**RECIPE GENERATOR CHATBOT APPLICATION**

**AIM:**

The aim is to develop a recipe generator chatbot powered by artificial intelligence that provides step by step instructions for a given recipe name, enabling users to quickly access cooking instructions and prepare meals efficiently.

**DESCRIPTION:**

The Python script serves as a versatile recipe chatbot, streamlining the cooking experience by providing step-by-step instructions for a diverse array of dishes. It utilizes dictionaries to organize recipes, encompassing both general and Indian cuisine, thereby expanding its culinary offerings.Central to the script is the get\_recipe\_steps() function, which retrieves and displays cooking instructions based on user input. It ensures a seamless interaction by checking the availability of the requested recipe and providing clear feedback if the recipe is not found.Facilitating user engagement is the chatbot() function, orchestrating the primary interaction loop. Upon initiation, the chatbot delivers a friendly welcome message and usage instructions. Users input recipe names, triggering the retrieval of cooking instructions through the get\_recipe\_steps() function. The chatbot iterates this process until the user opts to exit, enhancing usability and interaction.A conditional check ensures that the chatbot() function executes only when the script is directly run, enhancing modularity and ease of integration into larger projects or systems.Overall, this Python script offers a straightforward yet robust solution for accessing recipe instructions, empowering users to explore culinary creativity with confidence and convenience. Its intuitive design and comprehensive recipe database make it a valuable resource for cooks of all skill levels.

**CODE:**

import random

# Dictionary of recipe titles and steps

recipes = {

"pan-fried chicken": [

"1. Marinate chicken with salt, pepper, and lemon juice for 30 minutes.",

"2. Heat oil in a pan and add chicken pieces.",

"3. Cook until golden brown on both sides.",

"4. Serve hot with your favorite sides."

],

# Add more recipes as needed

}

additional\_indian\_recipes = {

"chicken biryani": [

"1. Marinate chicken with yogurt, ginger-garlic paste, and biryani masala for 1-2 hours.",

"2. Cook basmati rice until partially cooked, then drain and set aside.",

"3. In a large pot, heat ghee and sauté onions until golden brown.",

"4. Add marinated chicken and cook until browned.",

"5. Layer partially cooked rice over the chicken.",

"6. Sprinkle saffron-infused milk, fried onions, mint leaves, and coriander leaves over the rice.",

"7. Cover and cook over low heat until the chicken is cooked through and the rice is fully cooked.",

"8. Serve hot with raita.",

],

"paneer tikka": [

"1. Marinate paneer cubes with yogurt, ginger-garlic paste, tikka masala, and lemon juice for 1-2 hours.",

"2. Thread marinated paneer onto skewers, alternating with bell peppers, onions, and tomatoes.",

"3. Grill skewers on a preheated grill or barbecue until paneer is golden brown and vegetables are tender.",

"4. Serve hot with mint chutney.",

],

“chicken tikka masala": [

"1. Marinate chicken with yogurt, ginger-garlic paste, tikka masala, and lemon juice for 1-2 hours.",

"2. Grill or bake marinated chicken until cooked through.",

"3. Heat oil in a pan and sauté chopped onions until golden brown.",

"4. Add tomato puree, ginger-garlic paste, and spices; cook until oil separates.",

"5. Stir in grilled chicken and simmer until flavors are blended.",

"6. Finish with cream and garnish with chopped coriander leaves.",

"7. Serve hot with naan or rice.",

],

"butter chicken": [

"1. Marinate chicken with yogurt, ginger-garlic paste, tikka masala, and lemon juice for 1-2 hours.",

"2. Grill or bake marinated chicken until cooked through.",

"3. Heat butter in a pan and sauté chopped onions until golden brown.",

"4. Add tomato puree, ginger-garlic paste, and spices; cook until oil separates.",

"5. Stir in grilled chicken and simmer until flavors are blended.",

"6. Finish with cream and garnish with chopped coriander leaves.",

"7. Serve hot with naan or rice.",

],

"chana masala": [

"1. Soak chickpeas overnight, then cook in a pressure cooker until tender.",

"2. Heat oil in a pan and temper with cumin seeds.",

"3. Add chopped onions and cook until golden brown.",

"4. Stir in chopped tomatoes and cook until softened.",

"5. Add cooked chickpeas, along with spices and salt.",

"6. Simmer until flavors are blended and sauce thickens.",

"7. Garnish with chopped coriander leaves and serve hot with rice or bhatura.",

],

"paneer butter masala": [

"1. Heat butter in a pan and sauté chopped onions until golden brown.",

"2. Stir in chopped tomatoes and cook until softened.",

"3. Add ginger-garlic paste and cook until fragrant.",

"4. Blend the mixture into a smooth paste.",

"5. Heat butter in a pan and add the blended paste.",

"6. Add tikka masala and cook until oil separates.",

"7. Stir in cubed paneer and simmer until heated through.",

"8. Finish with cream and garnish with chopped coriander leaves.",

"9. Serve hot with naan or rice.",

],

"pav bhaji": [

"1. Boil mixed vegetables until tender, then mash them with a potato masher.",

"2. Heat butter in a pan and sauté chopped onions until golden brown.",

"3. Stir in chopped tomatoes and cook until softened.",

"4. Add mashed vegetables, pav bhaji masala, and salt.",

"5. Simmer until flavors are blended and bhaji thickens.",

"6. Toast pav (dinner rolls) with butter on a griddle.",

"7. Serve hot bhaji with toasted pav, chopped onions, and lemon wedges.",

],

"masala dosa": [

"1. Soak rice and urad dal separately for 4-6 hours.",

"2. Grind rice and urad dal separately to a smooth paste.",

"3. Mix both the pastes together and ferment overnight.",

"4. Heat a non-stick pan and pour a ladleful of batter onto it.",

"5. Spread the batter in a circular motion to form a thin layer.",

"6. Drizzle oil around the edges and cook until golden brown on both sides.",

"7. Spread dosa with potato masala and fold it.",

"8. Serve hot with coconut chutney and sambar.",

],

}

# Update the recipes dictionary with the additional Indian recipes

recipes.update(additional\_indian\_recipes)

# Function to provide steps for a specific recipe

def get\_recipe\_steps(recipe\_name):

if recipe\_name in recipes:

print(f"Here are the steps to prepare {recipe\_name}:")

for step in recipes[recipe\_name]:

print(step)

else:

print("Sorry, I don't have the recipe for that dish.")

# Function to interact with the user

def chatbot():

print("Welcome to the Recipe Chatbot!")

print("You can ask me for recipe steps by providing the name of the dish.")

print("Type 'exit' to end the conversation.")

while True:

user\_input = input("You: ").lower()

if user\_input == "exit":

print("Chatbot: Goodbye! Have a great day.")

break

else:

get\_recipe\_steps(user\_input)if \_name\_ == "\_main\_":

chatbot()

**OUTPUT:**

