Date:24.09.25

TASK:9

To Build an Intelligent **Chatbot system** with Python and Dialog-flow using Interactive Text Mining Framework for Exploration of Semantic Flows in Large Corpus of Text.

To Build an Intelligent Chatbot system with Python and Dialog-flow using Interactive Text Mining Framework for Exploration of Semantic Flows in Large Corpus of Text. **CO4 S3**

- To integrate with Google Cloud Speech-to-Text and third-party services such as Google Assistant, Amazon Alexa, and Facebook Messenger.
- Configure Dialogflow to manage your data across GCP services and let you optionally integrate Google Assistant.

Tools- Python, Dialog-flow Framework

DATE:24.09.25

TO BUILD AN INTELLIGENT **CHATBOT SYSTEM** WITH PYTHON AND DIALOG-FLOW USING INTERACTIVE TEXT MINING FRAMEWORK FOR EXPLORATION OF SEMANTIC FLOWS IN LARGE CORPUS OF TEXT

AIM:

To build an intelligent chatbox system with Python and dialog-flow using interactive text mining framework for exploration of semantic flow in large corpus of Text

ALGORITHM:

Steps to create an intelligent chatbot using OpenAI APIs:

1. Sign up for OpenAI API access at https://beta.openai.com/signup/. Once you sign up, you will receive your API key.

2. Choose the type of chatbot you want to create. For example, you can create an FAQ chatbot, a customer support chatbot, or a conversational chatbot.

3. Use OpenAI's GPT-3 language model to generate responses to user input. You can use the API to train the language model on your chatbot's intended use case/s.

4. Use Natural Language Processing (NLP) techniques to understand user input and provide relevant responses. You can use OpenAI's API to extract entities (such as dates and names) from user input.

5. Use Machine Learning to continually improve the chatbot's ability to understand and respond to user input.

6. Integrate the chatbot with your preferred messaging platform or channel (e.g., web chat, social media, etc.) using API connectors.

7. Test your chatbot frequently, and use user feedback to improve its performance and provide the best possible experience for your users.

A. SIMPLE CHATGPT USING GEMINI

CODE:

```
from langchain_google_genai import ChatGoogleGenerativeAI

llm = ChatGoogleGenerativeAI(

    model="gemini-2.5-flash",  # Or "gemini-1.5-pro-latest" if available

     google_api_key="AIzaSyCp7RYEV2grZ3GkemVEGyqFQW_LXF9fUk4",  # Keep this secure!

    temperature=0.7

)

response = llm.invoke("Explain quantum computing simply,breif in points")

print(response.content)
```

OUTPUT:

```
C:\Users\nammu\PycharmProjects\PythonProject1\.venv\Scripts\python.exe C:\Users\nammu\PycharmProjects\PythonProject1\VTU26845.py
HI
HLO
Here's a simple, brief explanation of quantum computing:

*   **New Type of Computer:** It's a fundamentally new kind of computer that harnesses the weird rules of quantum physics.

*   **Qubits (Not Bits):** Instead of classical bits (which are either 0 or 1), it uses **qubits**. Qubits can be 0, 1, or *both at the same time* (called

*   **Superposition Power:** This "both at once" ability allows a quantum computer to explore many possibilities simultaneously, like trying all paths in a

*   **Entanglement Magic:** Qubits can also be **entangled**, meaning they're deeply linked. The state of one instantly affects others, no matter the dista

*   **Quantum Interference:** Quantum computers use quantum interference to amplify correct answers and cancel out incorrect ones, helping them find the ri

*   **Solving Hard Problems:** It's designed to solve specific, incredibly complex problems that are impossible for even the most powerful classical superc

*   **Key Applications:** Ideal for tasks like:
    *   Designing new drugs and materials (simulating molecules).
    *   Breaking complex encryption codes.
    *   Optimizing logistics and financial models.
    *   Developing advanced Artificial Intelligence.
```

B. CHATGPT ASSISTANT USING GEMINI

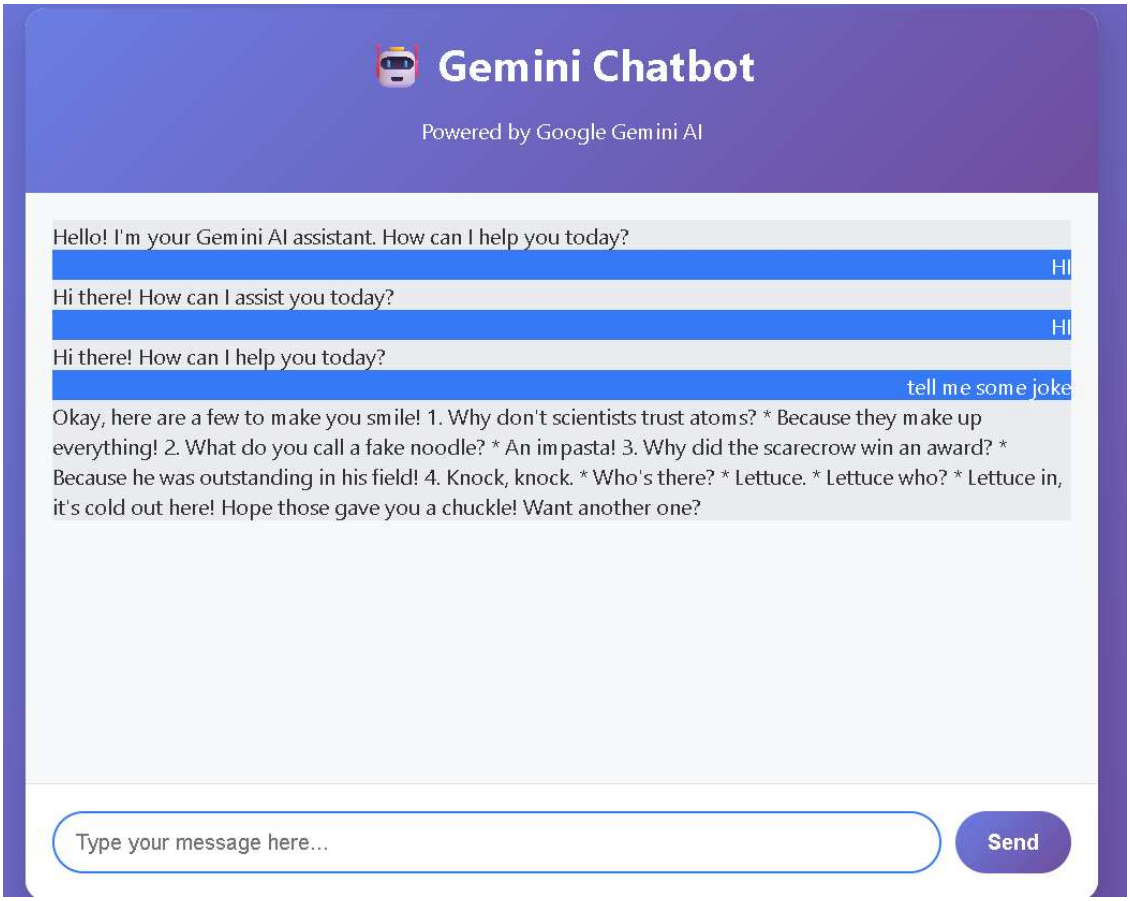
CODE:

```
# gemini_chatbot.py


from flask import Flask, request, jsonify

import os

from google import genai

from google.genai import types


app = Flask(__name__)

GEMINI_API_KEY="AIzaSyCp7RYEV2grZ3GkemVEGyqFQW_LXF9fUk4"


# --- Configure API Key ---

# Using the hardcoded API key from above

api_key = GEMINI_API_KEY


# Initialize the client

client = genai.Client(api_key=api_key)


# Choose the Gemini model you want to use

MODEL = "gemini-2.5-flash"  # or “gemini-2.5-pro” etc, depending on access


def generate_reply_from_gemini(prompt: str) -> str:

    """

    Send the user prompt to Gemini and return the response text.

    """
```

```
    response = client.models.generate_content(
        model=MODEL,
        contents=prompt,
        # You can optionally provide a config, e.g. thinking_budget etc.
                                                                                #
config=types.GenerateContentConfig(thinking_config=types.ThinkingConfig(thinking_budget
=0))
    )
    return response.text


@app.route("/")
def home():
    return app.send_static_file('index.html')


@app.route("/chat", methods=["POST"])
def chat():
    data = request.get_json()
    user_message = data.get("message", "")
    if not user_message:
        return jsonify({"error": "No message provided"}), 400


    try:
        reply = generate_reply_from_gemini(user_message)
        return jsonify({"reply": reply})
    except Exception as e:
        return jsonify({"error": str(e)}), 500
```

```
if __name__ == "__main__":
    # Run in debug for development
    app.run(host="0.0.0.0", port=5000, debug=True)
```

OUTPUT:

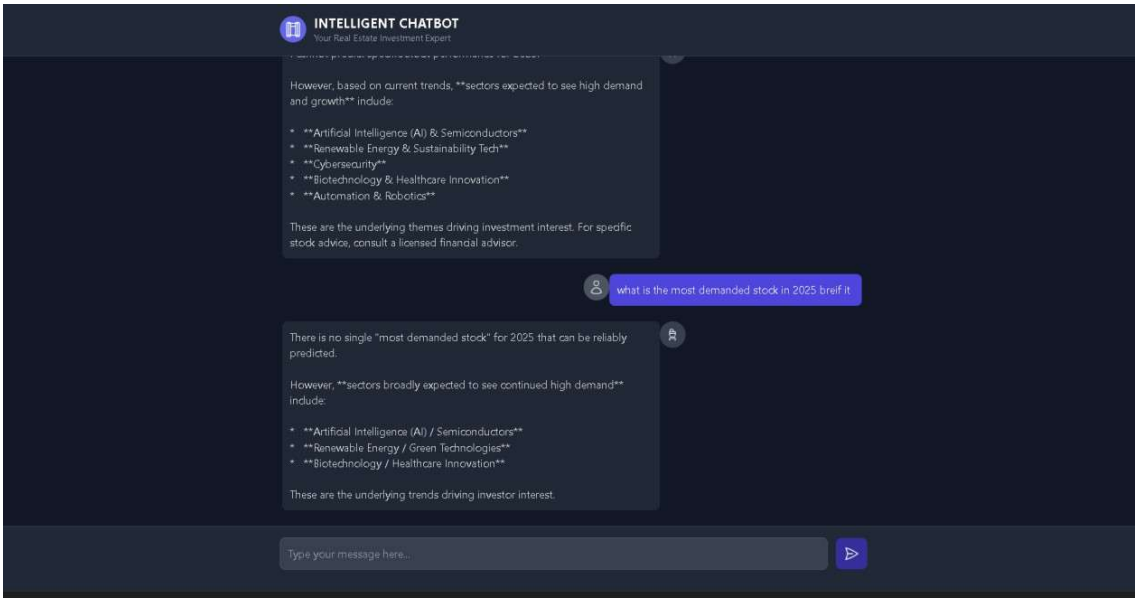


C. CHATBOT CHAT ASSISTANT WEBSITE

CODE:

```
import openai

import gradio

openai.api_key = "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"

messages = [{"role": "system", "content": "You are a financial experts that specializes in real estate investment and negotiation"}]

def CustomChatGPT(user_input):

    messages.append({"role": "user", "content": user_input})

    response = openai.ChatCompletion.create(

        model = "gpt-3.5-turbo",

        messages = messages

    )

    ChatGPT_reply = response["choices"][0]["message"]["content"]

    messages.append({"role": "assistant", "content": ChatGPT_reply})

    return ChatGPT_reply

demo = gradio.Interface(fn=CustomChatGPT, inputs = "text", outputs = "text", title = "INTELLIGENT CHATBOT")

demo.launch(share=True)
```

OUTPUT:



RESULT:

Thus, to build an intelligent chatbox system with Python and dialogue flow was successfully completed and output was verified.