

APPLIED ARTIFICIAL INTELLIGENCE

EXPERIMENT – 02

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# === Super Simple Disease Diagnosis System with Safe Input ===

# Step 1: Store diseases and their symptoms
knowledge_graph = {
    "Common Cold": ["cough", "sore throat", "runny nose", "sneezing"],
    "Flu": ["fever", "cough", "body ache", "chills"],
    "COVID-19": ["fever", "cough", "loss of taste", "difficulty breathing"],
    "Malaria": ["fever", "chills", "headache", "sweating"],
    "Allergy": ["sneezing", "runny nose", "itchy eyes"]
}

# Step 2: Create a list of all symptoms (no duplicates)
all_symptoms = [
    "cough", "sore throat", "runny nose", "sneezing", "fever", "body ache",
    "chills", "loss of taste", "difficulty breathing", "headache", "sweating", "itchy eyes"
]

print("=== Welcome to the Simple Disease Diagnosis System ===")
print("Select the symptoms you are experiencing:")

# Step 3: Show symptoms with numbers
for i in range(len(all_symptoms)):
    print(str(i + 1) + ". " + all_symptoms[i])

# Step 4: Get input from user
print("\nEnter the numbers of your symptoms separated by commas (e.g., 1,3,5):")
user_input = input("Your symptoms: ")

# Step 5: Convert and validate input
selected_symptoms = []
numbers = user_input.split(",")
for n in numbers:
    n = n.strip()
    if n.isdigit():
        index = int(n)
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if 1 <= index <= len(all_symptoms):  
    symptom = all_symptoms[index - 1]  
    if symptom not in selected_symptoms:  
        selected_symptoms.append(symptom)  
  
# Step 6: Show result or error  
  
if len(selected_symptoms) == 0:  
    print("\nNo valid symptoms selected. Please enter correct numbers only.")  
else:  
    print("\nChecking possible diseases...\n")  
  
for disease in knowledge_graph:  
    disease_symptoms = knowledge_graph[disease]  
    match_count = 0  
  
    for symptom in selected_symptoms:  
        if symptom in disease_symptoms:  
            match_count = match_count + 1  
  
    if match_count > 0:  
        print(disease, " --> matched ", match_count, "symptoms.")
```

output:

```
=== Welcome to the Simple Disease Diagnosis System ===  
Select the symptoms you are experiencing:  
1. cough  
2. sore throat  
3. runny nose  
4. sneezing  
5. fever  
6. body ache  
7. chills  
8. loss of taste  
9. difficulty breathing  
10. headache  
11. sweating  
12. itchy eyes  
  
Enter the numbers of your symptoms separated by commas (e.g., 1,3,5):  
Your symptoms: 1,5,7,8  
  
Checking possible diseases...  
  
Common Cold --> matched 1 symptoms.  
Flu --> matched 3 symptoms.  
COVID-19 --> matched 3 symptoms.  
Malaria --> matched 2 symptoms.  
>>
```