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#include<iostream>
#include<queue>
#include<string>
using namespace std;
struct patient {
    string name;
    int priority;
    patient( string &name, int priority):
        name(name), priority(priority) {}
};

int main() {

    auto compare=[]( patient &P1, patient &P2 ) {
        return P1.priority > P2.priority;
    };

    priority_queue<patient, vector<patient>, decltype(compare)>PQ(compare);

    int n;
    cout<<"Enter the number of patients: ";
    cin>>n;
    for(int i=0; i<n; i++) {
        string name;
        int p;
        cout<<"Enter the patient's name :";
        cin>>name;

        cout<<"Enter the priority of the patient (1 for serious patient , 2 for non-serious,
3 for general checkup) :";
        cin>>p;
        PQ.emplace(name,p);
    }
}

```

```
cout<<"LIST OF PATIENTS:"<<endl;
while(!PQ.empty()){
    patient P=PQ.top();

    if(P.priority==1) {
        cout<<"Serious patient, Name:"<<P.name<<endl;;
    }
    else if(P.priority==2) {
        cout<<"Non-Serious patient, Name:"<<P.name<<endl;;
    }
    else if(P.priority==3){
        cout<<"General patient, Name:"<<P.name<<endl;
    }

    PQ.pop();
}

return 0;
}
```