/\*10. Consider a scenario for Hospital to cater services to

different kinds of patients as Serious

(top priority), b) non-serious (medium priority), c) General Checkup (Least priority).

Implement the priority queue to cater services to the patients.

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#include <iostream>

#include <queue>

using namespace std;

struct Patient {

string name;

int priority;

};

bool operator<(const Patient& a, const Patient& b) { return a.priority < b.priority; }

int main() {

priority\_queue<Patient> q;

int choice;

do {

cout << "1. Add Patient" << endl;

cout << "2. Serve Patient" << endl;

cout << "3. Exit" << endl;

cout << "Enter your choice: ";

cin >> choice;

switch (choice) {

case 1: {

Patient p;

cout << "\nEnter patient name: ";

cin >> p.name;

cout << "Enter patient priority (1 - Serious, 2 - Non-serious, 3 - General Checkup): ";

cin >> p.priority;

q.push(p);

cout << "Patient added successfully." << endl;

break;

}

case 2: {

if (q.empty()) {

cout << "\nNo patients in the queue." << endl;

} else {

cout << "\nServing patient: " << q.top().name << endl;

q.pop();

}

break;

}

case 3: {

cout << "\nExiting..." << endl;

break;

}

default: {

cout << "\nInvalid choice. Please try again." << endl;

break;

}

}

} while (choice != 3);

return 0;

}