TASK 3: Artificial Intelligence Chatbot

This Java program implements a basic AI chatbot that uses rule-based logic to respond to user queries. It simulates interactive communication and can be expanded with NLP techniques or a GUI interface. The bot replies to common questions with predefined answers.

```java
import java.util.*;

public class Chatbot {
    private static final Map<String, String> responses = new HashMap<>();

    static {
        responses.put("hi", "Hello! How can I help you?");
        responses.put("hello", "Hi there! What can I do for you?");
        responses.put("how are you", "I'm a bot, but I'm doing great!");
        responses.put("what is your name", "I'm ChatBot, your virtual assistant.");
        responses.put("bye", "Goodbye! Have a great day!");
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("ChatBot: Hi! Type something to start chatting (type 'exit' to quit).");

        while (true) {
            System.out.print("You: ");
            String input = sc.nextLine().toLowerCase();

            if (input.equals("exit")) {
                System.out.println("ChatBot: Goodbye!");
                break;
            }

            String response = responses.getOrDefault(input, "I'm sorry, I don't understand that.");
            System.out.println("ChatBot: " + response);
        }

        sc.close();
    }
}
```