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:

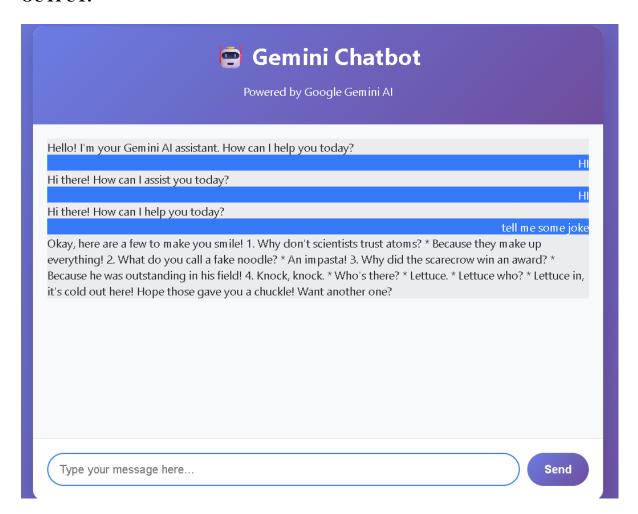
B. CHATGPT ASSISTANT USING GEMINI

```
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. Generate Content Config (thinking\_config=types. Thinking Config (thinking\_budget) and the config of the config o
=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:

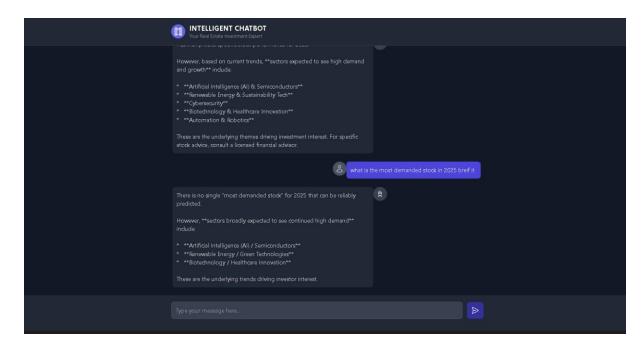


C. CHATBOT CHAT ASSISTANT WEBSITE

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.