AI CHATBOT FOR RECIPE SUGGESTIONS

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PROJECT OVERVIEW

- A simple chatbot to suggest recipes

- User types what they want to cook or ingredients they have

- Chatbot returns the recipe if available

OBJECTIVE

- Understand user queries using keywords
- Match to stored recipes
- Provide ingredients and instructions

TOOLS USED

- **Language:** Python
- **Libraries:** None (No modules used)
- **Interface:** Console-based chatbot

DATASET

Stored as Python dictionary:

```
recipes = {
    "pasta": {"ingredients": [...], "instructions": "..."},
    ...
}
```

CORE LOGIC

- CONVERT USER INPUT TO LOWERCASE
- CHECK IF RECIPE NAME OR INGREDIENT EXISTS IN INPUT
- RETURN CORRESPONDING RECIPE

SAMPLE CODE

- if "pasta" in user_input:
- return "pasta"
- Basic keyword matching logic
- Easy to implement, no modules

CHAT EXAMPLE

- **USER:** I HAVE EGGS
  BOT: TRY MAKING AN OMELETTE!
  USER: HOW TO COOK RICE?
  BOT: BOIL WATER, ADD RICE, AND COOK

RECIPE LIST IN THE CODE

1 . Pasta 2.Omelette 3. Salad 4. Rice

5. Sandwich 6. Fried Rice 7. kheer 8.Pancakes

9. Noodles 10. Chicken Curry 11 . Banana Smoothie 12.Burger

13.Soup 14.Pizza 15. Dal 16.Roti

17.Idli 18.Dosa 19.Biryani 20.Cutlet

21.Poha 22.Upma 23.Chapati 24.Paneer Curry

25 .Lassi

CODE:

```
RECIPES = {
  "PASTA": {
    "INGREDIENTS": ["PASTA", "TOMATO", "GARLIC", "OLIVE OIL"],
    "INSTRUCTIONS": "BOIL PASTA. COOK TOMATO AND GARLIC IN OLIVE OIL. MIX AND SERVE."
  },
  "OMELETTE": {
    "INGREDIENTS": ["EGGS", "SALT", "PEPPER", "BUTTER"],
    "INSTRUCTIONS": "BEAT EGGS. COOK IN BUTTER. ADD SALT AND PEPPER."
  },
```

```
"SALAD": {
    "INGREDIENTS": ["LETTUCE", "TOMATO", "CUCUMBER", "OLIVE OIL"],
    "INSTRUCTIONS": "CHOP VEGETABLES. ADD OLIVE OIL. MIX WELL."
},

    RICE": {

        "INGREDIENTS": ["RICE", "WATER", "SALT"],

        "INSTRUCTIONS": "BOIL WATER, ADD RICE AND SALT, COOK UNTIL DONE."

    },

"SANDWICH": {

    "INGREDIENTS": ["BREAD", "CHEESE", "TOMATO", "LETTUCE", "MAYONNAISE"],

    "INSTRUCTIONS": "PLACE CHEESE, TOMATO, AND LETTUCE BETWEEN SLICES OF BREAD. ADD
MAYONNAISE."

    },
```

```json
"FRIED RICE": {
    "INGREDIENTS": ["RICE", "EGG", "CARROT", "PEAS", "SOY SAUCE"],
    "INSTRUCTIONS": "COOK RICE. STIR-FRY WITH VEGGIES, EGG, AND SOY SAUCE."
},

"pancakes": {
    "ingredients": ["flour", "milk", "egg", "sugar", "butter"],
    "instructions": "Mix ingredients. Cook batter on a pan with butter."
},
"noodles": {
    "ingredients": ["noodles", "soy sauce", "garlic", "vegetables"],
    "instructions": "Boil noodles. Stir-fry with garlic, vegetables, and soy sauce."
},
```

```
"CHICKEN CURRY": {
    "INGREDIENTS": ["CHICKEN", "ONION", "GARLIC", "TOMATO", "SPICES"],
    "INSTRUCTIONS": "COOK ONION, GARLIC, AND TOMATO WITH SPICES. ADD
CHICKEN AND SIMMER."
    },


"banana smoothie": {
    "ingredients": ["banana", "milk", "honey"],
    "instructions": "Blend banana with milk and honey. Serve chilled."
    },
    "burger": {
    "ingredients": ["bun", "patty", "lettuce", "tomato", "cheese"],
    "instructions": "Grill patty. Assemble with bun, cheese, and vegetables."
    },
```

```json
"SOUP": {
    "INGREDIENTS": ["WATER", "VEGETABLES", "SALT", "PEPPER"],
    "INSTRUCTIONS": "BOIL VEGETABLES IN WATER WITH SALT AND PEPPER."
},

"PIZZA": {
    "INGREDIENTS": ["PIZZA BASE", "CHEESE", "TOMATO SAUCE", "TOPPINGS"],
    "INSTRUCTIONS": "SPREAD SAUCE ON BASE. ADD TOPPINGS AND CHEESE. BAKE UNTIL GOLDEN."
},

"DAL": {
    "INGREDIENTS": ["LENTILS", "WATER", "TURMERIC", "SALT", "GHEE"],
    "INSTRUCTIONS": "BOIL LENTILS WITH TURMERIC AND SALT. ADD GHEE FOR FLAVOR."
},
```

```
"ROTI": {
    "INGREDIENTS": ["FLOUR", "WATER", "SALT"],
    "INSTRUCTIONS": "KNEAD DOUGH, ROLL FLAT, COOK ON HOT PAN UNTIL
GOLDEN."
    },

"IDLI": {
    "INGREDIENTS": ["RICE", "URAD DAL", "SALT"],
    "INSTRUCTIONS": "GRIND RICE AND DAL. FERMENT, THEN STEAM THE BATTER IN MOLDS."
    },

"DOSA": {
    "INGREDIENTS": ["RICE", "URAD DAL", "OIL"],
    "INSTRUCTIONS": "GRIND, FERMENT BATTER. SPREAD ON PAN WITH OIL. COOK TILL CRISPY."
    },
```

```
"BIRYANI": {
    "INGREDIENTS": ["RICE", "CHICKEN", "YOGURT", "SPICES",
"ONION"],
    "INSTRUCTIONS": "LAYER COOKED RICE WITH MARINATED
CHICKEN. STEAM TOGETHER."
    },


    "KHEER": {
        "INGREDIENTS": ["MILK", "RICE", "SUGAR", "CARDAMOM", "NUTS"],
        "INSTRUCTIONS": "BOIL RICE IN MILK. ADD SUGAR AND CARDAMOM. GARNISH WITH NUTS."
    },
    "CUTLET": {
        "INGREDIENTS": ["POTATO", "VEGETABLES", "BREAD CRUMBS", "SPICES"],
        "INSTRUCTIONS": "MASH VEGGIES. SHAPE AND COAT WITH CRUMBS. FRY UNTIL GOLDEN."
    },
```

```
"POHA": {
    "INGREDIENTS": ["FLATTENED RICE", "ONION", "MUSTARD SEEDS",
"TURMERIC", "LEMON"],
    "INSTRUCTIONS": "SOAK POHA. FRY WITH SPICES AND ONION.
ADD LEMON JUICE."
    },


        "UPMA": {
            "INGREDIENTS": ["SEMOLINA", "VEGETABLES", "MUSTARD SEEDS", "CURRY LEAVES"],

            "INSTRUCTIONS": "ROAST SEMOLINA. COOK WITH FRIED VEGGIES AND SPICES."

        },
        "CHAPATI": {

            "INGREDIENTS": ["FLOUR", "WATER", "SALT"],

            "INSTRUCTIONS": "KNEAD DOUGH, ROLL INTO CIRCLES, AND COOK ON TAWA."

        },
```

```python
    "PANEER CURRY": {
        "INGREDIENTS": ["PANEER", "TOMATO", "ONION", "SPICES", "CREAM"],
        "INSTRUCTIONS": "COOK ONION AND TOMATO WITH SPICES. ADD PANEER
AND CREAM."
    },
"LASSI": {
        "INGREDIENTS": ["YOGURT", "SUGAR", "WATER"],
        "INSTRUCTIONS": "BLEND YOGURT WITH WATER AND SUGAR. SERVE COLD."
    }
}


DEF FIND_RECIPE(USER_INPUT):
    USER_INPUT = USER_INPUT.LOWER()
    FOR RECIPE_NAME IN RECIPES:
```

```
IF RECIPE_NAME IN USER_INPUT:
      RETURN RECIPE_NAME
      FOR INGREDIENT IN RECIPES[RECIPE_NAME]["INGREDIENTS"]:
      IF INGREDIENT IN USER_INPUT:

RETURN RECIPE_NAME
   RETURN None

PRINT("👤👁 Welcome to RecipeBot! Ask me for a recipe (e.g., 'How to make pizza?' or
'I have potatoes').")

PRINT("Type 'exit' to end the chat.")


WHILE True:

   USER_INPUT = input("You: ")

   IF USER_INPUT.LOWER() IN ["exit", "quit", "bye"]:

      PRINT("RecipeBot: Goodbye! Happy cooking! 👍")

      BREAK
```

```python
match = find_recipe(user_input)
    if match:
        recipe = recipes[match]


        print(f"\n🍴 Recipe: {match.title()}")

        print("Ingredients:", ", ".join(recipe["ingredients"]))

        print("Instructions:", recipe["instructions"], "\n")

    else:

        print("RecipeBot: Sorry, I couldn't find a recipe for that. Try using a food name or ingredient.\n")
```

ANY QUESTIONS

THANK YOU