**INTRODUCTION**

When the user enters the query, the bot uses the pattern matching compares and relates the words in the question with the words in the data base. From the user input, the words in the sentence will be scored to get the similarity. The highest score obtained will be printed as output. NLP (Natural Language Processing) method is used in order to understand the human language by the computer.

Currently there are two different types of chatbots. They are:

**1)Rule based chatbot**: These types of chatbots mostly work on interactive FAQ (frequently asked questions). They are programmed to identify and recognize the key terms and patterns from the user query from which they can respond with pre-set answers in the database.

**2)AI chatbot**: These kind of chatbots acts as an artificial brain, using the techniques like natural language processing from NLTK (natural language toolkit). This kind of chatbot not only understands from the query, but also context, intents, emotions and continuously gets updated as it learnt from the conversation with user.

**Proposed system**

**🡪**The users enters the message, Intent Classification will intent the message and also recognizes the entity. Based on the query, candidate response generator will respond and give related response. In existing system it can only answers for the queries that are in data base. But in this proposed system, even if the questions are not present in database the chat bot uses the google search and give the answers to the questions.

**Training chatbot**

🡪Chat bot using Python requires some prerequisite modules to be installed. The modules are NLTK, sklearn, random, numpy etc. From NLTK module the NLP is imported which is used by the chatbot to understand the human language.

🡪 Chat bot takes some steps to convert the user query into the structured data.

🡪 The processing steps are:

**Normalization**: The program processes the text to find common spelling mistakes or typographical errors that might user wants to convey.

**Tokenization**: It divides the string of sentences into words and words into tokens and lemmer preprocess the tokens.

**Conclusion**

User enters the query. Using the keyword and pattern matching compares the strings from the data base and suitable output will be given by the bot during the conversation.