#include <iostream>

#include <vector>

#include <string>

#include <limits>

using namespace std;

struct Patient {

string name;

int age;

string condition;

};

vector<Patient> patients; // Store patients in a vector

void addPatient() {

Patient newPatient;

cin.ignore(); // Ignore leftover newline from previous input

cout << "Enter patient's name: ";

getline(cin, newPatient.name);

cout << "Enter patient's age: ";

while (!(cin >> newPatient.age)) {

cout << "Invalid input. Please enter a number for age: ";

cin.clear();

cin.ignore(numeric\_limits<streamsize>::max(), '\n');

}

cin.ignore(); // Ignore leftover newline

cout << "Enter patient's condition: ";

getline(cin, newPatient.condition);

patients.push\_back(newPatient);

cout << "Patient added successfully!\n";

}

void displayPatients() {

cout << "List of Patients:\n";

for (const auto &patient : patients) {

cout << "Name: " << patient.name << ", Age: " << patient.age << ", Condition: " << patient.condition << "\n";

}

}

void searchPatientByName(const std::string &name)

{

cout << "Patients with name '" << name << "':\n";

for (const auto &patient : patients)

{

if (patient.name == name)

{

cout << "Name: " << patient.name << ", Age: " << patient.age << ", Condition: " << patient.condition << "\n";

}

}

}

void searchPatientByCondition(const std::string &condition)

{

cout << "Patients with condition '" << condition << "':\n";

for (const auto &patient : patients)

{

if (patient.condition == condition)

{

cout << "Name: " << patient.name << ", Age: " << patient.age << ", Condition: " << patient.condition << "\n";

}

}

}

void countPatients()

{

cout << "Total number of patients: " << patients.size() << "\n";

}

int main()

{

int choice;

do

{

cout << "\nHospital Management System\n";

cout << "1. Add New Patient\n";

cout << "2. Display Patients\n";

cout << "3. Search Patient by Name\n";

cout << "4. Search Patient by Condition\n";

cout << "5. Count Patients\n";

cout << "6. Exit\n";

cout << "Enter your choice: ";

cin >> choice;

switch (choice)

{

case 1:

addPatient();

break;

case 2:

displayPatients();

break;

case 3:

{

string name;

cout << "Enter name to search: ";

cin >> name;

searchPatientByName(name);

break;

}

case 4:

{

string condition;

cout << "Enter condition to search: ";

cin >> condition;

searchPatientByCondition(condition);

break;

}

case 5:

countPatients();

break;

case 6:

cout << "Exiting...\n";

break;

default:

cout << "Invalid choice. Try again.\n";

}

} while (choice != 6);

return 0;

}