



Chatbot for Train Ticket Booking Enquiries

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Abstract:

To access this Ticket Booking System in Chatbot, users doesn't suppose to register by giving their entire details to retrieve information but for booking a ticket registration is must. In the Chatbot, User can get the details of in between Stops and its timings while Travelling from one place to another place will be updated automatically with request and responses in chat. User can also able to see the previous Stop places and it's Timings for starting and ending points. Chatbot helps to give responses for the users requests with the help of pattern matching and NLP programming. The main goal of their creation was to resemble a human being in the way they perform said interaction. Chatbots use sophisticated natural language processing systems, but many simpler systems scan for keywords within the input, then pull a reply with the most matching keywords, or the most similar wording pattern, from database. It enquiries about train details for customers. The process of creating a chatbot follows a pattern similar to the development of a web application. The chatbot will define the chatbot personality, the questions that will be asked to the users, and the overall interaction.

INDEX TERMS:

Natural language processing (NLP), ASP .NET, Chatbot.

1. INTRODUCTION

A **chatbot** (also known as a **talkbot**, **chatterbot**, **Bot**, **IM bot**, **interactive agent**, or **Artificial Conversational Entity**) is a computer program which conducts a conversation via textual methods. Such programs are often designed to convincingly simulate how a human would behave as a conversational partner, thereby passing the Turing test. Chatbots are typically used in dialog systems for various practical purposes including customer service or information acquisition. Some chatbots uses sophisticated natural language processing systems, but many simpler systems scan for keywords within the input, then pull a reply with the most matching keywords, or the most similar wording pattern, from database. The implementation of chatbot system has resulted in better resource utilization and increased responsiveness of user behavior. It is one of the easiest way to fetch information from a system without having to think for proper keywords to look up in a search engine or browse several web pages to collect information users can easily type their query in natural language and retrieve information. Each time a user enters a statement, the library saves the text that they entered and the text that the statement was in response to it.

2. EXISTING SYSTEM:

The first chatbot developed was ELIZA. It was developed by Joseph Weizenbaum using a keyword matching technique. The idea was to read the input from the user and search for specific patterns, if a pattern was found then the answer is retrieved. If a keyword is not found then ELIZA tries, according to defined rules, to get more information from the user to keep the communication with the user alive. ALICE uses pattern matching and saves the information in Artificial Intelligence Mark-up Language (AIML) files. Like ELIZA it

is a chat-bot that is used mainly for the purpose of chatting with the user. It is mainly used for casual communication with user. Natasha is a live assistant on hike android application and replies to your text, in a pre-defined intelligent way. You can spend time with her if you feel bored, she will surely make you feel better. She is a really good assistant who can provide you with quite a lot of useful information .

DISADVANTAGES

- ❖ ELIZA doesn't understand what it is saying. It only produces results according to rules that are predefined.
- ❖ ALICE does not have the ability to learn and can only come with data that exist in its database.

3. PROPOSED SYSTEM

- ❖ This system communicates with the users using a chatting application which provides intelligent answers and guidance to get information required for bookings of train tickets.
- ❖ The system provides precise output to its users even avoiding minor spelling mistake.
- ❖ Moreover the parsing avoids sending the system, words that do not form patterns.
- ❖ Regular travelers can make most out of the system.

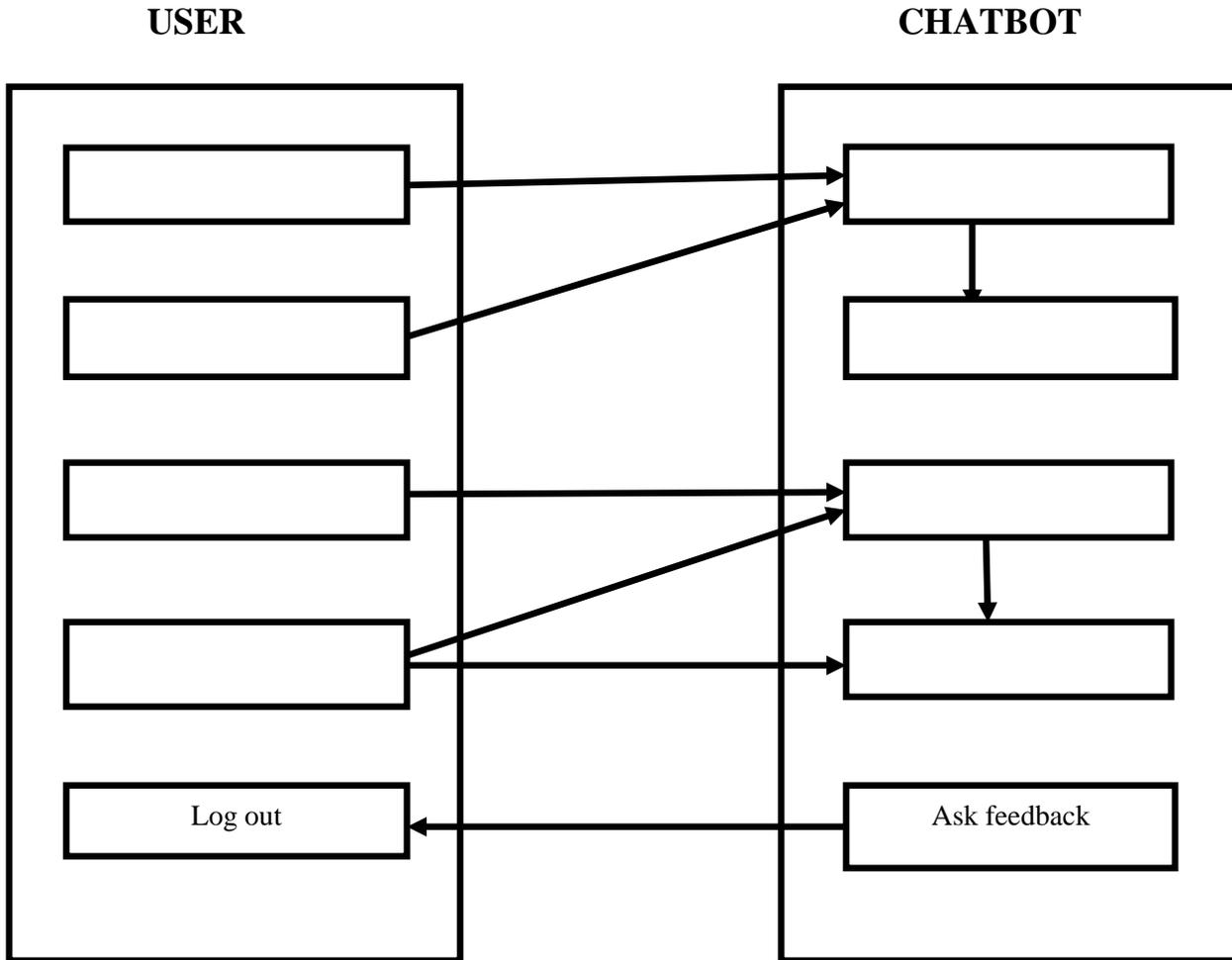
ADVANTAGES

- ❖ It starts with providing of input by the user through the chat interface. Now the chatbot checks whether input provided by the user is inappropriate, insufficient, complete, or conversational.
- ❖ If the input is inappropriate the user is notified that he has entered a wrong input.

- ❖ If the input is insufficient the user is notified to enter the missing parameters. If the input is conversational the chat-bot undergoes casual chat with user. If the

input is complete the user is provided a precise output.

4.ARCHITECTURE DIAGRAM



4.MODULES

- Search Module
- Chat Module
- Payment Module
- Update Module

MODULES DESCRIPTION

Search Module

In this module the Customer can easily track the information of the entire train destination as arrival time, departure time, charges details and many more information through chat. In between stations and their stoppage duration can also be available. The search module is used to search trains for the major cities and get information of all the stations and their stoppage timings.

Chat Module

By this module we can get all information about the train details and its location through chat method and also we can book a ticket by chatbot. The information about the stoppages and the train major information of whole distance

in kilometers and last stoppage timing. It includes about food and berth details. The train speed and total hours till last stop.

Payment Module

After booked the tickets the customer pay with credit or debit card through online and booking confirmation will be sent to email after successful payment. The payment module is used to book a ticket with proper transaction.

Update Module

The train details had been updated and inform if there is a delay. The customer can collect the updated details and it display the links to book tickets.it update about the train if it is cancelled or any problem in the way.

5. CONCLUSION

This project had given me an ample opportunity to code, train and implement an application. This has helped in putting into practice various software engineering principles and Database Management concepts like

maintaining integrity and consistency of data. Furthermore, this has helped me to learn more about ASP.NET, JSON, C#, MYSQL, VISUAL STUDIO 2015 and bot framework emulator.

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