Documentation for Poppleton Interactive Chat System

Overview

This program simulates an interactive chat system between a user and a randomly assigned agent. It supports basic chat interactions, admin access, keyword-based responses, random jokes, and the ability to reconnect after disconnection. It also records all conversations with timestamps in a text file for training and reference purposes.

Features

- Chat with Random Agents: Users can chat with a randomly assigned agent.
- **Keyword-based Responses:** Predefined keywords trigger specific responses.
- **Jokes:** Users can request jokes during the conversation.
- Admin Access: Admins can modify keyword responses, jokes, and random responses.
- **Conversation Logging:** All conversations are recorded with timestamps for future analysis.
- Reconnection Support: Users can reconnect after disconnection.

Functionality

1. SelectionUI_Main

The entry point of the program. It:

- Welcome the user.
- Assigns a random agent for interaction.
- Loads responses from a JSON file.
- Starts the chat loop.

2. Username

Prompts the user to enter their name and format it (first letter capitalized).

3. Available_agents

Randomly selects an agent from the predefined list of agents.

4. read_response_file

Loads predefined keywords, jokes, and random responses from a responses.json file. If the file is not found, the program exits.

5. record conversation

Logs the entire conversation into a text file with the following details:

- Filename: <username>_conversation.txt
- **Header:** Includes the user name, agent name, and timestamp.
- Entries: Each message is prefixed with a timestamp.

6. disconnect_agent

Handles user disconnection. It:

- Logs the disconnection message.
- Prompts the user to reconnect.
- If the user agrees, starts a new chat session.

7. Authentication

Provides an authentication interface for admins. Only valid credentials (admin_id=10037 and admin_pass="Admin") grant access to the admin panel.

8. Admin

The admin panel allows the admin to:

1. Add or modify keyword-based responses.

- 2. Add jokes.
- 3. Add random responses.

9. Append_keywords

Allows the admin to add new keywords and their associated responses to the responses.json file.

10. Append_jokes

Allows the admin to add new jokes to the responses. json file.

11. Append_random_responses

Allows the admin to add random responses to the responses.json file.

12. chat_loop

The core of the program. It:

- Handles the conversation between the user and the agent.
- Triggers specific responses based on user input.
- Logs each interaction.
- Detects keywords and delivers corresponding responses.
- Manages the disconnection process.

13. reconnect_session

Allows the user to reconnect after disconnection. A new agent is assigned, and the chat session resumes.

File Structure

1. responses.json

A JSON file containing:

- **Keywords:** A dictionary mapping keywords to their responses.
- **Jokes:** A list of jokes.
- Random Responses: A list of responses for unrecognized inputs.

```
Example:

{
    "keywords": {
        "hello": "Hello, {name}! How can I help you?",
        "fees": "The fees are hella expensive, {name}. Save up!"
    },
    "jokes": [
        "Why was the JavaScript developer sad? Because they didn't know how to 'null' their feelings."
    ],
        "random_responses": [
        "Hmm, let me think about it, {name}.",
        "That's beyond my expertise, but I can learn more, {name}!"
    ]
}
```

How to Use

Prerequisites

- Python 3.x installed.
- A valid responses.json file in the same directory.

Steps

- 1. Run the program: python script_name.py.
- 2. Enter your name when prompted.
- 3. Chat with the randomly assigned agent.
- 4. Use keywords or type "joke" for predefined responses.
- 5. Type "bye" or "exit" to end the conversation.
- 6. If you are an admin, type "admin access" and provide valid credentials to enter the admin panel.

Sample Output

Chat Interaction

```
Welcome to the Poppleton Interactive Chat!
All the chat data are being recorded and saved for training purposes!

Please enter your name: Nikhilesh

Hello Nikhilesh! How can I assist you today?

You're now chatting with Human.

Nikhilesh: Hello Human!

Human: Hello, Nikhilesh! To process further, you may type 'help' to know more about the keywords.

Nikhilesh: I would like to know the location.

Human: We are currently located at the Thaphathali, Kathmandu .

Nikhilesh: Oh great and what about the courses?

Human: We offer a variety of courses, Nikhilesh. Check our website www.PoppletonUniversity.com for the full list!.

Nikhilesh: Thanks

Human: The sports center is open from 6 AM to 10 PM. Best place to break a sweat, Nikhilesh!.

Nikhilesh: Thanks

Human: Always here to help!

Nikhilesh: bye

Sorry for the interruption but it seems like you have Disconnected

Would you like to reconnect? (Y/N): n

Human: Have a great day, Nikhilesh! Goodbye!
```

Future Enhancements

- 1. Add support for multiple users simultaneously.
- 2. Introduce more advanced natural language processing for better responses.

3. Implement a GUI for easier interaction.

Author

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