Deloitte Auditor Enterprise Chat UI - Ajax and Restful interface

Sri Charan Reddy Mallu
017419779

1. Using Anthropic API with prompt engineering for Tax information.

```python
# Define the function to get the response from Anthropic
async def get_gpt_response(question):
    try:
        response = client.messages.create(
            model="claude-3-sonnet-20240229",
            max_tokens=1000,
            temperature=0,
            system="You are a highly skilled Tax Filing Assistant. Your primary goal is to help the user with tax-related questions and
            messages=[{"role": "user", "content": [{"type": "text", "text": question}]}]
        )
        return response.content
    except Exception as e:
        print(f"Error communicating with Anthropic API: {e}")
        return [{"text": "There was an error generating the response. Please try again later."}]
```

Using FastAPI (for RestAPI backend)

```python
import os
from dotenv import load_dotenv
from fastapi.middleware.cors import CORSMiddleware

# Load environment variables from .env file
load_dotenv()
api_key = os.getenv("ANTHROPIC_API_KEY")

# Initialize Anthropic client
client = Anthropic(api_key=api_key)

app = FastAPI()

app.add_middleware(
    CORSMiddleware,
```

Using Ajax for UI and backend interaction:

```javascript
function sendQuestion() {
    const question = document.getElementById("taxPrompt").value;
    const responseBox = document.getElementById("response");

    // Create an AJAX request
    const xhr = new XMLHttpRequest();
    xhr.open("POST", "http://127.0.0.1:8000/api/tax-question", true);
    xhr.setRequestHeader("Content-Type", "application/json");

    xhr.onreadystatechange = function () {
        if (xhr.readyState === 4) {
            if (xhr.status === 200) {
                const data = JSON.parse(xhr.responseText);
                const answer = data.answer[0].text || "No answer provided.";


                appendMessage("You", question);
                appendMessage("Bot", answer);

                // Save the conversation to localStorage
                saveConversation("You", question);
                saveConversation("Bot", answer);
```

Final chatbot UI with the input queries on Tax and Non tax related information: