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Virtual Agent Using Chatbot

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ABSTRACT: As we are growing with the faster technology where AI is making its impact on every activity to improve efficiency of work. Still, we are facing problem like stand in queue to just resolve a stupid query and make your work done although we are having website or a web-based agent but it is not an efficient way to get queries resolved as it is time consuming. This are some basic problems which we can resolved modern trend like AI Chatbots. Chatbots are efficient way to reduce queues and paperwork. As it capable to respond thousands of users at a time and resolve their queries.

If we take an example of schools or colleges. There are lots of area we can make automate with the help chatbots. Chatbots are really easy way and also it can be available 24X7 on every type of device. So, the user really gets attract to it. College chatbot is a project interprets the user message and responds accordingly. The algorithm interprets the user query with machine learned data and a per the confidence based on trained data it will reply to user. Currently this application is capable to understand user queries and give response for which they are trained. Instead of wasting time on web search users will get their queries resolved quickly without any time delay.

I. INTRODUCTION

- Chatbots were introduced in early 1960's by MIT professor Joseph Weizenbaum it is called ELIZA.
- Later in 2009, a company called WeChat in China created a more advanced Chatbot.
- Later with evolving technology this trend become one of the major role in IOT.
- As we are moving toward a world where humanize robot can process the human intention by neural network whereas the chat bot with their NLU (Natural language Understanding) making this more practical.
- They can guess or score the user intention based on data we have trained. This is really good step towards and automated world

II.LITERATURE SURVEY

- Even though we are having college portals still we need to keep one person engage to solve the user queries. That causes a long queue and waste of your precious time.
- As we are era where we are trying to implement the solution which are based on IOT to make things simple and easy for humans. So Digital Agent (Chatbots) are the one of the solution to this long queue.
- With capability of NLU we can create the Digital Agent for college which will help us to resolve many issues based on their understandings.
- Surely it will need lot of training to them to understand human intention but they are the possible great source in future to shut down this long queue.

III.MOTIVATION

- In are day-to-day college life we do any activities which can be automated with virtual agents.
- Virtual Agents can serve lot of peoples for a different activity at a time.
- Virtual agent is the emerging technology which can reduced manual efforts which will result in time consumption.

- School or Colleges are the areas where such technology can help to reduce human work, time and lot of paperwork.

IV. PROBLEM IDENTIFICATION

- In current digital world we still suffering for long queues and procedural work that can be done with help of Digital Agents like chatbots. Even though we are having web-based platforms still some time you need to get guidance before proceeding to fill the forms for basic information.
- Chatbots are the one of the Technology and one step towards IOT where the machine is able to recognise the user problem and try to give solution based on it.
- So, in this digital era, we are making use of this agents to get our work done.

V.PROPOSED METHODOLOGY & DISCUSSION

System Components & Working Process: -
To create chatbot below are the requirements:
- Visual Studio 2019
- Bot Framework v4
- SQL
- LUIS (Language Understanding Intelligent System)

Implementation Technology: -
LUIS (Language Understanding Intelligent System):

- LUIS is brain of the chat bot.
- It is NLU technology by Microsoft.
- It's service which is part of Microsoft azure platform.
- it is used to understand user intention.

Bot Framework V4:
- bot framework v4 is the Microsoft framework which will help us to build chatbot application
- with it is dialog we can design multiple flows to make bot conversation interesting.
- With card we can design interactive (Clickable) conversation for chatbot.

Algorithm: -
- Step 1: On user utterance (Query / User input) check where user is guidance (within conversation flow) by using activity details
- Step 2: Agent will Query LUIS with the user input to get understand the user intention
- Step 3: on the basis of user intention, it will fetch response for SQL
- Step 4: If Agent is not able to understand the user intention it will come back with no result found response
- Step 5: if user in guidance and provided invalid input. Agent will comeback with validations.
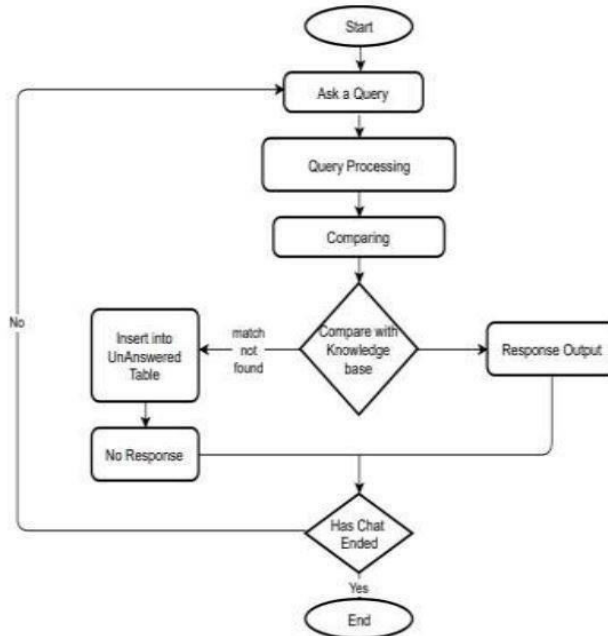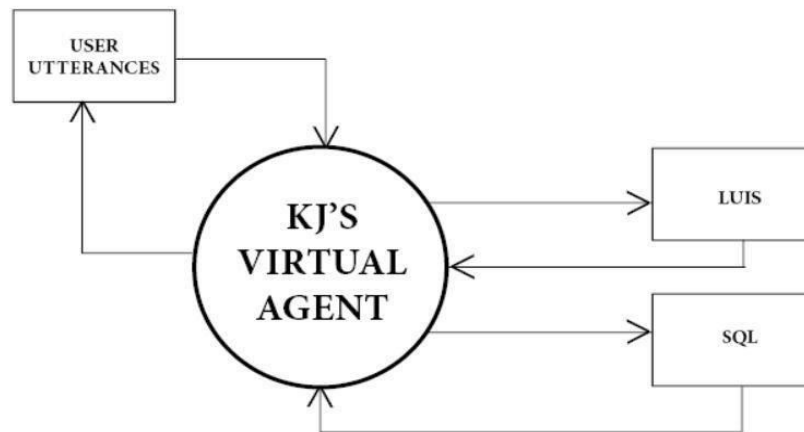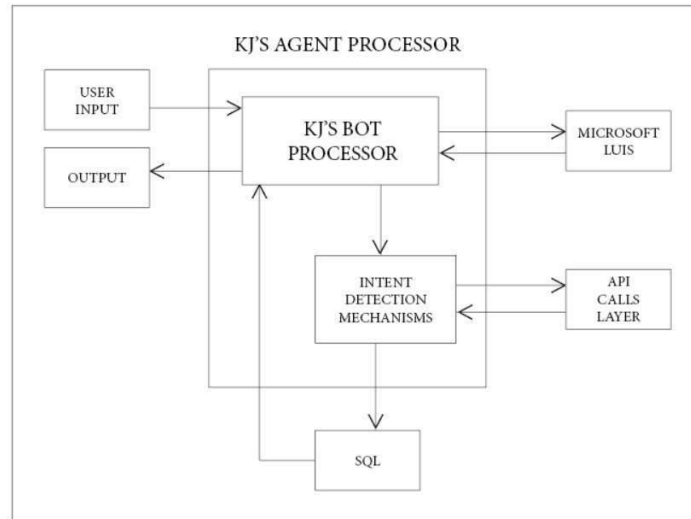
Fig. 1 System Diagram

HIGH LEVEL SYSTEM DIAGRAM
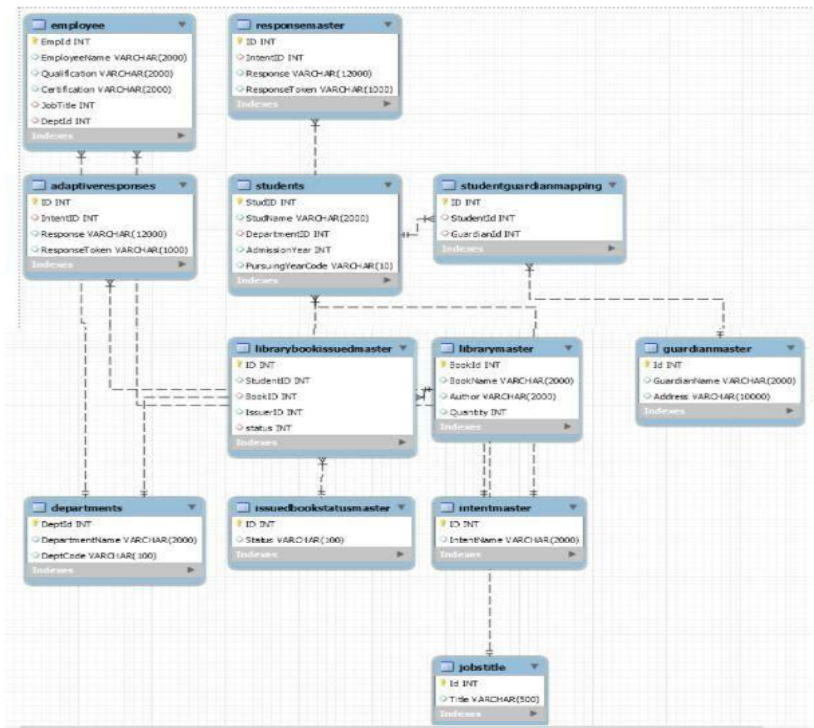
LOW LEVEL SYSTEM DIAGRAM

Fig.3: Database Diagram

Advantages: -
- Faster
- Cheaper
- Easy to Handle and Manage
- Multitasking

Disadvantages: -
- Not having capability to generate answer for question user asked
- It might something goes wrong and will not understand user question
- It is difficult to training bot for every possible intention

Objective & Planned Outcomes: -
- With this project our objective is to find out certain areas in college and make them automated with chatbot
- As this planned outcome we found out certain areas like library enquiry counters etc. which can be automated with simple bot
- There are many areas we can automate through the chatbots but our objective is to focus on smaller areas for now as initial activity.

Purpose: -
- To reduce the human efforts
- To get required information on fingertips
- To reduce time that we invest in silly work

VI.RESULTS

: -

Fig.4 Student Login

Hi Sujit Gaikwad! How can i help you

2 minutes ago

Search issued book

Just now

Please find the issued book history for

Name : Sujit Gaikwad

Branch : Computer Engineering

Book Name	Author	Status
The C Programming Langauge. 2nd Edition	Brian Kernighan and Dennis Ritchie	Renewed
Computer Algorithms	Sartaj Sahni	Issued

Just now

Please select your user type to proceed futher

Student

Employee

Others

Please enter the your id and password to proceed futher

Employee Id   7

Password   123

Submit

A minute ago

Hi Mrs. Nadini Patel! How can i help you

Just now

Search issued book

Fig.5 Employee Login

HI {FirstName} !, please enter the id and select the user type in below box.

Enter the user id to which you want to search details:

1

Select the user type

● Student
● Employee

Search

Cancel

A minute ago

Please find the issued book history for

Name : Mrs. Nadini Patel

Branch : Managment

Book Name	Author	Status
The C Programming Langauge. 2nd Edition	Brian Kernighan and Dennis Ritchie	Renewed
Computer Algorithms	Sartaj Sahni	Issued

VII.CONCLUSION

- Here we conclude that chatbot is evolving technology. as still it is not up to mark but we can believe and can make many of our activity automated.
- This is not the exact structure of NLP (Natural language processing) but with this kind of technology we are half way there.

VIII.FUTURE SCOPE

- In Future we can add many other domains than just chat like vison, Image processing, voice processing etc. which will make it more reliable.
- With upcoming technology of sentiment analysis, we can understand users feeling and can respond accordingly.
- "With speech ability chatbot can help deaf and blind people in their work".
- With voice and image processing technologies they can helpful to handicapped people to make their work easy.

REFERENCES

1. Mauldin Michael (1994)," Chatterbots, Tiny Muds," and that trueing test: entering the Liebner prize competition ", proceedings of the eleventh national conference on artificial intelligence.
2. Bayu Setiaji, Ferri Wahu Wibawo, "Chatbot Using a Knowledge in the Database", on 2016 7th International Conference on the Intelligent Systems, Modelling and Simulation.

3. S. J. du Preez, M. Lall and S. Sinha, "An intelligent web-based voice chat bot," EUROCON 2009, EUROCON '09. IEEE, St. - Petersburg, 2009.
4. E. Haller and T. Rebedea, "Designing a Chat-bot that Simulates an Historical Figure," 2013 19th International Conference on Control Systems and Computer Science, Bucharest, 2013.K. Elissa, "Title of paper if known," unpublished.

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