**Basic Chatbot**

Create a text-based chatbot that can have conversations with users. You can use natural language processing libraries like NLTK or spaCy to make your chatbot more conversational

Program:

import nltk

from nltk.stem import WordNetLemmatizer

import random

lemmatizer = WordNetLemmatizer()

responses = {

"greeting": ["Hello!", "Hi there!", "Hey!", "Howdy!"],

"goodbye": ["Goodbye!", "See you later!", "Bye!"],

"thanks": ["You're welcome!", "No problem!", "Anytime!"],

"age": ["I'm just a few lines of code.", "Age is just a number."],

"name": ["I'm a simple chatbot.", "Call me ChatBuddy."],

"default": ["Sorry, I don't understand that.", "Can you rephrase that?", "Interesting... tell me more!"]

}

keywords = {

"greeting": ["hello", "hi", "hey", "morning"],

"goodbye": ["bye", "goodbye", "see you"],

"thanks": ["thanks", "thank you"],

"age": ["how old", "your age"],

"name": ["your name", "who are you"]

}

def preprocess(text):

tokens = nltk.word\_tokenize(text.lower())

lemmatized = [lemmatizer.lemmatize(word) for word in tokens]

return lemmatized

def match\_intent(user\_input):

words = preprocess(user\_input)

for intent, kw\_list in keywords.items():

for keyword in kw\_list:

if all(k in user\_input.lower() for k in keyword.split()):

return intent

if any(k in words for k in keyword.split()):

return intent

return "default"

def chatbot():

print("ChatBot: Hello! Type 'bye' to exit.")

while True:

user\_input = input("You: ")

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

print("ChatBot:", random.choice(responses["goodbye"]))

break

intent = match\_intent(user\_input)

print("ChatBot:", random.choice(responses[intent]))

if \_name\_ == "\_main\_":

chatbot()