Quiz #4

Describing JSON files for POST requests to a chatbot API.

In sending POST requests to a chatbot API there are certain bits of crucial information that need to be transferred. The most barebones JSON structure should include the user's API key, the user's message, and the chat history of all previous messages. This is a sample JSON file:

```json
{
  "api_key": "your_api_key_here",
  "message": "user_message_here",
  "history": "chat_history_here"
}
```

As we can see the file includes placeholders for an API key, the latest user message and the chat history of the conversation leading up to this request, this last slot will be empty on the first message.

The following is an example of a POST request JSON file:

```json
{
  "api_key": "your_api_key_here",
  "message": "I should go!",
  "history": "User: Hello\nChatbot: Good day\nUser: What time is it?\nChatbot: 9:00 AM"
}
```

As we can see this JSON file has a placeholder for an API key, this would be replaced with an actual key, it allows the chatbot to know which user it is dealing with. It includes the most recent message from the user "I should go!" and the chat history of all previous messages, as the response of the chatbot will vary depending on the previous history.

Some chatbots will have further information in JSON files, for example the type or mode of their algorithm that they should use:

```json
{
"api_key": "your_api_key_here",
"message": "user_message_here",
"history": "chat_history_here",
"persona": ["friendly", "helpful"] //This specifies the persona that the chatbot should use in response to this message
"temperature": 0.7, // This would control the randomness of the response (0.0 to 1.0)
}
```

All of these additions would be specific to particular chatbots, and introduce additional functionality and customization for requests.

Now lets look at a JSON POST requests in a sample conversation with a chatbot, we will use the simplest version of the JSON files we stated above.

Sample conversation:

User: Hello

Chatbot: How can I help you today?

User: Write a python script that says hello world.

Chatbot:

```python
print("Hello, World!")
```

User: Change it to say hello, and an input name.

Chatbot:

```python
name = input("Whats your name?")
print("Hello", name)
```

JSON POST requests:

First user request:

```json
{
   "api_key": "your_api_key_here",
   "message": "hello",
   "history": ""
}
```

Second user request:

```json
{
   "api_key": "your_api_key_here",
   "message": "Write a python script that says hello world.",
   "history": "User: Hello\nChatbot: How can I help you today?\n"
}
```

Third user request:

```json
{
   "api_key": "your_api_key_here",
   "message": "Change it to say hello, and an input name.",
   "history": "User: Hello\nChatbot: How can I help you today?\nUser: Write a
python script that says hello world.\nChatbot: \nprint(\"Hello, World!\")\n"
}
```

After this user request the chatbot has a history of all the previous messages so it knows that the change in the script needs to be in python.