Assignment : 01

CHATBOT SUMMARY

1. OVERVIEW

The chatbot evaluates user inputs to generate contextually relevant responses based on predefined keywords and phrases. The primary goal is to create an engaging and responsive experience, mimicking conversational dynamics with the user.

2. FUNCTIONAL COMPONENTS

- Message Evaluation and Response Selection: This script is responsible for breaking down the user's message, evaluating its content against a set of recognized keywords, and selecting the most relevant response. The responses are varied, ranging from simple greetings to more specific replies based on the context of the conversation.

- Static Responses and Unknown Input Handling: This script includes static responses related to specific contexts such as discussions about the chatbot's dietary preferences or giving advice. It also includes a mechanism to handle unknown or unclear input through a selection of random responses that prompt the user for clarification.

3. KEY FEATURES

- Keyword Recognition: The chatbot uses a list of recognized keywords to assess the relevance of user messages. Each keyword is associated with a potential response, and the presence of these keywords in a user's message increases the likelihood of selecting a corresponding response.

- Required Keywords: For some responses, certain keywords are mandatory. This ensures that the responses are not only relevant but also contextually appropriate. For instance, the response about the chatbot's dietary preferences only triggers if both "you" and "eat" appear in the user's input.

- Randomized Responses: To handle ambiguous or unclear inputs, the chatbot randomly selects responses from a predefined list. This feature helps maintain engagement even when the chatbot fails to understand the user's input fully.

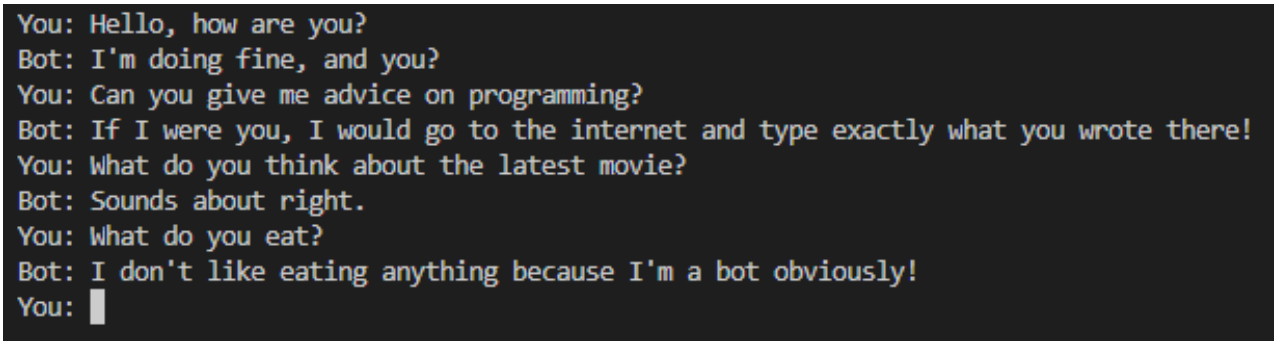
- Dynamic Interaction Loop: The main script operates in an infinite loop, continuously processing user inputs and printing responses. This setup simulates a real-time conversation with the user.

4. TECHNICAL IMPLEMENTATION

The chatbot is implemented using Python, utilizing libraries such as re for regular expression operations and random for randomizing selections. The implementation involves defining functions for each specific task, such as message relevance calculation, response probability assignment, and the overall evaluation of all messages based on their calculated relevancies.

5. USAGE

- The chatbot is designed to be run in a Python environment where it can interact directly with users via command-line input. Users initiate conversations, and the chatbot responds based on its programming to simulate a conversational partner capable of discussing a variety of topics and responding to different types of inquiries.



Link :- https://github.com/ramishka98/chatbot