SDA ASSIGNMENT 3-786

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Classes Identification:

Previous Knowledge:

We’ve created the Analysis Model in our assignment 2. Now we are required to identify all the classes that were present in our previous model.

Key Point:

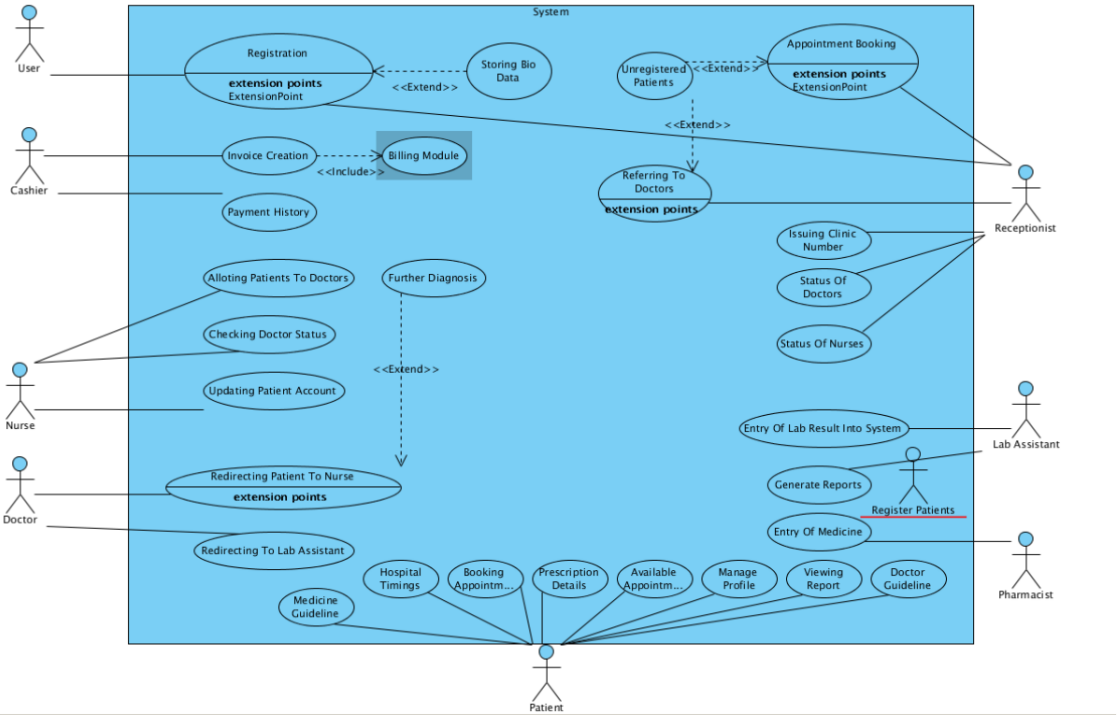
Few key points that are going to help you in identifying the classes are mentioned below.

- The classes are mainly the Stakeholders.
- Stakeholder must be noun.
- Stakeholders cannot be verb under any circumstances.
- Classes have data members.
- Classes have data functions.
- Data functions help in interaction/connection of one class with the other class.

Identification:

The identification of the classes will be done by using our previous Analysis Model.

Diagram:



Collected Information:

We can easily identify the classes from the above diagram.
If you have a look at the Visual Demonstration attached above, we can clearly see there are several stakeholders present in front of you and they are mostly NOUNS. Therefore we will write the classes one by one.

Class 1: User

Class 2: Cashier

Class 3: Nurse

Class 4: Doctor

Class 5: Receptionist

Class 6: Lab Assistant

Class 7: Pharmacist

These are the few classes that are identified from our Analysis Model.

Also keep this point in mind that Activity Diagram is used in Finding The "Behaviour of the identified classes" or you can say "Data Functions".

Identifying The Associations:

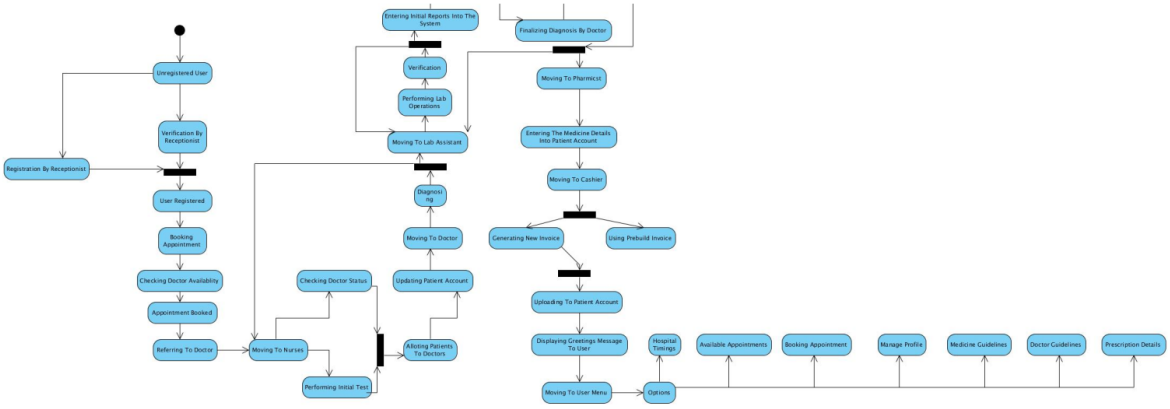
In most of the cases, we use:

"*Activity Diagram"* for the identification of Associations between different classes of a Model.

Associations are basically the behaviors or interactions between different classes of a Model.

Key Point: The associations between classes is identified by different strategies but here i'm going to use my Activity Diagram for association identification which i've created in the previous assignment no two.

Activity Diagram:



Collected Information:

We can easily identify the associations from the activity diagram attached above.

Association 1:

The first association is between the User class and the Receptionist.

Association 2:

The second association is between the Receptionist and the Nurse.

Association 3:

The third association is between the Nurse and the Doctor.

Association 4:

The fourth association is between the User and the Lab Assistant.

Association 5:

The fifth association is between the Lab Assistant and the Doctor.

Association 6:

The sixth association is between the User and the Pharmacist.

Association 7:

The seventh association is between the User and the Lab Assistant.

Association 8:

The eight association is between the Lab Assistant and the Doctor.

Association 9:

The ninth association is between the User and the Cashier.

Association 10:

The tenth association is between the User and the Pharmacist.

Association 11:

The eleventh association is between the Pharmacist and the User Interaction menu.

Association 12:

The twelve association is between the User and User Menu Of System.

Class Diagram:

Key points:

We’ve made the Class diagram after the identification of:

- ***Classes Identification from Use Case Diagram.***

- ***Association Identification from Activity Diagram.***

Separate Demonstration:

Here we are going to show each classes that are going to be the part of our Class Diagram Independently.

User:

User class has following:

bool REGISTRATIONFlag;

int username;

int age;

int gender;

Member Function:

Registration();

Booking();

DoctorAvailablity();

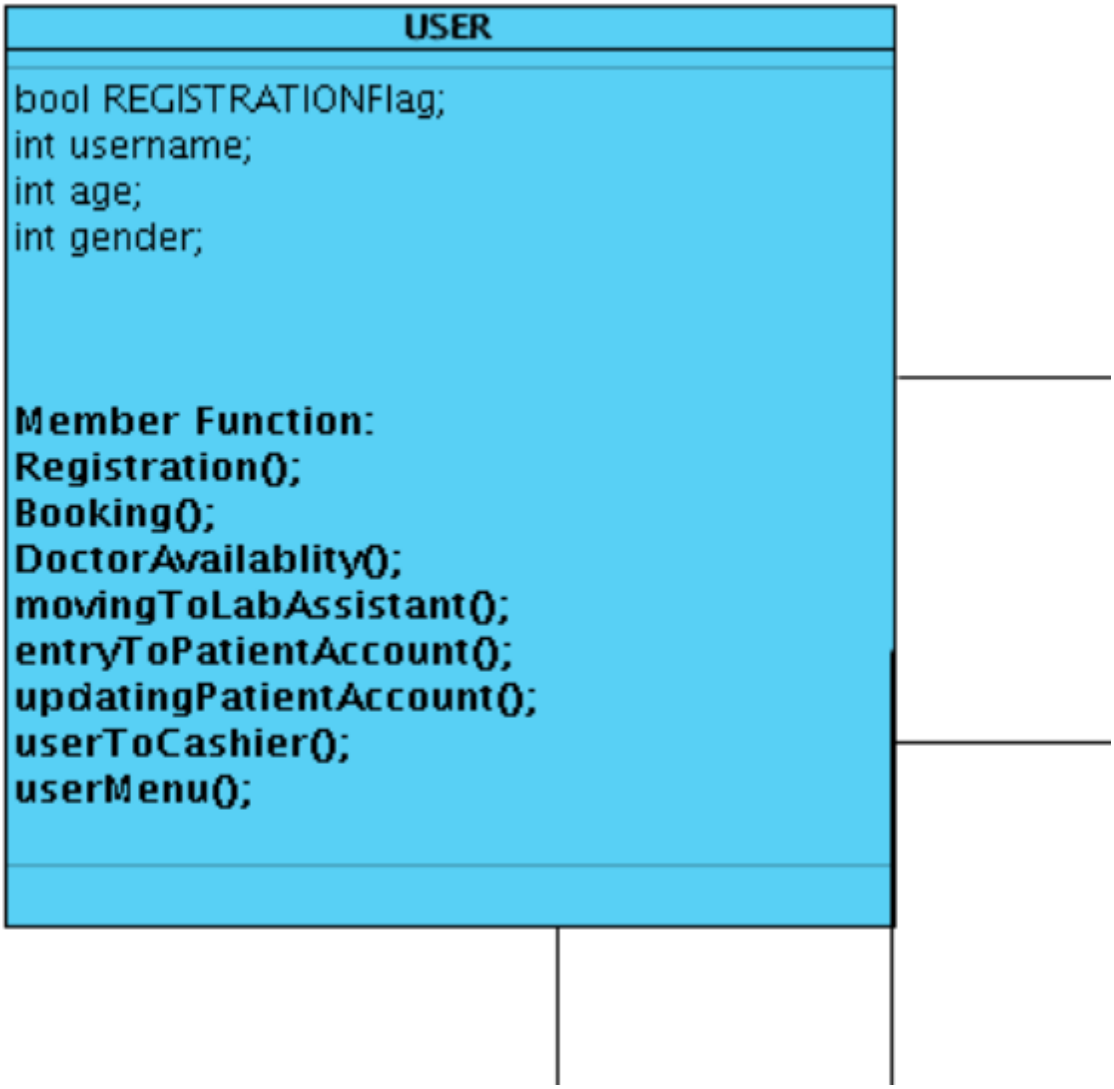
movingToLabAssistant();

entryToPatientAccount();

updatingPatientAccount();

userToCashier();

userMenu();



Receptionist:

Receptionist class has following:

bool registrationFlag;

char userName;

char userCredientials[];

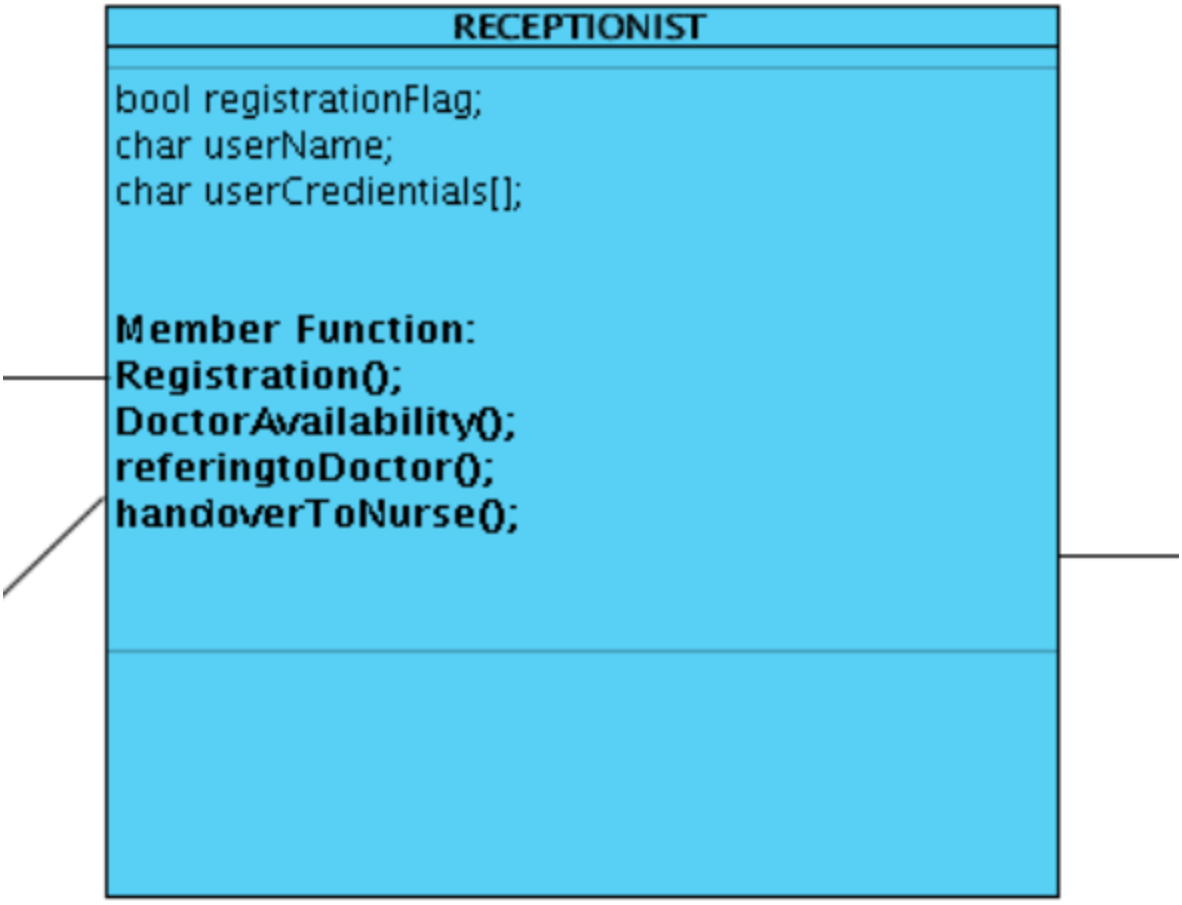
Member Function:

Registration();

DoctorAvailability();

referingtoDoctor();

handoverToNurse();



Nurse:

Nurse class has following:

bool patientFlag;

bool doctorAvailability;

bool allotingFlag;

Member Function:

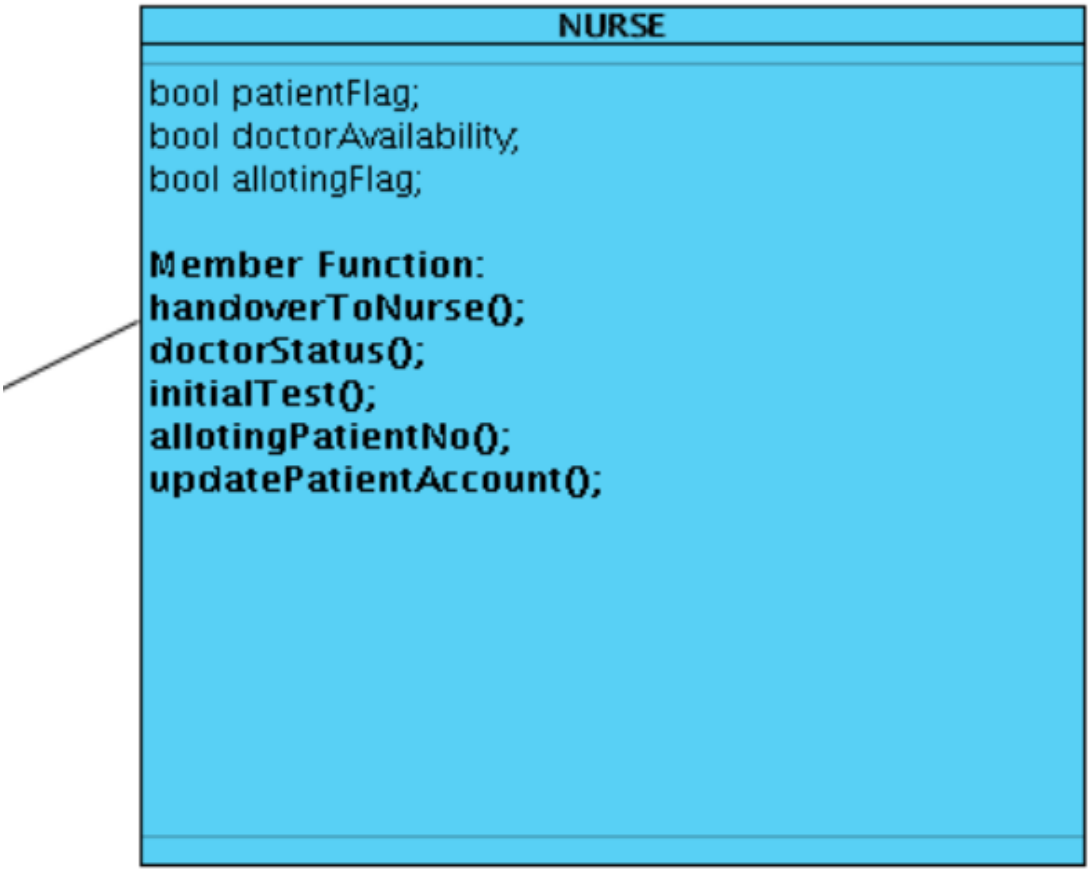
handoverToNurse();

doctorStatus();

initialTest();

allotingPatientNo();

updatePatientAccount();



Doctor:

Doctor class has following:

bool patientRecieved;

bool diagnosis;

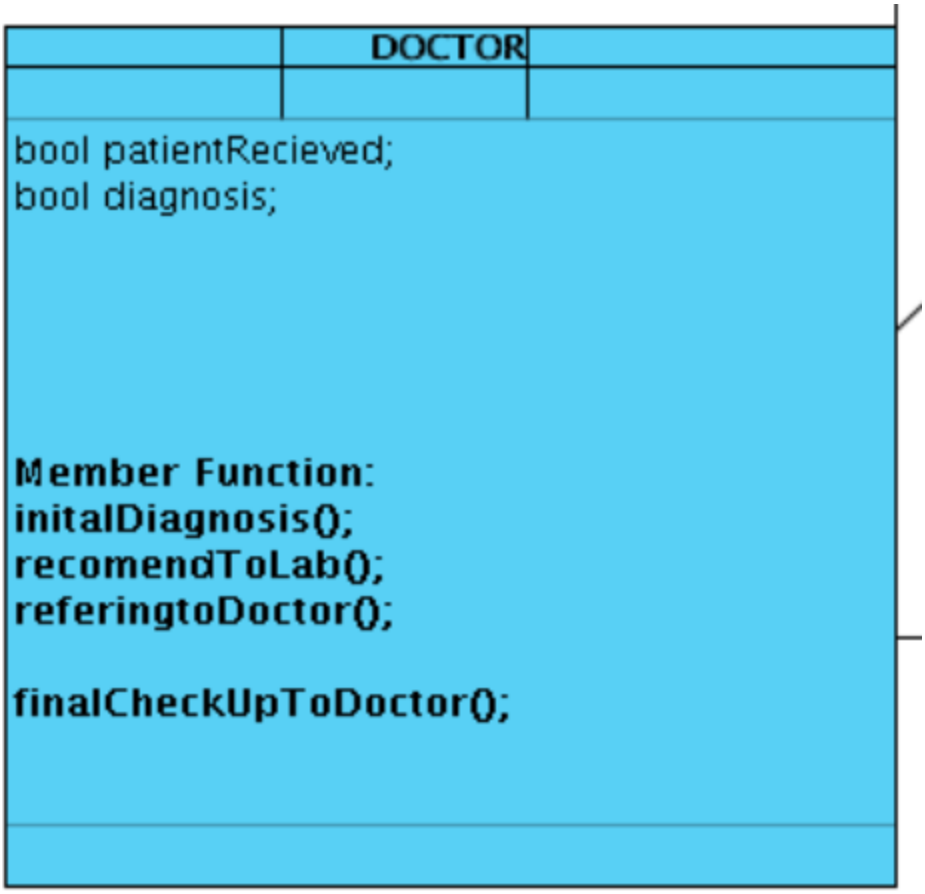
Member Function:

initalDiagnosis();

recomendToLab();

referingtoDoctor();

finalCheckUpToDoctor();



Lab Assistant:

Lab Assistant class has following:

bool patientRecieved;

int reportResult;

int patientNo;

bool documentCheck;

Member Functions:

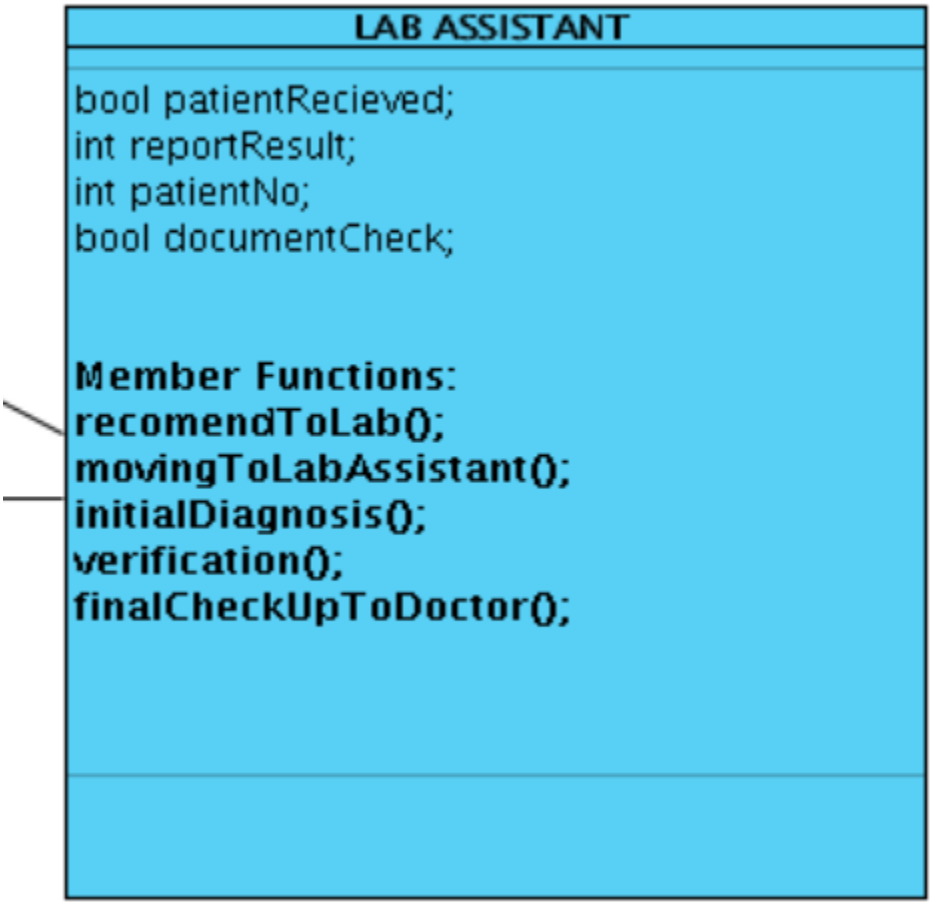
recomendToLab();

movingToLabAssistant();

initialDiagnosis();

verification();

finalCheckUpToDoctor();



Pharmacist:

Pharmacist class has following:

bool patientRecieved;

int report;

int medicine;

bool finalizing;

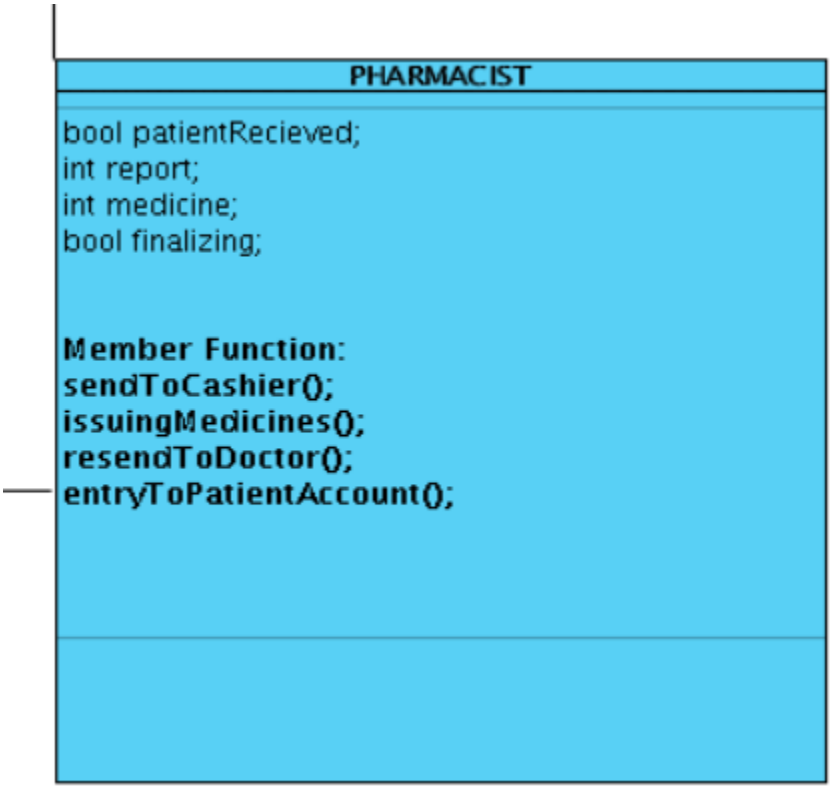
Member Function:

sendToCashier();

issuingMedicines();

resendToDoctor();

entryToPatientAccount();



Cashier:

Cashier class has following:

int bill;

int dues;

int fines;

int medicinecost;

bool patientRecieved;

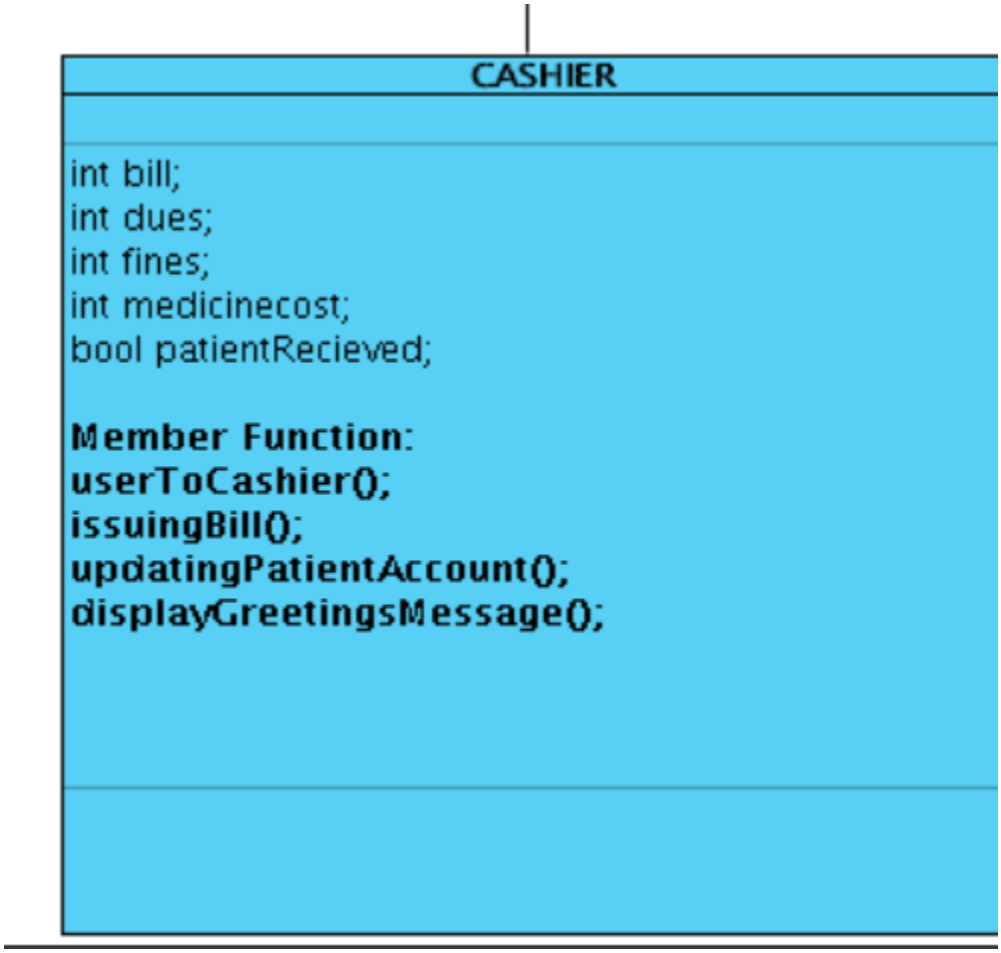
Member Function:

userToCashier();

issuingBill();

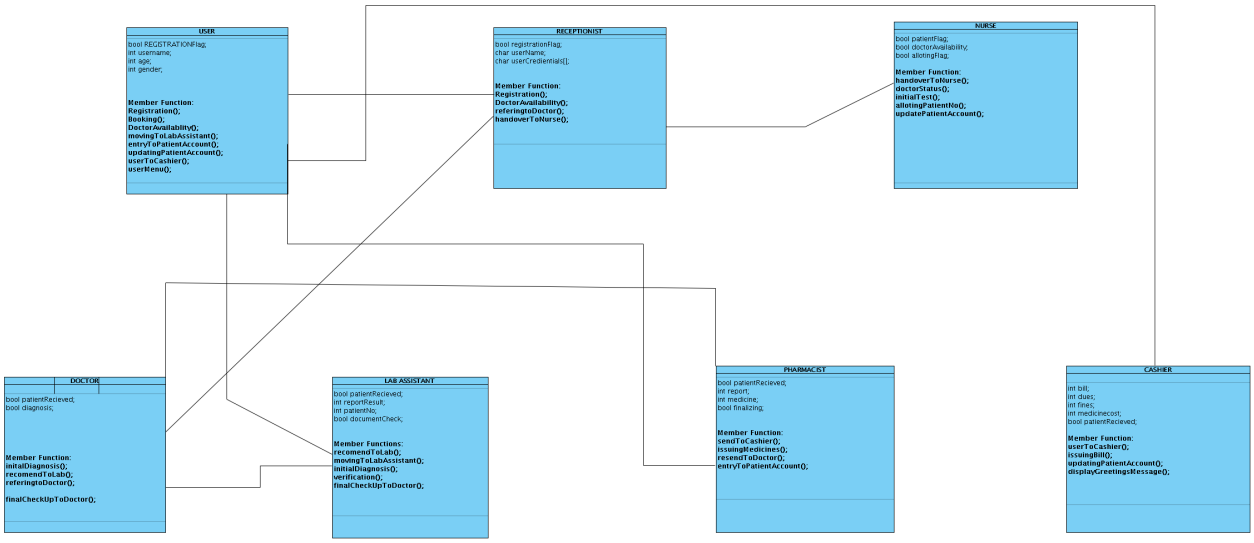
updatingPatientAccount();

displayGreetingsMessage();



Complete Association Between Classes Through The Class Diagram:

Here is a complete view of Attributes and the Association between the Classes of our System.



Use Case-1:

In our use case following are the key points:

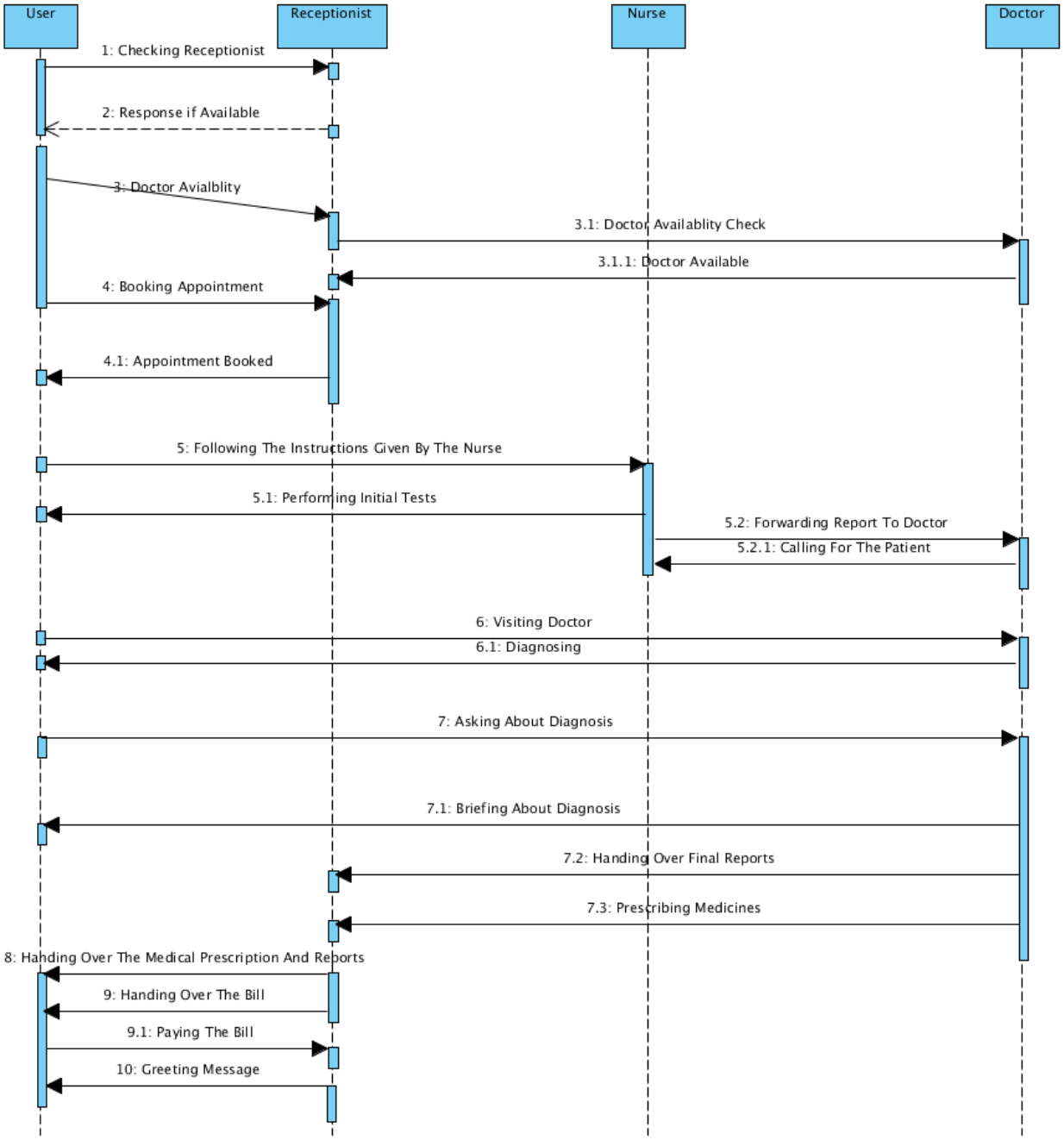
- A user will **visit the Hospital**
- The Receptionists will **welcome the User.**
- The User will ask for **appointment booking.**
- Receptionist will **check Doctor Availability.**
- Doctor will **response if he’s available.**
- The receptionist will **book an appointment for the Patient.**
- After Appointment Booking, **the user will follow the instructions given by the Nurse.**
- Nurse will perform the **Initial Tests for the User.**
- Nurse will forward the **report to the Doctor.**
- Doctor will **diagnose the report.**

- Doctor will **call for the Patient.**
- User/Patient will **visit the Doctor.**
- Doctor will **diagnose the Patient.**
- User will ask for **briefing of the Diagnosis.**
- Doctor will debrief the **Patient about the Diagnosis.**
- Doctor will hand over the **final reports to the Receptionist.**
- Doctor will hand over the medical **prescription to the receptionist.**
- The receptionist will Hand over the medical prescription to the Patient.
- The receptionist will Hand over the **Final Reports** and **Bill to the Patient.**
- The User will **Pay the bill.**
- The Receptionist will Greet the **User/Patient in a formal way.**

Life Lines:

Whole Demonstration Of Our Use Case View:

The whole demonstration of our Use Case View is attached below.



Use Case-2:

In our use case following are the key points:

- A user will visit the **Hospital.**
- The Receptionists will welcome the **User.**

- The User will ask for **appointment booking**.
- Receptionist will check **Doctor Availability**.
- Doctor will **response** if he’s **available.**
- The receptionist will **book an appointment** for the **Patient**.
- After Appointment Booking, the **user** will follow the **instructions given by the Nurse.**
- Nurse will perform the **Initial Tests for the User.**
- Nurse will forward the r**eport to the Doctor.**
- Doctor will **diagnose the report.**
- Doctor will **call for the Patient.**
- User/Patient will **visit the Doctor.**
- Doctor wil**l diagnose the Patient.**
- Doctor will refer the Patient to Lab for **Lab Tests.**
- Lab Assistant will **send reports to Doctor** after completing Tests.
- User will ask for **briefing of the Diagnosis.**
- Doctor will debrief the Patient about the **Diagnosis.**
- Doctor will send the Medical Prescription **Report to the Pharmacist.**
- Pharmacist will give response to the Doctor about the **Availability of the Medicines.**
- Pharmacist will forward the total Medicines **Cost to Cashier.**
- Doctor will forward total Diagnosis **Cost to Cashier.**
- Lab Assistant will forward Total Lab Tests **Cost to Cashier.**
- Cashier will forward the Total Issued **Bill to Receptionist.**
- Doctor will hand over the final **reports to the Receptionist.**
- Doctor will hand over the medical **prescription to the receptionist.**
- The receptionist will Hand over the **medical prescription to the Patient.**

- The receptionist will Hand over the **Final Reports** and **Total Bill to the Patient.**
- The User will **Pay the bill.**
- The Receptionist will **Greet the User/Patient in a formal way.**

FIN