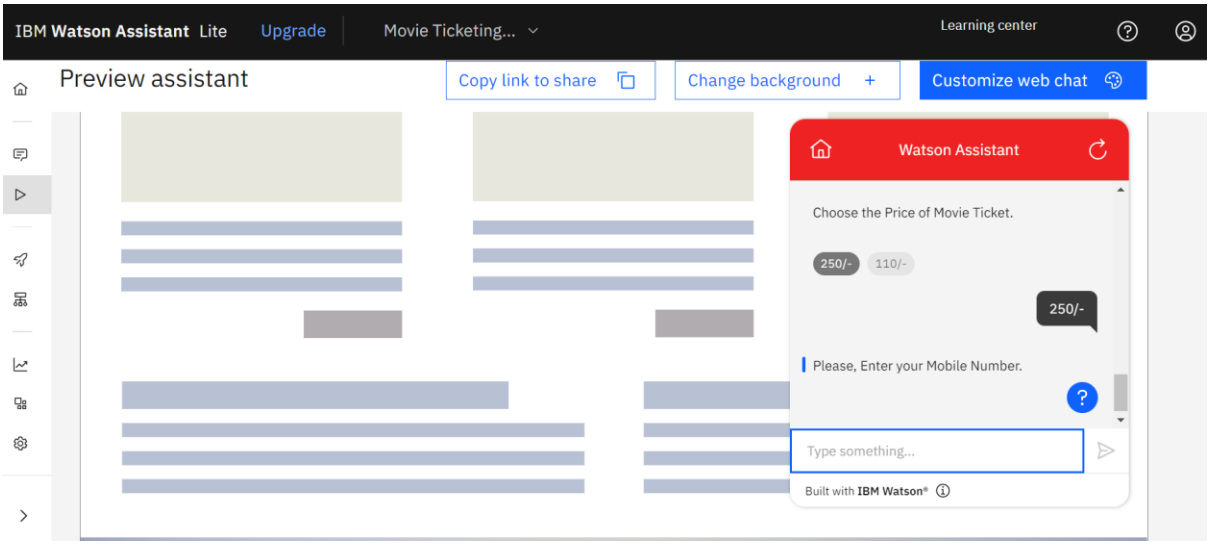

IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Watson Assistant
Hello
Hi, I'm Your Assistant.
I can help you in Booking Movie tickets.
Yes
No
Yes
Type something...
Built with IBM Watson®

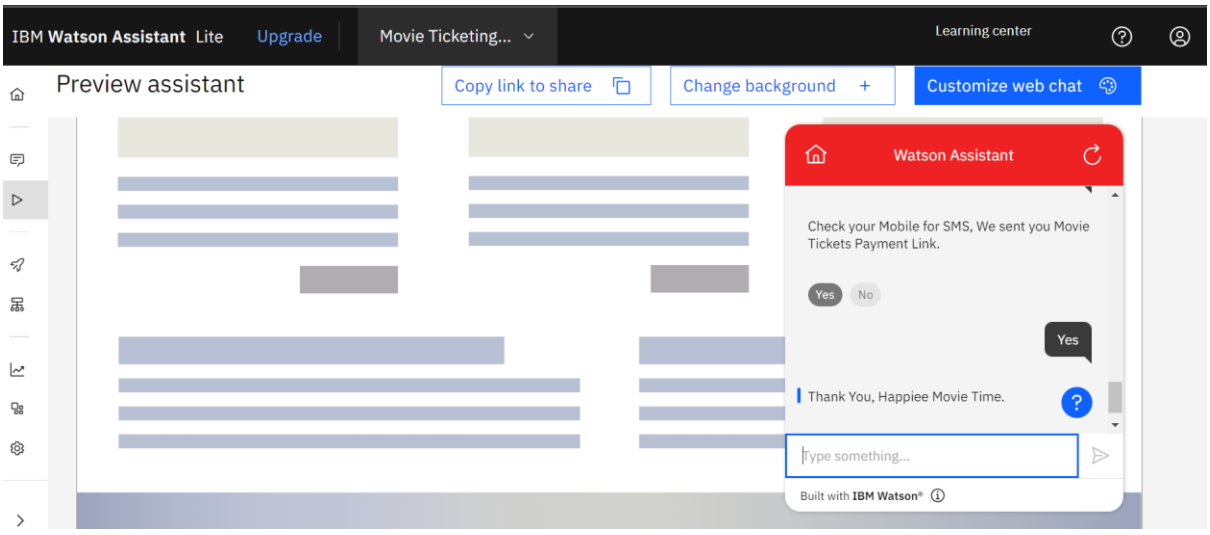

IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Sample website
Watson Assistant
Yes
In which Location are you Looking for ?
Warangal
Hyderabad
Warangal
Choose a Theatre below.
Type something...
Built with IBM Watson®


IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Sample website
Watson Assistant
Warangal
Choose a Theatre below.
Asian Gemini
Amrutha
PVR Madox
Asian Gemini
Here is the list of Movies,
Type something...
Built with IBM Watson®


IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Sample website
Watson Assistant
Here is the list of Movies,
RRR-Telugu
KGF-Telugu
Avengers-English
Avengers-English
choose the date
Choose a date (mm/dd/yyyy)
Type something...
Built with IBM Watson®


IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Watson Assistant
Choose show timings
Morning show(10:00am)
Noon show(2:00pm)
Night show(9:00pm)
Morning show(10:00am)
How many seats you would like to Book?
Type something...
Built with IBM Watson®


IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Watson Assistant
Choose the Price of Movie Ticket.
250/-
110/-
250/-
Please, Enter your Mobile Number.
Type something...
Built with IBM Watson®


IBM Watson Assistant Lite
Upgrade
Movie Ticketing...
Learning center
Preview assistant
Copy link to share
Change background
Customize web chat
Watson Assistant
Check your Mobile for SMS, We sent you Movie Tickets Payment Link.
Yes
No
Yes
Thank You, Happiee Movie Time.
Type something...
Built with IBM Watson®

7.ADVANTAGES AND DISADVANTAGES:

Advantages:

- Online booking systems and scheduling software save your staff time.
- Removing the bottleneck of phone booking systems.
- Greater sales and marketing synergy.
- Increased revenue thanks to upselling.
- A modern approach to booking.
- Can come at a cost.
- Requires internet access.

Disadvantages:

- Not All booking System is Equally.
- Needs Internet Connection.
- Booking tickets before movie showtime.
- Pay Online Booking Fee and Tax.
- There is a limit to booking tickets at a time (Not More than 10)
- Cancellation Charges or No Cancellation (in Some Cases)

8.APPLICATIONS

- Easy booking of movie tickets, events, concerts, and sports
- Easy search by venue, city or event
- Option to choose from single screen theatre to multiplexes
- Facility to go through movie reviews, trailers and theatre list.

9.CONCLUSION

The chatbot “Movie Ticketing Bot Powered by IBM Watson Assistant” was developed to make movie ticketing easier in terms of time.

The following conclusions can be deduced from the development of the project.

- Give the list of movies available
- The Bot should be able to show different show timings
- When a movie is selected the bot should show the availability of tickets
- The bot should be in a position to book tickets.

10.FUTURE SCOPE

Many more features can be integrated to give a better user experience to the customer, such as automating simple payments and allowing users to pay directly over live chat, and integrating as many theatres possible with the website so that every theatre will have profit and the customers also. This action indirectly decreases ticket prices.

11.BIBILOGRAPHY

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https://templates.botstar.com/chatbot-template/cinema-ticket-chatbot

Appendix

A) IBM Watson Assistant

https://webchat.global.assistant.watson.appdomain.cloud/preview.html?backgroundImageURL=https%3A%2F%2Fussouth.assistant.watson.cloud.ibm.com%2Fpublic%2Fimages%2Fupx-27f286a3b7b94b37bb41c522d246de11%3A%3A3fb3c84c-e50b49e09adb818a42bc22ec&integrationID=8e0dc79f9ef5444c849f6f92137d737a&region=us-south&serviceInstanceID=27f286a3-b7b9-4b37-bb41c522d246de11