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 \* Problem Statement :-

        Implement any one of the following Expert System.

            I.)   Information Management

            II.)  Hospitals and Medical Facilities

            III.) Help Desk Management

            IV.)  Employee Performance Evaluation

            V.)   Stock Market Trading

            VI.)  Airline Scheduling And Cargo Schedules

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#include <bits/stdc++.h>

using namespace std;

int main()

{

    cout << "\n\n\t\t \_\_\_\_\_\_\_ Welcome to COVID-19 Expert system \_\_\_\_\_\_\_\n";

    int covidSuspisionCounter = 0;

    int severity = 0;

    int oxylevel = 0;

    int temp = 0;

    vector<string> ques1 = {

            "What is patient's body temparature? (float value) = ",

            "What is the oxygen level? (int value) = ",

            "How many vaccines has the patient taken? (int value) = ",

            "What is patient's age? (int value) = "

    };

    vector<string> ques2 = {

            "Does the patient have cough and cold? (yes/no) = ",

            "Is the patient able to recognize smell and taste? (yes/no) = ",

            "Is the patient suffering from sore throat? (yes/no) = ",

            "Is the patient suffering from headache? (yes/no) = ",

            "Is the patient suffering from BP/ diabetes? (yes/no) = ",

            "Has the patient come in a contact of a Covid suspicious person? (yes/no) = "

    };

    for(int i=0; i<6; i++)

    {

        string ans;

        cout << "\n\t " << ques2[i];

        cin >> ans;

        if(i != 1 && ans == "yes")

            covidSuspisionCounter += 1;

        else if(i==1 && ans=="no")

            covidSuspisionCounter += 1;

    }

    for(int i=0; i<4; i++)

    {

        cout << "\n\t " << ques1[i];

        if(i==0)

        {

            float ans;

            cin >> ans;

            if(ans >= 101.0)

            {

                severity += 2;

                covidSuspisionCounter += 1;

                temp = 1;

            }

            else if(ans<101.0 && ans>=99.6)

                severity += 1;

            else

                severity += 0;

        }

        if(i==1)

        {

            int ans;

            cin >> ans;

            if(ans>=94)

                severity += 0;

            else if(ans<94 and ans>87)

                severity += 1;

            else

            {

                severity += 2;

                covidSuspisionCounter += 1;

                oxylevel = 1;

            }

        }

        if(i==2)

        {

            int ans;

            cin >> ans;

            if(ans==0)

                severity += 2;

            else if(ans==1)

                severity += 1;

            else

                severity += 0;

        }

        if(i==3)

        {

            int ans;

            cin >> ans;

            if(ans>12 and ans<31)

                severity += 0;

            else if(ans>31 and ans<51)

                severity += 1;

            else

                severity += 2;

        }

    }

    cout << "\n\t \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n\n";

    if(covidSuspisionCounter>3)

    {

        cout << "\n\t The patient is probably covid positive\n";

        if(severity<3)

            cout << "\n\t It looks like the symptoms are mild \n\t Home Quarantine\n";

        else if(severity>=3 and severity<6)

            cout << "\n\t The patient can get an admission in the general ward\n";

        else

            cout << "\n\t The patient looks critical\n";

    }

    else

        cout << "\n\t It looks like patient is not Covid positive\n";

    if(oxylevel == 1)

        cout << "\n\t Keep monitoring patient's oxygen level\n";

    if(temp == 1)

        cout << "\n\t Keep monitoring patient's body temperature\n";

    cout << "\n\n";

    return 0;

}