elementary chatbot

import re

def chatbot\_response(user\_input):

user\_input = user\_input.lower().strip()

responses = {

r"\b(1|hello|hi|hey)\b": "Hello! Welcome to the IFB Washing Machine Service Centre. How can I assist you today?",

r"\b(2|how are you)\b": "I'm doing great! I'm here to help you with your IFB washing machine service needs.",

r"\b(3|book service|schedule service|repair)\b": "Sure! Please provide your washing machine model number and preferred service date.",

r"\b(4|installation)\b": "We provide installation support. Please share your product details and address.",

r"\b(5|warranty status|check warranty)\b": "Please provide your machine's serial number to check warranty status.",

r"\b(6|troubleshooting|problem|issue)\b": "I'm here to help! Please describe the problem you are facing with your washing machine.",

r"\b(7|service charges|cost)\b": "Service charges vary based on the issue. Basic inspection charges are ₹300.",

r"\b(8|parts replacement|spare parts)\b": "We use genuine IFB spare parts. Charges depend on the part that needs replacement.",

r"\b(9|service status|track request)\b": "Please share your service request number to track the status.",

r"\b(10|customer care|support number)\b": "You can reach our customer care at 1800-3000-5678 (toll-free).",

r"\b(11|working hours|timings)\b": "Our service center is open from 9 AM to 7 PM, Monday to Saturday.",

r"\b(12|location|address)\b": "We are located at XYZ Plaza, Main Road, YourCity.",

r"\b(13|feedback|complaint)\b": "We're sorry for the inconvenience. Please share your feedback or complaint, and we'll address it quickly.",

r"\b(14|maintenance tips|care tips)\b": "Always use IFB-approved detergents, avoid overloading, and clean the filter regularly for best performance.",

r"\b(15|bye|exit)\b": "Goodbye! Thank you for contacting IFB Service Centre. 😊"

}

for pattern, response in responses.items():

if re.search(pattern, user\_input):

return response

return "I'm sorry, I didn't understand that. Could you please rephrase or ask about IFB washing machine service?"

# Chatbot interaction loop

print("Welcome to the IFB Washing Machine Service Centre Chatbot! Type 'exit' to end the conversation.")

while True:

user\_message = input("You: ")

if user\_message.lower() in ["bye", "exit"]:

print("Chatbot: Goodbye! Thank you for contacting IFB Service Centre. 😊")

break

response = chatbot\_response(user\_message)

print("Chatbot:", response)

theory

This is a rule-based chatbot that simulates a customer service assistant for an IFB Washing Machine Service Centre. It uses regular expressions (regex) to match specific keywords or phrases in the user's message and responds accordingly.

🔁 How It Works:

User Input Handling:

The input is converted to lowercase and trimmed to remove extra spaces.

Predefined Rules:

A dictionary (responses) stores patterns (like "hello", "book service", etc.) as keys and replies as values.

These patterns are written using regex to match multiple variants of similar questions.

Pattern Matching:

The program checks the user’s message against each regex pattern using re.search().

When a match is found, the corresponding response is returned.

Fallback Response:

If no patterns match, a default message is shown asking the user to rephrase the query.

Chat Loop:

A while loop keeps the conversation running until the user types "bye" or "exit".

🧠 Techniques Used:

Regex (Regular Expressions): For flexible matching of user inputs.

Dictionary-Based Logic: Simple and efficient for fixed types of queries.

Looping & Conditionals: For continuous interaction and control flow.

✅ Use Cases Covered:

Booking service

Warranty checks

Troubleshooting

Contact info

Service tracking

Installation and maintenance tips