

MINOR - 1 FINAL REPORT

on

Chat Bot using Natural Language Processing

Submitted by:

Name	Roll no	Branch	SAP ID
Sehajpreet Singh Boparai	R163217007	CSE MC	500062448
Vinayak Sharma	R163217012	CSE MC	500060029
Madhvendra Singh Rautela	R610217012	CSE MFT	500060184
Nitesh kandari	R610217015	CSE MFT	500060039

(Under the Guidance Of)

Mr. Prashant Rawat

Assistant Professor

Dr. Monit Kapoor

Program Head – B tech. CSE

Department of Systematics.

(Mobile Application Development)



Department of Systemics

School of Computer Science University of Petroleum & Energy Studies, Dehradun.

CANDIDATE’S DECLARATION

We hereby declare that the work which is being presented in this dissertation entitled “CHAT BOT USING NATURAL LANGUAGE PROCESSING” done by SEHAJPREET SINGH, VINAYAK SHARMA, NITESH KANDARI, MADHVENDRA for partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science & Engineering with Specialization in Mobile Application Development, Mainframe Technology to School of Computer Science, University of Petroleum & Energy Studies, Dehradun, is an authentic record of our work carried out during a period from June, 2019 to December. 2019 under the supervision of Mr. Prashant Rawat, Assistant Professor, Department of Systematic, UPES.

The matter presented by us in this report has not been submitted by any of us for any other degree to any other institutes.

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

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ACKNOWLEDGMENT

If words are considered as a symbol of approval and token of appreciation, then let the words play the heralding role of expressing my gratitude.

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We are also grateful to Dr. Manish Prateek, Dean, SoCS, UPES for giving us the necessary facilities to carry out our project work successfully.

ABSTRACT

Did you know, there have been more than thousands of deaths in India due to lack of proper knowledge or by just ignoring a small health problem. Most of the people have never thought how small health problem can lead to major problems like migraine. We are trying to help those affected people by creating a chat bot that can provide remedies for these problems before it gets too late. We have used natural language processing to help our chat bot to provide appropriate remedies and by using information like blood pressure, heart beat chat bot can provide a better solution to the health problems of people.

INTRODUCTION

Its framework is based on interaction between a user input and machine output. Natural language processing (NLP) is not perfected but is evolving as the language used by people is continuously changing with time. A chat bot using natural language processing aims to provide efficiency in a particular domain by providing output based on user inputs. Chat bot provide functionality in various domains like communication, medical, travel, booking, customer care and a lot more.

PROBLEM STATEMENT

Many of us when go online and search for cures or even an indication on various websites that may or may not be safe some of us even rely on common household techniques rather than western medicine or the consultation from a proper DOCTOR. The CHAT BOT will not only communicate with the user but also suggest remedies, first aid techniques in case of burns and wounds. It is equivalent to having a mini doctor on the go.

Note: We do understand that indications and initial stats are not enough to fully understand or even treat a patient but this app is going to act on the initial stage of most common illnesses and diseases for various individuals on the go.

LITERATURE REVIEW

Chat bots are extremely popular these days. In the present purchaser driven online market, chat bots are performing different jobs. It very well may be buyer association outfitted towards critical thinking and tending to client demands in an assortment of businesses; or giving a smooth web-based shopping background to a cell phone client; and notwithstanding executing as a virtual home-right hand in home-robotization obligations inside a cutting-edge family unit.

As the name recommends, a chat bot is just a robot collaborator that you can connect with in a discussion to get what you have to complete. The discussion can occur through content informing or voice directions. Nonetheless, the significant thing to comprehend is that what causes a product or machine to speak with a person to perform easy to complex errands is 'computerized reasoning' innovation,

or AI.

Along these lines, AI can empower you to connect with a chat bot by utilizing a talk interface, and benefit administrations running from regular pragmatic assignments to diversion.

Instances of chat bots incorporate climate bots that educate and conjecture about your nearby climate, news bots that you can stay up with the latest about news identified with your calling, and other administration related bots like individual fund bots, and so forth.

These bots are found in numerous famous visit stages, for example, Facebook Messenger, Telegram, Slack, and so forth. It is very obvious that chat bots are prominent in the purchaser market and CX (client experience) field because of a few reasons, some of which are the accompanying:

- Ability to vigorously convey day in and day out client support
- Helping to give a customized involvement to shoppers, by sustaining client information to human specialists that empowers them to more readily check a customer's needs and prerequisites progressively.
- Building a human-like association with clients that can advance brand faithfulness, for example sending birthday welcome to customers.

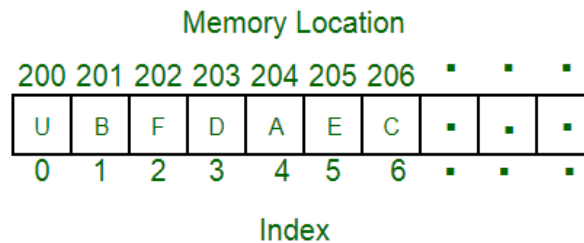
OBJECTIVE

The CHAT BOT will take input from the user such as indications and stats, stats include blood pressure, heart rate, body temperature and based on these stats display the solutions to the user by comparing the inputs through a hash table.

METHODOLOGY

1. Understanding of DATA STRUCTURES in C:

Data structure is a particular way of organizing data in a computer so that it can be used effectively. For example, we can store a list of items having the same data-type using the array data structure.



2. Understanding of HASH TABLES in C:

Hashing is an important Data Structure which is designed to use a special function called the Hash function which is used to map a given value with a particular key for faster access of elements. The efficiency of mapping depends on the efficiency of the hash function used.

Let a hash function $H(x)$ maps the value at the index $x \% 10$ in an Array. For example, if the list of values is [11,12,13,14,15] it will be stored at positions {1,2,3,4,5} in the array or Hash table respectively.

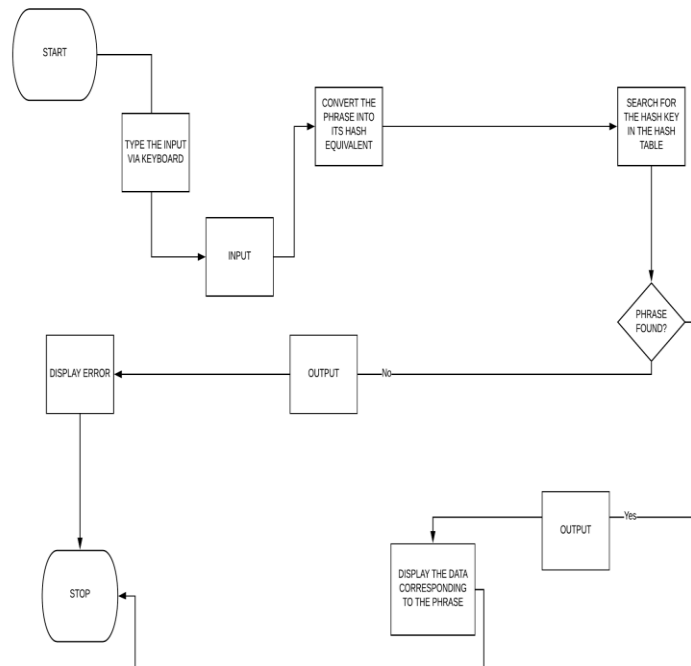
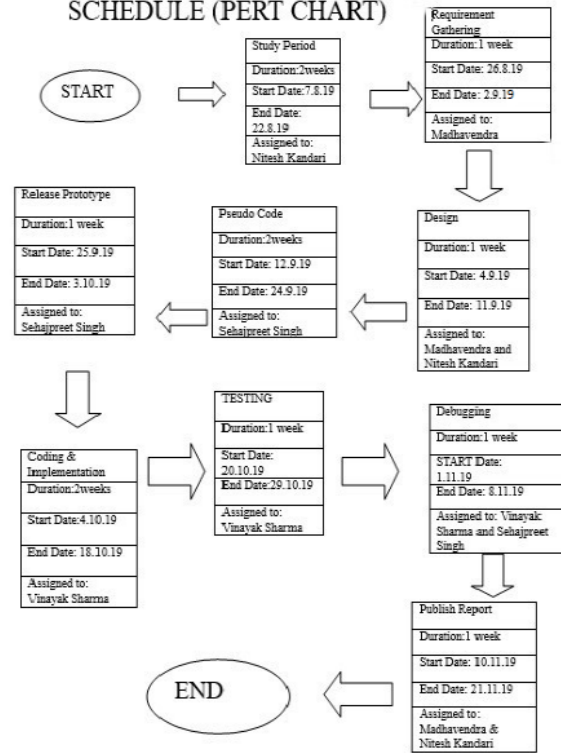
PROPOSED METHODOLOGY

To help and deliver output based on user input, our program makes use of a data structure referred to as hash table in C language. Our program registers a single phrase input by the user and then searches for that particular word throughout a hash table that is already defined inside the program.

A hash table is a data structure in C language. It basically comprises of two main entities that is the value (the actual value to be stored) and secondly a key or more precisely a hash key which use to uniquely define a single word in the entire table. At the fundamental core our program is just understanding user input and proving output based on a predefined script.

On further development our program will be able to take in various other inputs and provide different outputs via the help of nested if else concept.

SCHEDULE (PERT CHART)



RESULT AND FUTURE SCOPE

Helping people with their physiological and psychological Illness can lead to a great advancement in the medical field. Nowadays we have Chat bot related to booking appointments but now we can not only book but ask for remedy for a certain problem in our busy lifestyle.

Human interaction with machine will not only provide ease of working but also help in building up a better and much easier lifestyle.

LIMITATION

We are limited by the technology of our time, but work on machine learning and cyber-human linguistics is sure to advance more and more in the near future.

Currently we are also limited by storage as in the storage required to store the script but future storage tech advancements may help deal with this.