JAVA LAB 6 – CHAT BOT INTERFACE

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The designed simple chatbot interface is built using JSP to process user input and display the feedback dynamically. It uses a simple form to send user queries using text bar and a submit button , which are processed by the servlet and then responses are displayed in the chat window.

JSP components include:

chatbot.jsp: Responsible for UI for chat window and form submission.

EL Expression: Displays user questions and chatbot responses in the chat window.

The ChatbotService class contains the Chatbot logic:

The default keywords are stored in a HashMap and initialized in init method.

When a user submits a query, the service searches the HashMap for a matching key by iterating throught key set .If a match is found, the matching value is returned as a chatbot response.If no match is found, the default response will be given.

There is only one database schema Table connection in a MySQL database:

Fields: id (primary key), user\_query (stores the user's input query), chatbot\_response (stores the chatbot's response), and timestamp (shows when the conversation occurred).

communication:

The servlet handles both GET and POST requests. It retrieves the user’s input via POST, calls the service to get the chatbot’s response, saves the conversation to a database, and displays the results in a chat window.

The only recent conversations are shown in the chat window rather than showing all the conversations by making chat window clumsy.

Conversations are stored in a database, allowing you to continue conversations as needed.

This is how I implemented the simple chatbot interface that works on the predefined keywords and connection to simple database.

Output Screenshots:

A screenshot of a chatbot

Description automatically generatedA screenshot of a chatbot

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