```
pip install nltk
```

```
Requirement already satisfied: nltk in /usr/local/lib/python3.10/dist-packages (3.9.1)
Requirement already satisfied: click in /usr/local/lib/python3.10/dist-packages (from nltk) (8.1.7)
Requirement already satisfied: joblib in /usr/local/lib/python3.10/dist-packages (from nltk) (1.4.2)
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.10/dist-packages (from nltk) (2024.11.6)
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages (from nltk) (4.67.1)
```

```python
import nltk
import re
from nltk.chat.util import Chat, reflections
```

```python
# Download necessary NLTK datasets
nltk.download('punkt')
nltk.download('averaged_perceptron_tagger')
```

```
[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data]   Unzipping tokenizers/punkt.zip.
[nltk_data] Downloading package averaged_perceptron_tagger to
[nltk_data]     /root/nltk_data...
[nltk_data]   Unzipping taggers/averaged_perceptron_tagger.zip.
True
```

```python
# Define chatbot patterns and responses
pairs = [
    [r"my name is (.*)", ["Hello %1, how can I assist you today?"]],

    [r"(.*)", ["I'm sorry, I don't understand that. Can you rephrase?", "Could you please elaborate on that?"]]
]
```

```python
# Define the chatbot class
class RuleBasedChatbot:
    def __init__(self, pairs):
        self.chat = Chat(pairs, reflections)  # Initialize the chat with defined pairs and reflections

    def respond(self, user_input):
        """Generate a response from the chatbot based on user input."""
        return self.chat.respond(user_input)
```

```python
# Initialize the chatbot with defined patterns
chatbot = RuleBasedChatbot(pairs)
```

```python
# Function to chat with the bot
def chat_with_bot():
    print("Hi, I'm your chatbot. Type 'quit' to exit.")
    while True:
        user_input = input("You: ")  # Take input from the user
        if user_input.lower() == 'quit':  # Check if the user wants to quit the conversation
            print("Chatbot: Bye! Have a great day!")
            break
        response = chatbot.respond(user_input)  # Get chatbot response
        print(f"Chatbot: {response}")  # Print the chatbot's response
```

```python
# Start chatting with the bot
chat_with_bot()
```

```
Hi, I'm your chatbot. Type 'quit' to exit.
You: Hi
Chatbot: I'm sorry, I don't understand that. Can you rephrase?
You: who are you?
Chatbot: Could you please elaborate on that?
You: exit
Chatbot: Could you please elaborate on that?
You: quit
Chatbot: Bye! Have a great day!
```