TASK-3

**Artificial Intelligence Chatbot**

**import java.util.HashMap;**

**import java.util.Map;**

**import java.util.Scanner;**

**public class Chatbot {**

**private Map<String, String> responses;**

**// Constructor to initialize the chatbot responses**

**public Chatbot() {**

**responses = new HashMap<>();**

**// Add some basic responses**

**responses.put("hello", "Hi! How can I assist you today?");**

**responses.put("how are you", "I'm just a program, but I'm doing great! How about you?");**

**responses.put("what is your name", "I'm your Java chatbot.");**

**responses.put("tell me a joke", "Why don't programmers like nature? It has too many bugs.");**

**responses.put("bye", "Goodbye! Have a great day.");**

**}**

**// Method to get the chatbot's response**

**public String getResponse(String input) {**

**input = input.toLowerCase();**

**// Match the input with responses**

**for (String key : responses.keySet()) {**

**if (input.contains(key)) {**

**return responses.get(key);**

**}**

**}**

**return "I'm not sure I understand. Can you please rephrase?";**

**}**

**public static void main(String[] args) {**

**Chatbot chatbot = new Chatbot();**

**Scanner scanner = new Scanner(System.in);**

**System.out.println("Chatbot: Hello! You can start chatting. Type 'bye' to exit.");**

**while (true) {**

**System.out.print("You: ");**

**String userInput = scanner.nextLine();**

**if (userInput.equalsIgnoreCase("bye")) {**

**System.out.println("Chatbot: Goodbye! Have a great day.");**

**break;**

**}**

**String response = chatbot.getResponse(userInput);**

**System.out.println("Chatbot: " + response);**

**}**

**scanner.close();**

**}**

**}**