Edubot – Institutional Chatbot and Chatting Application

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Abstract- Application is created for students and parents to interact instantly without any physical contact during this pandemic. Chatting application helps to eliminate the time delay and physical conversations of the parents/students with the administration and teachers in the school. The bot is provided with a better understanding and control over the information like the details for Hierarchy of the institute. The goal of this project is to develop a web application for the use of end users such as students and their parents to interact with institutional admin and faculty. The other most important use of this web application is the conversation between different departments, sharing of information and important data files between school teachers and other personnel in a safe, secured and private IT environment rather than using any other web server technology or cloud technology. Apart from this, this web application provides a platform where the internal personnel can interact with each other using the Chat box integrated in this application for the use of conversation and information sharing which is safe secured and can be kept private. This application also provides valuable information about the school its various courses and curriculum for the students and their parents to understand. The chat bot part will be understand the hierarchy and make things better for the parents and students to understand it. It will also provide the details such as fees structure as per classes.

INTRODUCTION

This article guides a stepwise walkthrough of Web based chatting application and chatbot. Chatting application may refer to any kind of communication over the LAN and internet that offers a real-time transmission of text messages from sender to receiver. Chat messages are generally short in order to enable other participants to respond quickly. Thereby, a feeling similar to a spoken conversation is created, which distinguishes chatting from other text-based communication forms. Web based chatting may address point-to-point communications as well as multicast communications from one sender to many receivers. The chatting application integrates the information management of the educational institute for better control and timely response. This eliminates time delay and physical conversations of the parents/students with the administration and teachers in the school.

Edubot knows the answer only because departmental heads names are in the associated pattern. Similarly, Edubot respond to anything relating it to the associated patterns. With the help of equation, word matches are found for given some sample sentences for each class. Classification score identifies the class with the highest term matches but it also has some limitations. The score signifies which intent is most likely to the sentence but does not guarantee it is the perfect match. Highest score only provides the relativity base.

PLANNING OF THE PROJECT

The Idea was proposed and formulated under the guidance of Prof. Jyotsana Gabhane. The idea was to create an application which can act as a precautionary measure during this pandemic. The education category was selected as it is the most critically affected category during this pandemic.

Parents/Students are not able to interact with the departmental leads without any dependency so, to avoid this dependency and make the process transparent and precise this application idea came into existence. The main problem students/parents and even faculties and admin are facing is interaction without any physical

contact. The research was initiated with this issue under the guidance and supervision of Prof. Jyotsana Gabhane. The conclusion was this application. The data source and the information management was initiated with the references available over the internet.

The application software which are used in preparation of this project are HTML, JQUERY, CSS, Bootstrap, SQL, PHP

STUDIES AND FINDINGS

The exact problem of educational institutes was analyzed by our research team to find out the problems they are facing related to this pandemic. We need a solution which can be accepted by every category of people and must be easy to understand at no cost.

In this approach we started collecting data over the internet and continuous guidance from our faculties. We carried on a research and categorized the points to meet the conclusion. We deliberately looking for a solution and after combing the researches we came into the conclusion to create this application with multipurpose usages.

The data collected and the research made over the internet lead us to the path where we have the written propaganda of the project and then we started to utilize the data to create the exact application we required with the help of web development.

The Block Diagram is created as mentioned below to make the study of chatting application more accurate.
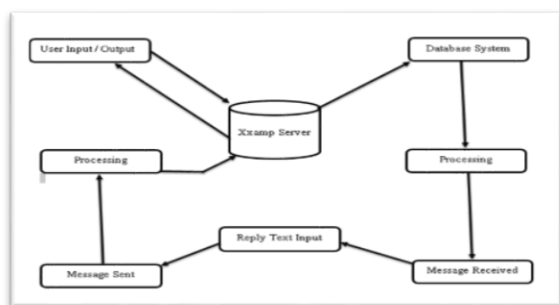
EXPERT COMMENTS

The application was reviewed by our faculty experts with some positive comments. The idea and work in progress was thoroughly reviewed by the experts and additional comments provided by them to make the application more efficient and accurate. The idea was appraised by faculties.

IMPROVEMENTS

We have analyze and understand all the provided review comments thoroughly and made modifications as per the comments. The review provided by expert faculties helped us to create a better version of this application or else we can say that an advance version of this application was emerged only because of our faculties.

The improvements are done under the guidance and supervision of our faculties which made the project more accurate.

LITERATURE REVIEW

Internet communication is getting more and more popular among the public. Apart from using telephones or automobiles and sending mails, people can now communicate with each other through the chat technology. The chat, is a kind of Internet technology that supports human-to-human communication. Edubot, for instance, is one of the latest chat. With Edubot, users can chat, send messages, files and URL's. Edubot enables us to stay in connected anytime, anywhere with faculties. There are many applications which provides chat services, the most popular among them are WhatsApp, Facebook messenger, yahoo IM, emails etc. Edubot have evolved from being just another application to send messages. Edubot have features such as transfer of different types of files, video chatting, group chat etc. The common disadvantage is that these applications restrict the size of the files being transferred. The most important features of Edubot are:

• Easy and quick communication.

• Unlimited data transfer without the size restriction.

• Group chat and the client.

The client initiates the communication by requesting for the server location information and display the received chat messages. The server conducts the chat session and manages all the client. The client starts the session by requesting for two parameters, the server name and the port number. The client and the server have two type of communication between them. Firstly, control message where one can join and leave chat session, create a chat room. Secondly, chat message where one can send and receive messages, transfer files from or to their contacts.

Front end of the system. It is responsible for collecting the user queries from the user which are the input to the system. It is also responsible for displaying the system generated results to the user. Therefore, it can be said that the chat interface is the face of the system through which the entire communication takes place. It is the mediator of conversation between the system and the user. The query that user fires on the chat interface is passed on to the chatting backend which acts as a message delivering system.

The conversational language used by humans for day to day conversations is not as perfect as the formal language. It does not focus much on the vocabulary and the grammar. Hence, it becomes difficult for a system to understand the intent of the sentence. The input received from the user is in unstructured text format which cannot be understood by the system directly. It understands input only in structured formats. The unstructured text received from the user is converted to structured format by extracting important words and patterns from the user text using the NLU techniques. Segmentation part helps for tokenization. This is the process of splitting text into smaller and meaningful units. These units could be paragraphs, sentences, clauses, phrases, words or letters. The smallest unit are the letters. For information retrievals, no matter how big our data is, no sentence sent by the user can be perfectly same to any sentence in the database. But there can be sentences with the same intent.

After understanding the intent of the user sentence, the database is checked for a sentence with the same intent. The matched sentences have difference of words which are used to express the same content. They use alternative words or synonyms. This makes synonym detection necessary for the system.

CONCLUSION

The application is created with multipurpose usage to overcome the interaction issue for educational institutes during this pandemic. The application helps parents to reach the faculty over internet without meeting physically to avoid the threat of Pandemic. The application interface is created in such a manner that everyone can use it without any guidance. The application is created especially for the educational institutes as they are the most critical categories related to Pandemic. The application can be modified to increase the scope for different categories such as healthcare, Government and other important fields. The application can be a game changer for many educational institutes as we are going through pandemic and the only issue currently is interaction of people with each other.

ACKNOWLEGMENT

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