INT 404 – PROJECT OF ARTIFICIAL INTELLIGENT

Group No. - 04

Project Name – College Enquiry Chat bot

Submitted By -

Name – Keshav Krishna

Roll no. - 22

Registration no. - 11810733

Name – Rohit Kumar

Roll No.- 29

Registration No.- 11810740

Name – Dharmender kaushik

Roll No. - 07

Registration no. - 11810803

Name – Rohit Kataria

Roll No. – 23

Registration No. - 11810799

1. INTRODUCTION

This System is a Chat bot which provides answer to the query of the student. The query of the Students is generally a chat.

The chat is done in any manner, there is no particular format declared for chatting with the bot. The main goal is to reduce the job of the students to personally visit the college. The system provides information about college related activities. The system consists of graphical user -friendly interface. System uses A.I. and M.L. for solving the queries. The user can ask questions related to college related activities such as date and timing of annual day, sports day, and other cultural activities.

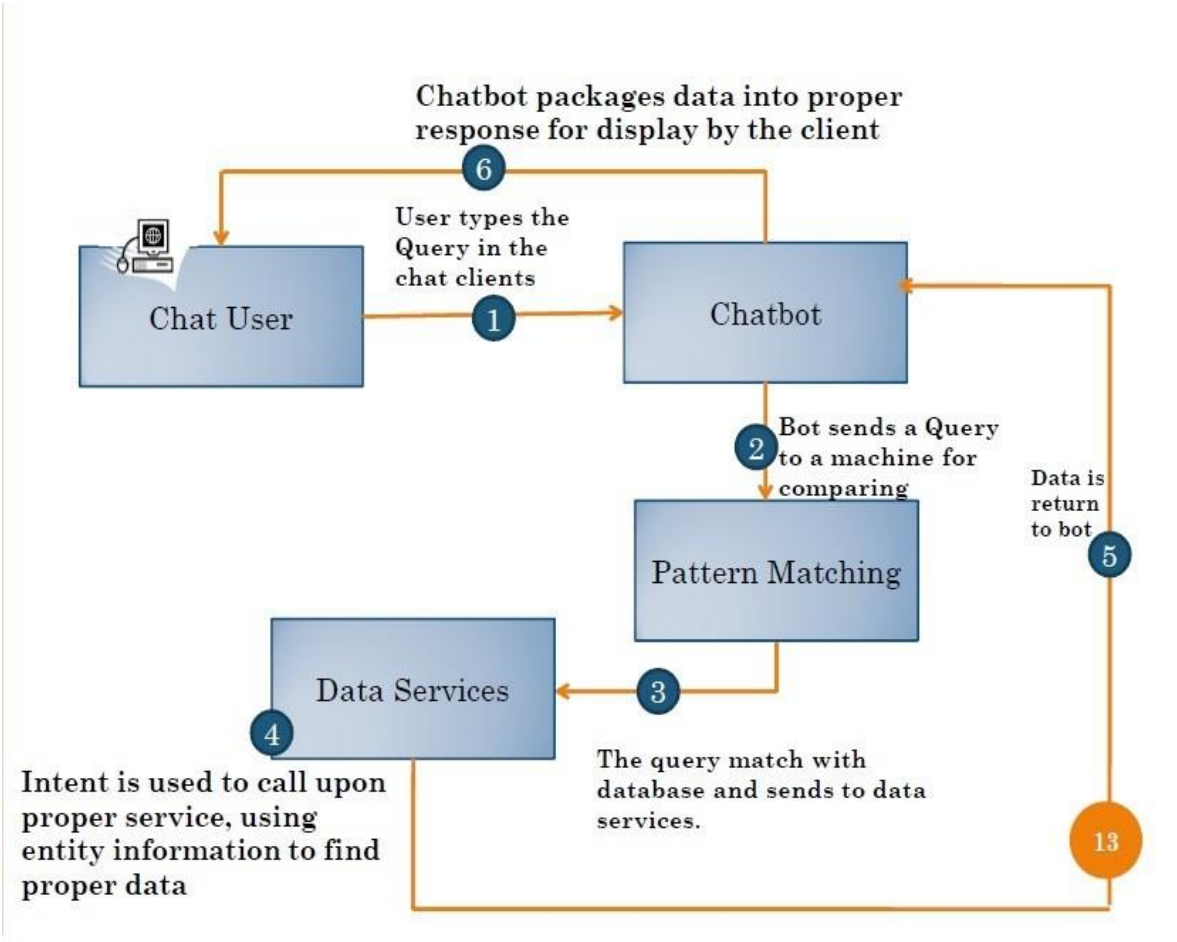
2. Theory

Traditionally, the chat bot system was not well-known to people who are not more into the technology field. Even if there exist a chat bot system, it is not much accurate in proving the answer or solutions. Students need to manually visit to the college to get their queries answered by the college help desk. This process consumes lot of time to visit college if its miles away from home. The idea behind the college chatbot is inspired from google assistant which will answer queries of student through a web application. It provides links for the query asked by the user. On visiting the link, the user gets solutions about the query. The chatbot works on a general algorithm to extract information and exhibit chat between the human user and the bot. It resolves queries regarding the college activities such as result, timetable, important notices, placement notices etc. The algorithm usually detects the intents i.e. keywords.

3.System Overview

In our College Chatbot System, we have designed a Chatbot using Python programming. First bot analyses user’s queries and understand user’s message, based on bot knowledge bot provide answers to the queries of the students. Students will just have to select the category for the department queries and then ask the questions to the bot that will be used for chatting. Student can query related to admission, faculty details, etc. Students don't have to go to the college or contact the faculty to make the enquiry. If any new candidate enquirers for admission and the details about any department of the college this bot will help to get the answer of query of the candidate and even while getting the answer the bot will read out the answer to the candidate.

4. Architecture Diagram



5. Algorithm

The general idea of working of proposed system algorithm is given as follow:

Step 1: Start.

Step 2: Get the user query. (INPUT)

Step 3: Pre-processing of the query E.g. suppose there is this query “what are the subjects for CSE first year” So, we are going to remove these stop words like „is", „the" using pre-processing technique.

Step 4: Now the step is to fetch the keyword from the query

Step 5: With the help of the keyword matching algorithm the keywords are matched with keywords in the database or knowledge base.

Step 6: Output to the user will be the response of the user entered query.

Step 7: Exit.

Here is the code that we have made to accomplish the project allotted

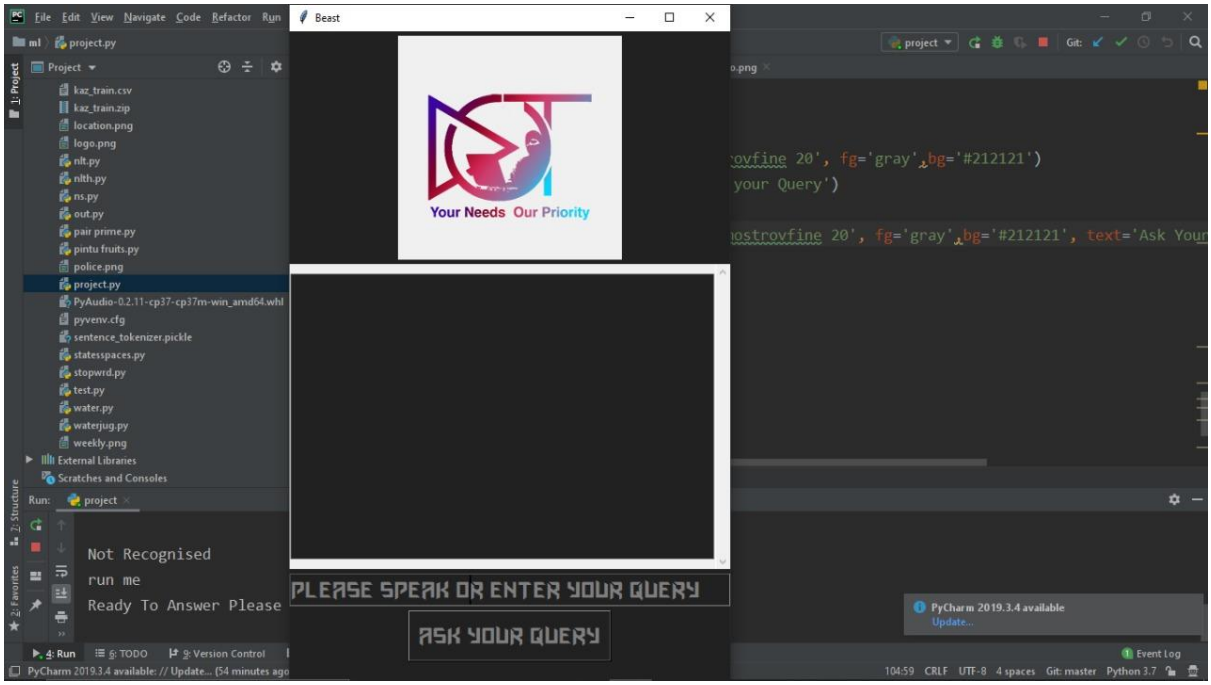
```
from chatterbot import ChatBot
from chatterbot.trainers import ListTrainer
from tkinter import *
import pyttsx3 as py
import speech_recognition as srm
import threading


tk = Tk()
frame = Frame(tk)
engine = py.init()

voices = engine.getProperty('voices')
print(voices)
engine.setProperty('voice', voices[1].id)

tk.geometry('500x800')
tk.configure(bg="#212121")
tk.title('Beast')
chatbot = ChatBot('Beast')

conversation = [
 'hello',
    'hi !',
    'what is the accredition of college',
    'it is ugc accredited',
    'what is the rank ?',
    'according tp nirf ranking it stood at second position in mba and 38th position in engeering',
    'what is the fee structure for engeering?',
```

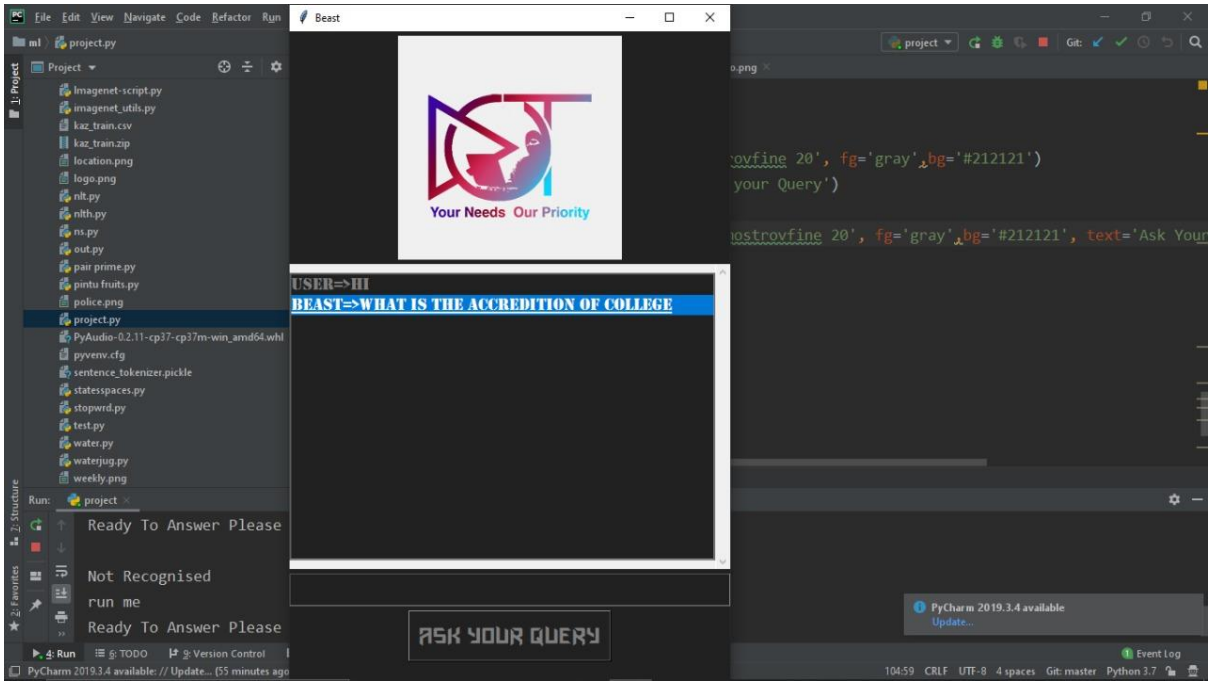
```
    'you can download it from www.dev.com/feesructure',
    'can i get the data of faculties?',
    'you can get it from www.dev.com/faculty',
    'what is the percentage of placement ?',
    'click on www.dev.com/placement for placement records',
    'does it provides transportation facilites to the students',
    'yes',
    'what are the charges of the hostel',
    'click on www.dev.com/hostelfacility',
    'what is the criteria to get admisssion here?',
    'click on www.dev.com/criteria',
    'does university provide loan facility',
    'yes you can contact the bank inside campus by clicking on www.dev.com/support',
    'i want the demand draft from university for loan requirement?',
    'register yourself at www.dev.com/financial and select demand draft option in it. it will be availaible in ypur account within 2 days',
    'thankyou',
    'would you specify it'


]


trainer = ListTrainer(chatbot)
trainer.train(conversation)



def getQuery():
    sr = srm.Recognizer()
    sr.pause_threshold = 1
    print("Ready To Answer Please Ask Your Query")
    with srm.Microphone() as m:
```

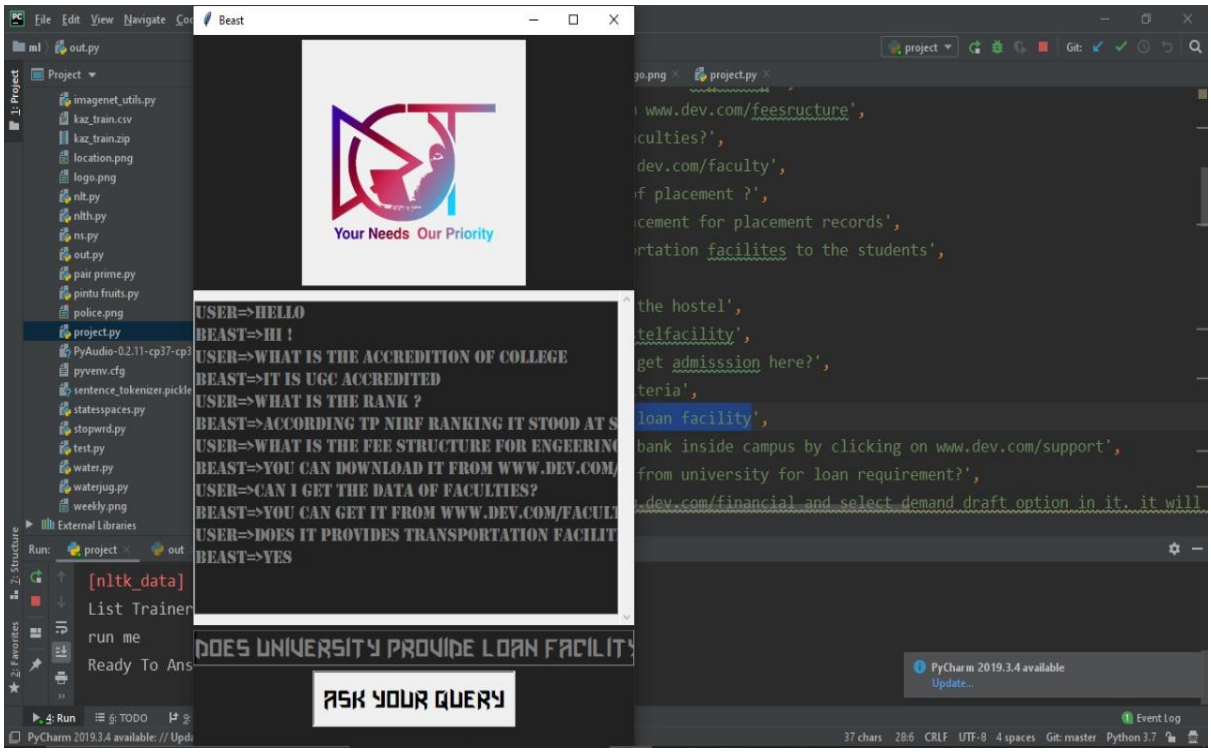
```
        try:
            audio = sr.listen(m)
            query = sr.recognize_google(audio, language='eng-in')
            print(query)
            input.delete(0, END)
            input.insert(0, query)
            responses()
        except Exception as e:
            print(e)
            print('Not Recognised')
def speak(word):
    engine.say(word)
    engine.runAndWait()
def responses():
    query = input.get()
    # reply='hi'
    reply = chatbot.get_response(query)
    chat.insert(END, 'User=>' + str(query))
    chat.insert(END, 'Beast=>' + str(reply))
    speak(reply)
    input.delete(0, END)
    chat.yview(END)
def submit(onEnter):
    response.invoke()

tk.bind('<Return>', submit)
logoDecryption = PhotoImage(file='logo.png')
logo = Label(tk, image=logoDecryption, width=250, height=250)
logo.pack(padx=5, pady=5)
scrollbar = Scrollbar(frame)
```

```
scrollbar.pack(side=RIGHT, fill=Y)

chat = Listbox(frame, width=80, height=14, bg='#212121', font='stencil 14',fg='gray', yscrollcommand=scrollbar.set)

chat.pack(side=LEFT, fill=BOTH, pady=10)

frame.pack()

input = Entry(tk, font='amazobitaemostrovfine 20', fg='gray',bg='#212121')

input.insert(0, 'please speak or Enter your Query')

input.pack(fill=X, pady=5)

response = Button(tk, font='amazobitaemostrovfine 20', fg='gray',bg='#212121', text='Ask Your Query', command=responses)

response.pack()


def repeatListen():
    while True:
        print('run me')
        getQuery()


t = threading.Thread(target=repeatListen)

t.start()

tk.mainloop()
```

Output of our Program






Beast
Your Needs Our Priority
USER=>HELLO
BEAST=>HI !
USER=>WHAT IS THE ACCREDITION OF COLLEGE
BEAST=>IT IS UGC ACCREDITED
USER=>WHAT IS THE RANK ?
BEAST=>ACCORDING TP NIRF RANKING IT STOOD AT S
USER=>WHAT IS THE FEE STRUCTURE FOR ENGEERIN
BEAST=>YOU CAN DOWNLOAD IT FROM WWW.DEV.COM/
USER=>CAN I GET THE DATA OF FACULTIES?
BEAST=>YOU CAN GET IT FROM WWW.DEV.COM/FACULT
USER=>DOES IT PROVIDES TRANSPORTATION FACILIT
BEAST=>YES
DOES UNIVERSITY PROVIDE LOAN FACILITY
ASK YOUR QUERY
www.dev.com/feesructure',
culties?',
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the hostel',
telfacility',
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teria',
loan facility',
bank inside campus by clicking on www.dev.com/support',
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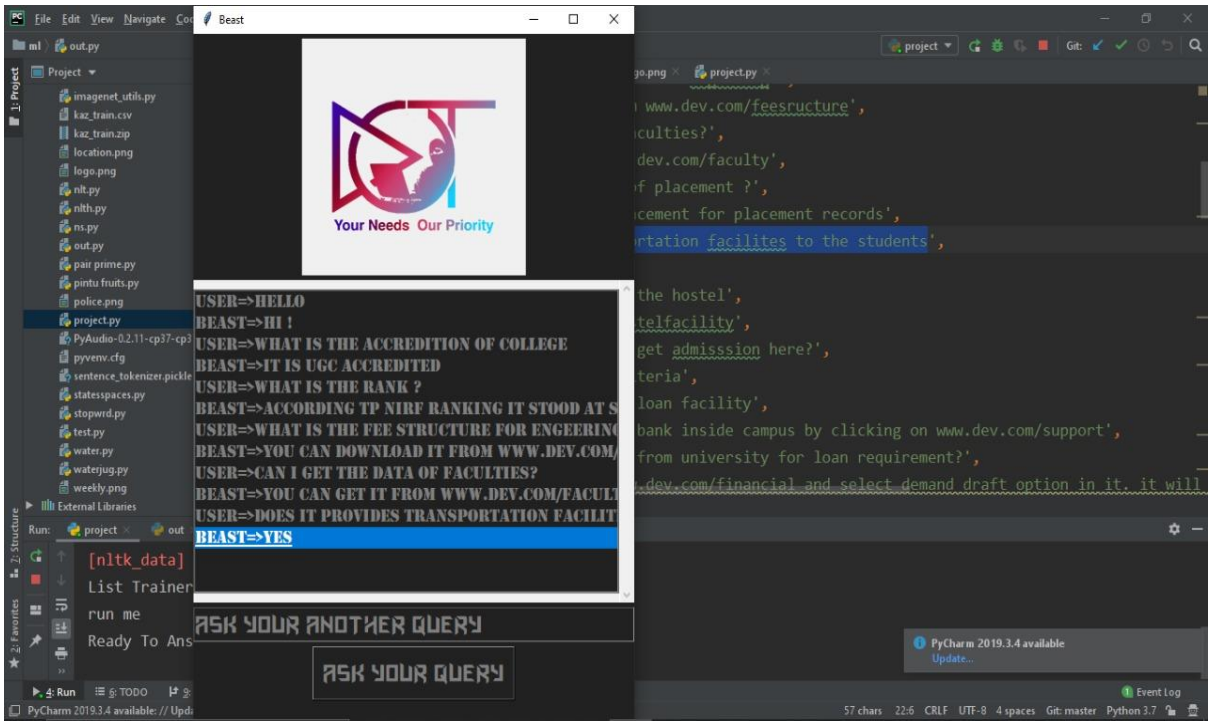
PyCharm 2019.3.4 available
Update...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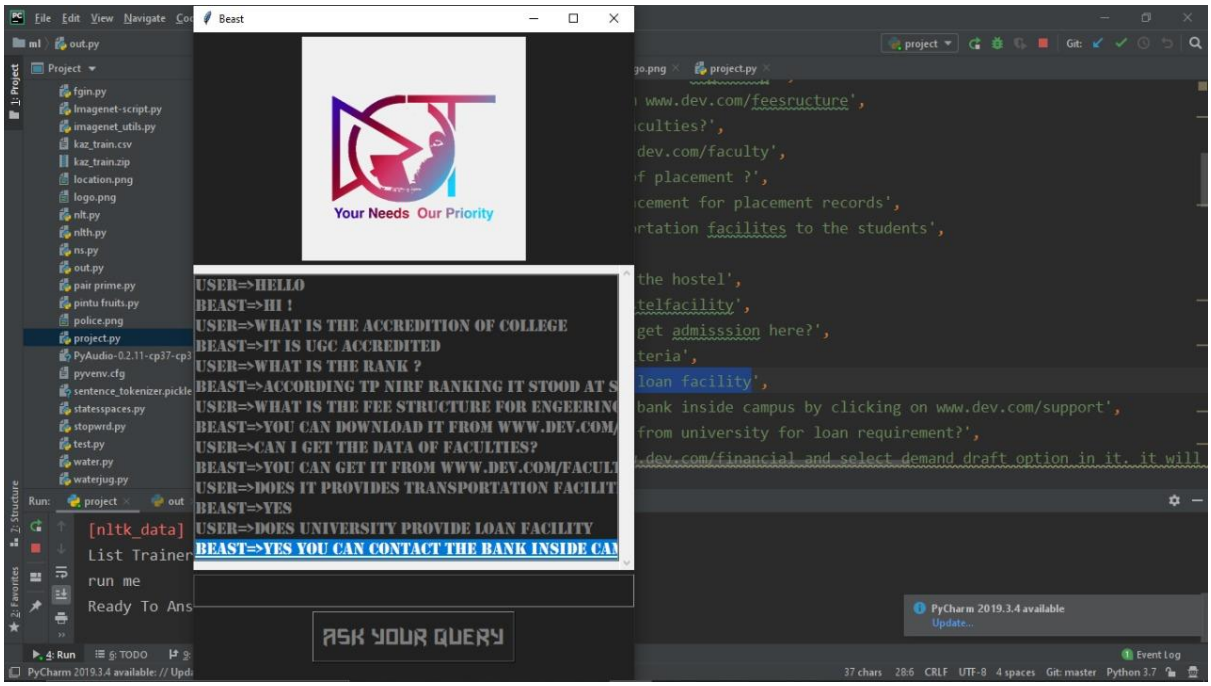

6. Related Works

1. Eliza

ELIZA is an chatbot that uses natural language processing for query response created from 1964 to 1966[by Joseph Weizenbaumat MIT Artificial Intelligence Laboratory to demonstrate the superficiality of communication between humans and machines. Eliza simulates the conversation by using a 'keyword matching' and substitution methodology that gave users an illusion of understanding on the part of the program. Directives on how to interact were provided by 'scripts', written originally in MAD-Slip, which made ELIZA to understand the user query and engage following the rules and directions of the script.

2. Google Assitant

Google Assistant in an AI powered virtual assistant developed by google that understands the user query an provide the response to the user's query. It also provide the feature of voice input and output i.e the user can query through voice.

7. Conclusion:

In this paper, we have implemented an chatbot which will provides solution to the student's queries. The field of A.I. and M.L The chatbot can answer only those questions which it has the answer in its database. So, to increase the knowledge of the chatbot, we can train the bot so as to get the response to the maximum queries. To increase probability of output the bot should be traines properly. The bot provides whole information about the result of students of all Department, timetable, various notices, event information, Campus information,..etc. are used to develop and emulate responses. This responses are gets enchanced by time and training of the bot. The bot works online. The future work can be if the bot is unable to provide the response to the user query then the user query is stored in the database, so as to add the response in further. So in this way we have implemented an automated response generation system.

8. References

1) Chatbot Evaluation and Database Expansion via Crowdsourcing, Author: Zhou Yu, Ziyu Xu, AlanWBlack, Alexander I. Rudnicky, and May 12, 2017.

2) Chatbot Using A Knowledge in Database, Authors: Bayu setiaji, Ferry Wahyu Wibowo, Jan. 2016.

3) A model of social chatbot, Author: Manuel Gentile, Lucas Weideveld, Frank Dignum,June 2016.

4) Smart Answering Chatbot based on OCR and over generating Transformations andRanking, Authors: Ly Pichponreay, Chi-Hwan Choi,Jin-Hyuk Kim, Kyung-Hee Lee,Wan-Sup Cho, and July 2016.

5) Design of Chatbot with 3D Avatar,Voice, Interface, and Facial Expression,Authors: Antonius Angga, P,Edwin, Fachri W,Elevanita A,Suryadi,Dewi Agushinta R, Oct. 2015.

6) An Internet Relay Chat Bot Using AIML, Authors: Om Kumawar Prasad, Thakar Rohit Shetty Akshay Bartukke, Volume 4 Issue 10, October 2015.