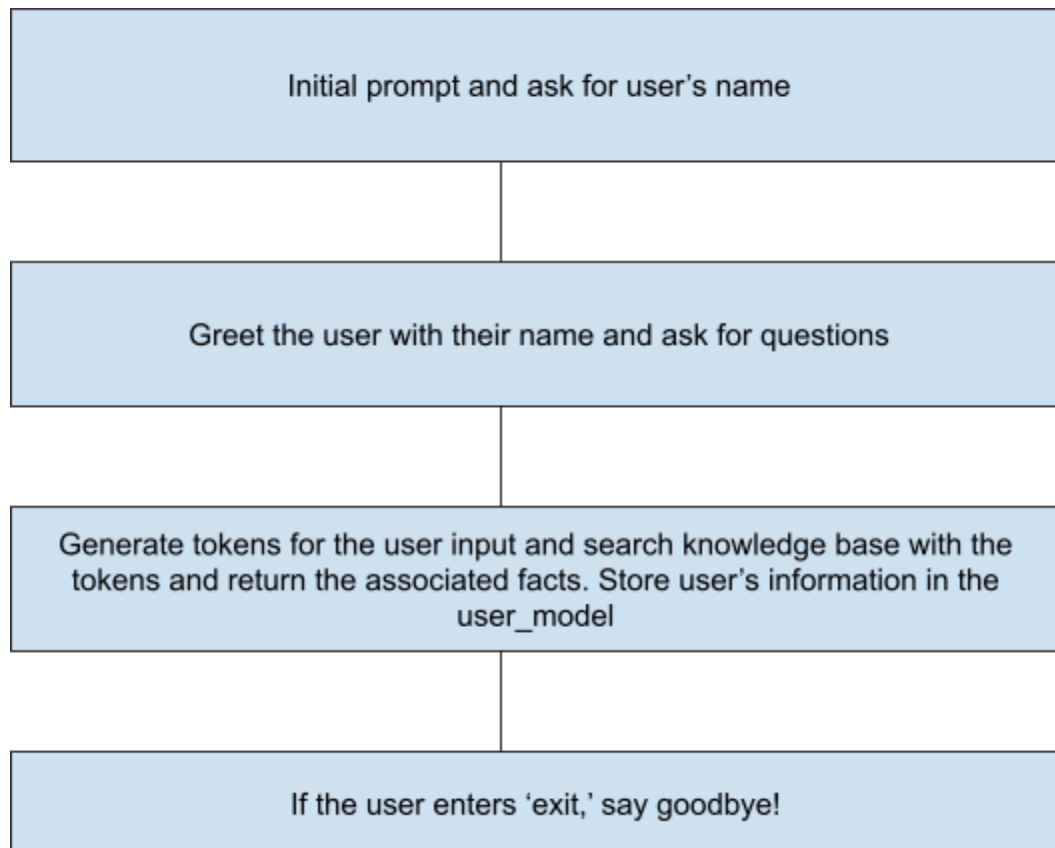


Chatbot Report

Description:

This chatbot is designed to provide information related to the actor Leonardo DiCaprio. It uses NLP techniques to understand the user input and to generate the responses. To design the algorithm for the chatbot, I started by getting the knowledge base from the pickled file. I then initialized a dictionary to store the user models. In the actual chatbot function, I used NLP's tokenization to tokenize the user input in order to break down sentences into individual words for better analysis. I also updated the user model based on the user's name, likes, and dislikes that are obtained from the conversation. I then checked to see if the term/token that the user entered matched with the knowledge base term. If it did, I'm returning the fact associated with that term. Otherwise, I'm returning a random response saying that the chatbot couldn't solve the user's query. I also checked if the user wanted to end the conversation by looking for the keyword 'exit.'

Diagram of the logic tree:



Here is a sample dialogue:

Chatbot: Hello, I'm a chatbot about Leonardo DiCaprio. You can exit the chatbot at any time by entering 'exit'. What is your name?
 User: My name is Anna
 Chatbot: Hello Anna, What can I help you with today?
 User: Hello
 Chatbot: Hi!
 User: Who is leonardo?
 Chatbot: Leonardo DiCaprio is an American actor, producer, philanthropist and activist.
 User: When was he born?
 Chatbot: Leonardo DiCaprio was born on November 11, 1974, in Los Angeles, California, USA.
 User: What is his father's name?
 Chatbot: I'm not sure I understand. Could you provide more information?
 User: Do you know his father's name?
 Chatbot: I'm still learning! How about asking me something simpler?
 User: Did he ever win an oscar?
 Chatbot: Leonardo DiCaprio received the Oscar for Best Actor for the 2015 film, The Revenant.
 User: What is his relationship with scorsese?
 Chatbot: He has starred in several films directed by the legendary Martin Scorsese including Gangs of New York (grossed \$193.7 million worldwide), The Aviator (grossed \$211.7 million worldwide), The Departed (\$289 million worldwide), Shutter Island (\$294.8 million), and The Wolf of Wall Street (\$392 million).
 User: Tell me something about Titanic
 Chatbot: Leonardo DiCaprio's Titanic was the first film to reach the billion dollar mark in international sales.
 User: I like the movie Titanic. What other movies was he a part of?
 Chatbot: Leonardo's next movie What's Eating Gilbert Grape?
 User: exit
 Chatbot: Goodbye! Have a great day!

Appendix for the knowledge base:

Leonardo: Leonardo DiCaprio is an American actor, producer, philanthropist and activist.

Born: Leonardo DiCaprio was born on November 11, 1974, in Los Angeles, California, USA.

Oscar: Leonardo DiCaprio received the Oscar for Best Actor for the 2015 film, The Revenant.

Scorsese: He has starred in several films directed by the legendary Martin Scorsese including Gangs of New York (grossed \$193.7 million worldwide), The Aviator (grossed \$211.7 million worldwide), The Departed (\$289 million worldwide), Shutter Island (\$294.8 million), and The Wolf of Wall Street (\$392 million).

Titanic: Leonardo DiCaprio's Titanic was the first film to reach the billion dollar mark in international sales.

Appendix for user model:

Name: Anna

Like: Titanic

Dislike: None

User: Anna

Details: {'name': Anna, 'likes': {'Titanic'}, 'dislikes': {None}}

Evaluations:

Self-Evaluation:

One of the strengths of the chatbot is that it works effectively and gives relevant facts related to the query that the user entered. The chatbot also has random responses for when it can't find any information about the user's query, which is another strength. These random responses help with the engaging aspect of the chatbot. One weakness of the chatbot is that it can't handle complex queries. Also, this chatbot doesn't have a live lookup, so it's completely dependent on the predefined knowledge base terms only. Another weakness is that the conversation between the user and the chatbot doesn't flow. For example, if the user asks the chatbot "How is your day?," the chatbot wouldn't have a response for that. It would simply generate one of the random responses saying that it was unable to understand what the user was saying.

Likert-style Questions:

Questions	User1	User2	User3
How satisfied are you with the chatbot's ability to provide information about Leonardo DiCaprio?	Very satisfied	Satisfied	Very Satisfied
How satisfied are you with the chatbot's conversation and flow?	Satisfied	Neutral	Neutral
How would you rate the accuracy of the responses?	Excellent	Excellent	Excellent