**AI**

**Practical 6**

import streamlit as st

from typing import List

knowledge\_base = {

"cold" : [

"1: Tylenol",

"2: Panadol",

"3: Nasal spray",

"4: Please wear warm clothes!"

],

"influenza": [

"1: Tamiflu"

"2: Panadol",

"2: Zanamivir",

"4: Please take a warm bath and do salt gargling!"

],

"typhoid": [

"1: Chloramphenicol",

"2: Amoxicillin",

"3: Ciproflaxacin",

"4: Azithromycin",

"5: Please do complete bed rest and take soft diet!"

],

"chicken pox" : [

"1: Varicella vaccine",

"2: Immunoglobulin",

"3: Acetomenaphin",

"4: Acyclovir",

"5: Please do have have oatmeal and stay at home!"

],

"measles" : [

"1: Tylenol",

"2: Aleve",

"3: Advil",

"4: Vitamin A",

"5: Please get rest and use more liquid!"

],

"malaria" : [

"1: Aralen",

"2: Qualaquin",

"3: Plaquenil",

"4: Mefloquine",

"5: Please do not sleep in open air and cover your full skin!"

]

}

st.header("Medical Diagnosis Expert System")

def respond(input: List[str]):

symptoms = input

if (len(symptoms) == 3):

if (symptoms[0] == "rash" and symptoms[1] == "body ache" and symptoms[2] == "fever"):

st.write("You have chicken pox!")

st.write("Please take the following medicines and precautions-")

for i in knowledge\_base["chicken pox"]:

st.write(i)

else:

st.write("Question is not present in the knowledge base!\nCould you please enter the appropriate answer for the question below-")

answer = st.text\_input("Answer")

add = st.button("Add answer")

if (add):

for key in symptoms:

knowledge\_base[key] = [answer]

elif (len(symptoms) == 4):

if (symptoms[0] == "headache" and symptoms[1] == "runny nose" and symptoms[2] == "sneezing" and symptoms[3] == "sore throat"):

st.write("You have cold!")

st.write("Please take the following medicines and precautions-")

for i in knowledge\_base["cold"]:

st.write(i)

elif (symptoms[0] == "headache" and symptoms[1] == "abdominal pain" and symptoms[2] == "poor appetite" and symptoms[3] == "fever"):

st.write("You have typhoid!")

st.write("Please take the following medicines and precautions-")

for i in knowledge\_base["typhoid"]:

st.write(i)

elif (symptoms[0] == "fever" and symptoms[1] == "runny nose" and symptoms[2] == "rash" and symptoms[3] == "conjunctivitis"):

st.write("You have measles!")

st.write("Please take the following medicines and precautions-")

for i in knowledge\_base["measles"]:

st.write(i)

else:

st.write("Question is not present in the knowledge base!\nCould you please enter the appropriate answer for the question below-")

answer = st.text\_input("Answer")

add = st.button("Add answer")

if (add):

for key in symptoms:

knowledge\_base[key] = [answer]

elif (len(symptoms) == 5):

if (symptoms[0] == "sore throat" and symptoms[1] == "fever" and symptoms[2] == "headache" and symptoms[3] == "chills" and symptoms[4] == "body ache"):

st.write("You have influenza!")

st.write("Please take the following medicines and precautions-")

for i in knowledge\_base["influenza"]:

st.write(i)

else:

st.write("Question is not present in the knowledge base!\nCould you please enter the appropriate answer for the question below-")

answer = st.text\_input("Answer")

add = st.button("Add answer")

if (add):

for key in symptoms:

knowledge\_base[key] = [answer]

elif (len(symptoms) == 6):

if (symptoms[0] == "fever" and symptoms[1] == "sweating" and symptoms[2] == "headache" and symptoms[3] == "nausea" and symptoms[4] == "vomiting" and symptoms[5] == "diahrrea"):

st.write("You have malaria!")

st.write("Please take the following medicines and precautions-")

for i in knowledge\_base["malaria"]:

st.write(i)

else:

st.write("Question is not present in the knowledge base!\nCould you please enter the appropriate answer for the question below-")

answer = st.text\_input("Answer")

add = st.button("Add answer")

if (add):

for key in symptoms:

knowledge\_base[key] = [answer]

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

options = st.multiselect(

'What are your symptoms?',

["headache", "runny nose", "sneezing", "sore throat", "fever", "chills", "body ache", "abdominal pain", "poor appetite", "rash", "conjunctivitis", "sweating", "nausea", "vomiting", "diahrrea"],

[])

col1, col2 = st.columns([1,0.1])

with col1:

ask = st.button("Ask")

with col2:

quit = st.button("Quit")

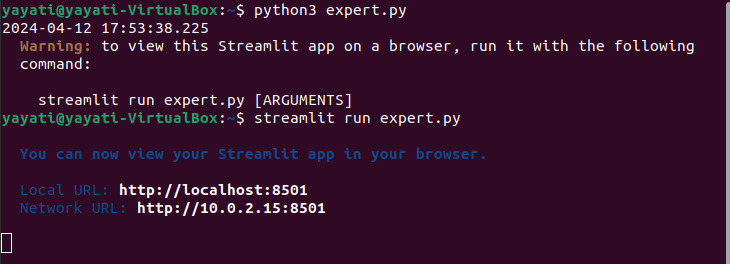
if (ask):

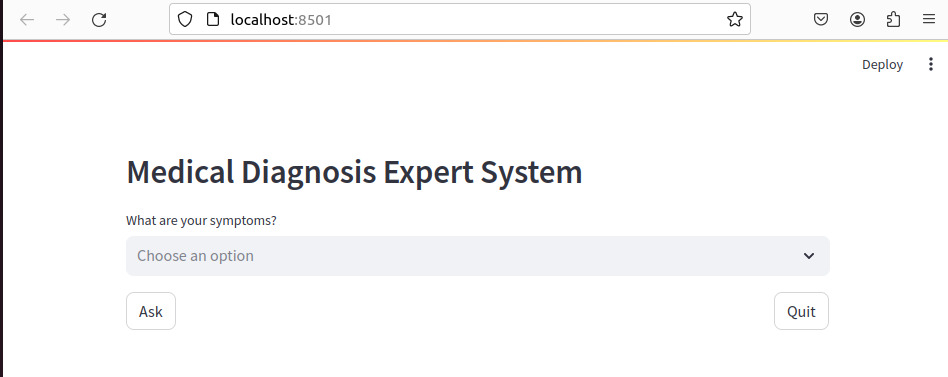
respond(options)

if (quit):

st.write("Thank you for using the Expert system!")

**Output:**

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