

DBATU UNIVERSITY
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A project report on

“Chatbot Application”

Submitted in partial fulfillment of the requirements for

B.Tech (Computer Engineering)

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CERTIFICATE

This is to certify that the project entitled
“Chatbot Application ”

has been successfully carried out by “*Kiran Ganji, Jayant Badgu, Kartik Kurapati, Nagesh Katkar.*” at **A. G. Patil Institute of Technology**, in partial fulfillment of the requirements for **Bachelor of Technology in Computer Engineering** of **DBATU University, Lonere**, during the academic year **2022-2023**. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in report deposited in departmental library. The project has been approved as it satisfies the academic requirements in respect of project work prescribed.

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1. Introduction:

It is a layer on top of, or a gateway to, a service. Sometimes it is powered by machine learning (the chatbot gets smarter the more you interact with it). Or, more commonly, it is driven using intelligent rules (i.e. if the person says this, respond with that).

The services a chatbot can deliver are diverse. Important life-saving health messages, to check the weather forecast or to purchase a new pair of shoes, and anything else in between.

The term chatbot is synonymous with text conversation but is growing quickly through voice communication... “Alexa, what time is it?” (Other voice-chatbots are available!)

The chatbot can talk to you through different channels; such as Facebook, Messenger, Siri, We Chat, Telegram, SMS, Slack, Skype and many others. Consumers spend lots of time using messaging applications (more than they spend on social media). Therefore, messaging applications are currently the most popular way companies deliver chatbot experiences to consumers

1.1 Purpose of the Project:

Chatbot applications streamline interactions between people and services, enhancing customer experience. At the same time, they offer companies new opportunities to improve the customer's engagement process and operational efficiency by reducing the typical cost of customer service. A chatbot can communicate with a real person behaving like a human.

Let's list down purpose of chatbots.

You can create chatbots for any business the same as you recruit a person for any department of your company. Whether you are a:

1. Insurance Assistant
2. Education Consultant
3. Legal Assistant
4. A real estate business
5. Recruiter
6. Travel Agency
7. Wedding Planner
8. Hospital or a Beautician!

Now a days, we can also use this application as an online teaching for primary standard students. Solving questions like MCQ, s and etc. by using chatbot application we can do anything that we are mentioned in above list.

1.2 Existing System

Chatbots are trending and they can now be found in almost every industry from e-commerce to travel. The increased use of late may be due to improved language processing or the more accessible development tools for non-developers. It may also be that many chatbots are made available through mainstream messaging applications, thus not forcing the user to download yet another application and allowing them to keep using an application they are already comfortable with.

1.3 Limitation of Existing System

Unclear scope of the chatbot

Despite the progress of the last few years, chatbots have not yet got the versatility and capability of improvisation of human brains. Just like any human being that works for a company, it needs a clear and precise scope for its utilization.

The problem of the scope of a chatbot is strictly connected with the purposes of the organization that is going to use the bot. In many cases, the goals are too vague or not well-defined, which answers the question why chatbots fail.

Fix: as it is better explained in the article of this blog: 10 Chatbot Best Practices, the first step when designing a chatbot is to clearly define your objectives and your chatbot's roles.

Settling Unrealistic expectations is often the reason why chatbot fails

Most chatbots are based on a set of rules that dictate the answer to give to a specific question by drawing the necessary resources from a database. The richer the database that supports the bot is, the more complete the range of questions that a chatbot can answer.

The fact that many chatbots are only rule-based which means the developer must implement all options and it reduces the options. There is little flexibility or room for improvement. Implementing AI can help overcome some of these limitations.

Unfortunately, as good as the AI training is done, it cannot match any possible human questions. And when the bot cannot understand a user question, it often replies with something nonsensical. This breaks the user experience and sends clients in total confusion. Thankfully, with proper training, it can be overcome.

1.4 Future scope of the project:-

As we know this is Chabot application and currently this is only for kids. And in future we supposed to do for college level and Competitive exams like JEE, GATE, NEET, CAT, SAP, CET, etc. A chatbot can help promote online business by providing users with personalized buying experience to communicate and purchase remotely without visiting a physical store.

2. Software Requirement Specification

2.1 Functional Requirements:

1. Chatting:

- a. The system should allow users to chat.
- b. The system shall inform the user if an answer is not available.
- c. The system shall inform the user about spelling mistakes.
- d. The system shall inform the user about the validity of the sentence.

2. Searching:

- a. The system should allow users to search for information about admissions.
- b. The system should allow users to search for information about tuition fees.
- c. The system should allow users to search for information.

3. Logs:

- a. The system should maintain a log of the current question and answer if the user is not satisfied.

2.2 Non-functional Requirements:

1. User Interface:

- a. The system shall maintain an easy to use interface across all functionality
- b. The clients' user interface should be compatible with all commonly used Browsers, such as Internet explorer, Firefox, Google chrome and Safari

2. Portability:

- a. The system should run on a variety of operating systems that support the Java language.
- b. The system should run on a variety of hardware.

3. Scalability:

- a. The system shall be able to scale based on the number of users using the system

2.3 Software and Hardware Requirements

Software Requirements:

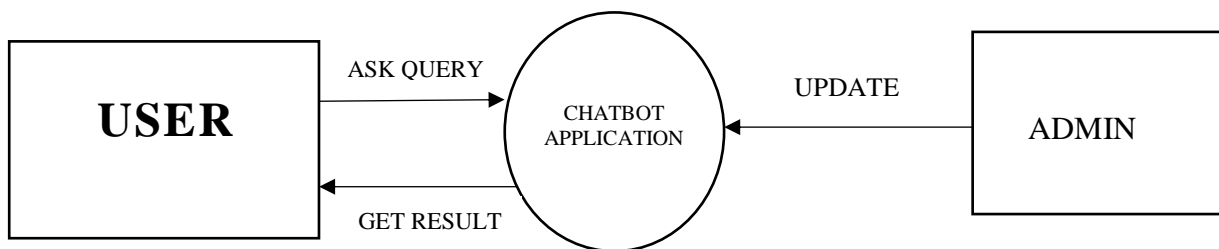
- Visual Studio
- Web browser
- MS Word
- Notepad++

Hardware Requirements:

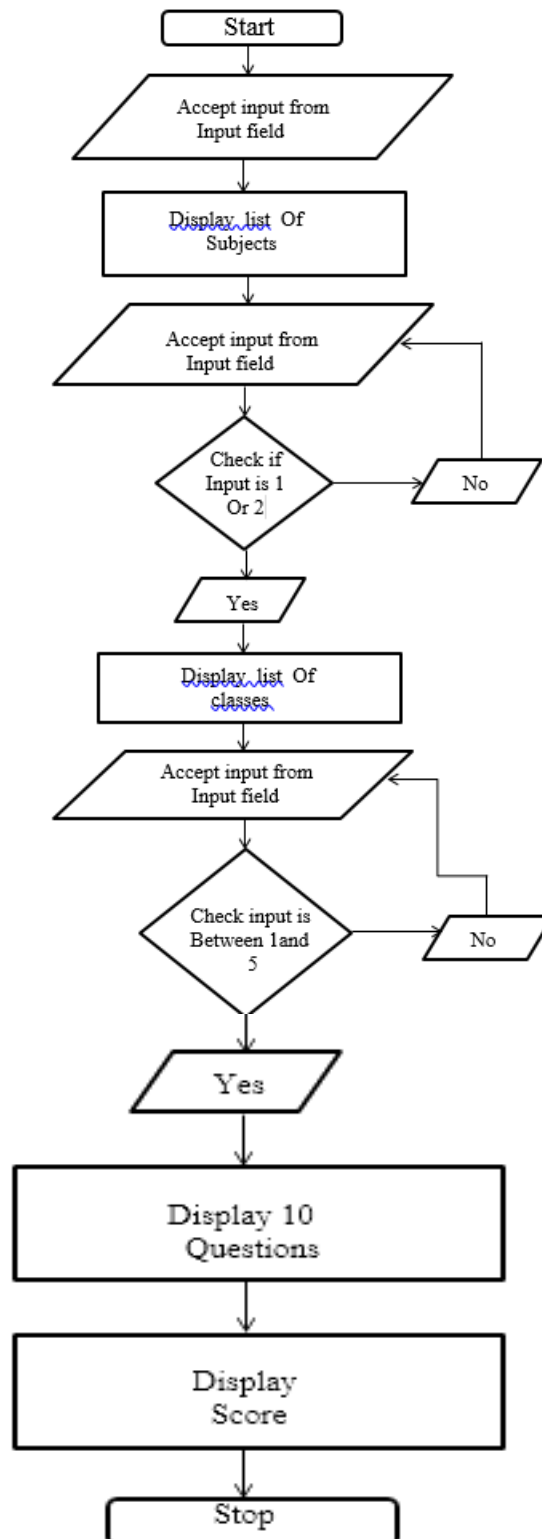
- Laptop core i5 windows10
- Internet Connection
- 4GB RAM

3. Design

3.1 Data Flow Diagram



3.2 Flow Chart



Conclusion

A chatbot is one of the simple ways to transport data from a computer without having to think for proper keywords to look up in a search or browse several web pages to collect information; users can easily type their query in natural language and retrieve information. In this paper, information about the design, implementation of the chatbot has been presented. From the survey above, it can be said that the development and improvement of chatbot design grow at an unpredictable rate due to variety of methods and approaches used to design a chatbot. Chatbot is a great tool for quick interaction with the user. They help us by providing entertainment, saving time and answering the questions that are hard to find. The Chatbot must be simple and conversational.

Since there are many designs and approaches for creating a chatbot, it can be at odds with commercial considerations. Researchers need to interact and must agree on a common approach for designing a Chatbot. In this project, we looked into how Chatbots are developed and the applications of Chatbots in various fields. In addition comparison has been made with other Chatbots. General purpose Chatbot must be simple, user friendly, must be easily understood and the knowledge base must be compact.

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