كلية: الحاسبات والمعلومات
الفرقة:الثالثة

"Hospital Management System"

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-This project made by:-

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Agenda:-

- **Overview.**
- **Objectives.**
- **Requirements.**
- **Problems we have in the projects.**
- **Project diagrams.**

Objectives:-

- ❖ Protect patients records.
- ❖ Easily access patient records in multiple ways.
- ❖ Communicate with other hospital sections (emergency, hospital clinic, Radiology Center).

Requirements:-

1-Create a new record for the patients includes data that will reserve in the hospital in terms of (name, age, patient status, department, room number, bed number, and date of reservation, special ID) to retrieve the patient's data when any problem occurs.

2- Create a data record categorized chronic and non-chronic diseases: Where a patient with a chronic disease is transferred to another hospital if the hospital's treatment shows no response or the technology necessary for treatment is not available, and there is also a special record for the cases of patients with highly chronic disease.

3- Establishing communication between the hospital system and the other specialized hospital systems so that patients are transferred to another department to provide urgently and required care that is not available, such as critical surgery and some chronic cases.

4- Emergency Department:-

- Where there is direct contact between the emergency and the specialist doctor when needed.
- Calculating the number of beds and reconciling them with the number of patients to be reserved.

5-The process of calculating the number of beds in each department and reconciling with the number of patients to be reserved.

6-Providing direct contact between the doctor and the hospital's clinic to see if treatment is available or not and if there is an alternative to treatment for what is not available.

7- A file for the intensive care unit, the radiology department, and there will be direct contact with the doctor, and keep the analysis and x-rays of each patient in his file until needed.

8- Rescue operation "code blue", which is a connection between the hospital system and the closest specialized doctor to find out the patient's location.

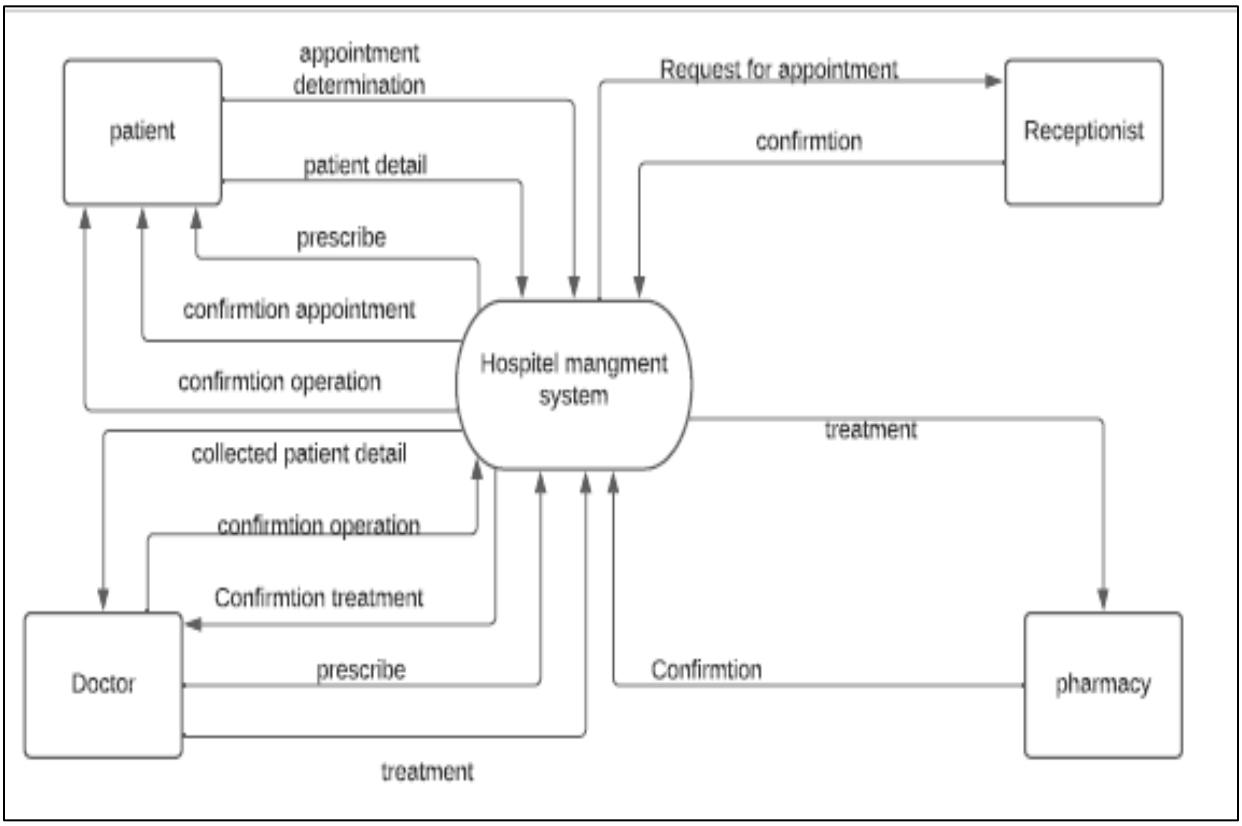
Problems we have in the projects:-

- Searching for patient as it wasn't easy for the doctors to remember the patient → we tried to add more than one option to search for the patient like (name, id, data of last visit, and others).

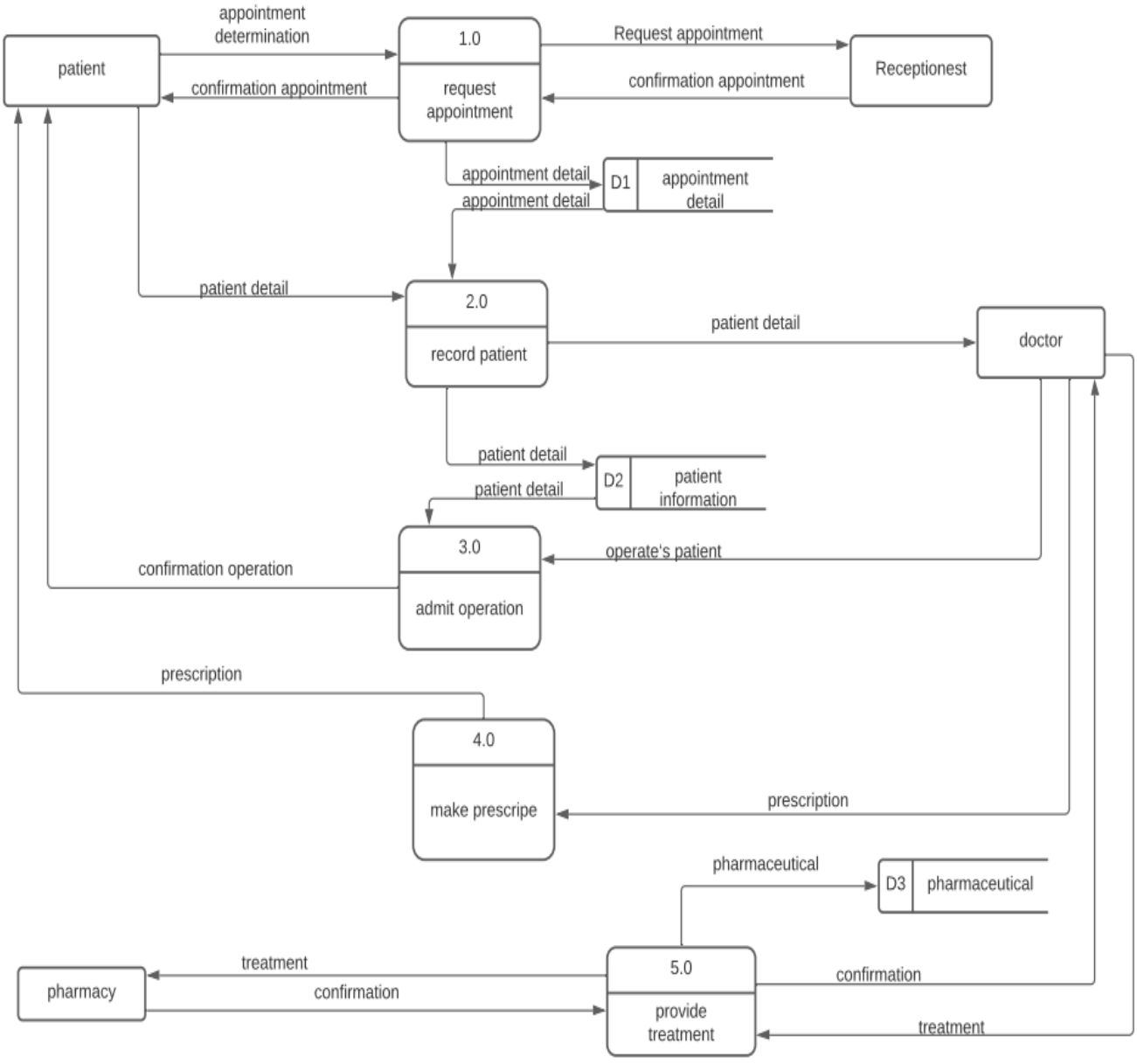
- Determine the place of the code blue → have records of number of beds in each department and give exact details about the place of code blue .

Project diagrams: -

1- Context diagram.

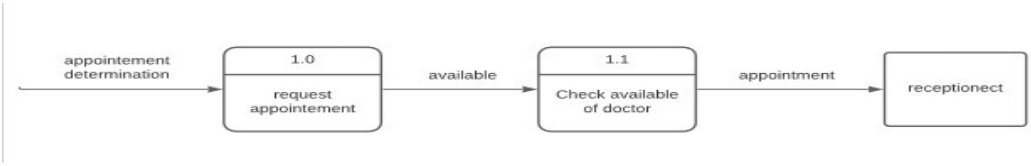


2- Level 0: -

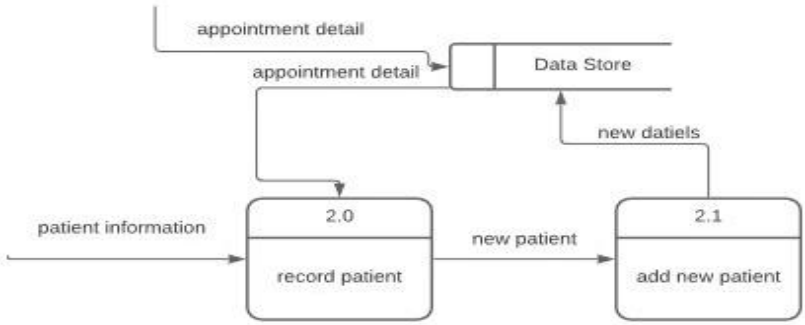

patient
appointment determination
confirmation appointment
1.0
request appointment
Request appointment
confirmation appointment
Receptionest
appointment detail
appointment detail
D1
appointment detail
patient detail
2.0
record patient
patient detail
doctor
patient detail
patient detail
D2
patient information
3.0
admit operation
operate's patient
confirmation operation
prescription
4.0
make prescripe
prescription
pharmaceutical
D3
pharmaceutical
pharmacy
treatment
confirmation
5.0
provide treatment
confirmation
treatment

3-Level 1:-

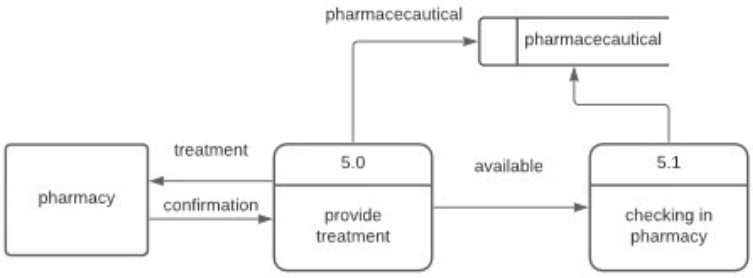
1-


appointement determination
1.0
request appointement
available
1.1
Check available of doctor
appointment
receptionect

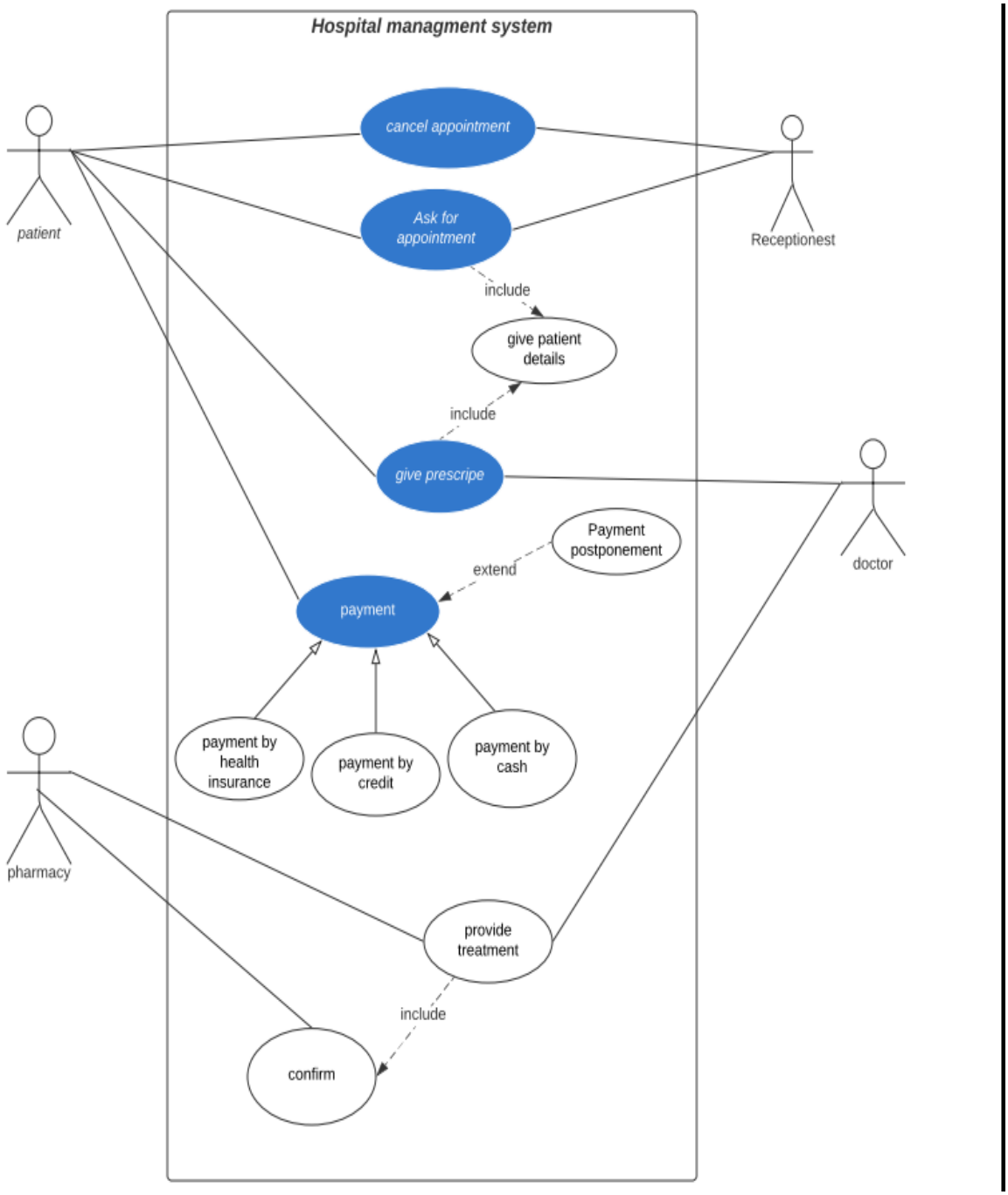
2-


appointment detail
appointment detail
Data Store
new datiels
patient information
2.0
record patient
new patient
2.1
add new patient

3-

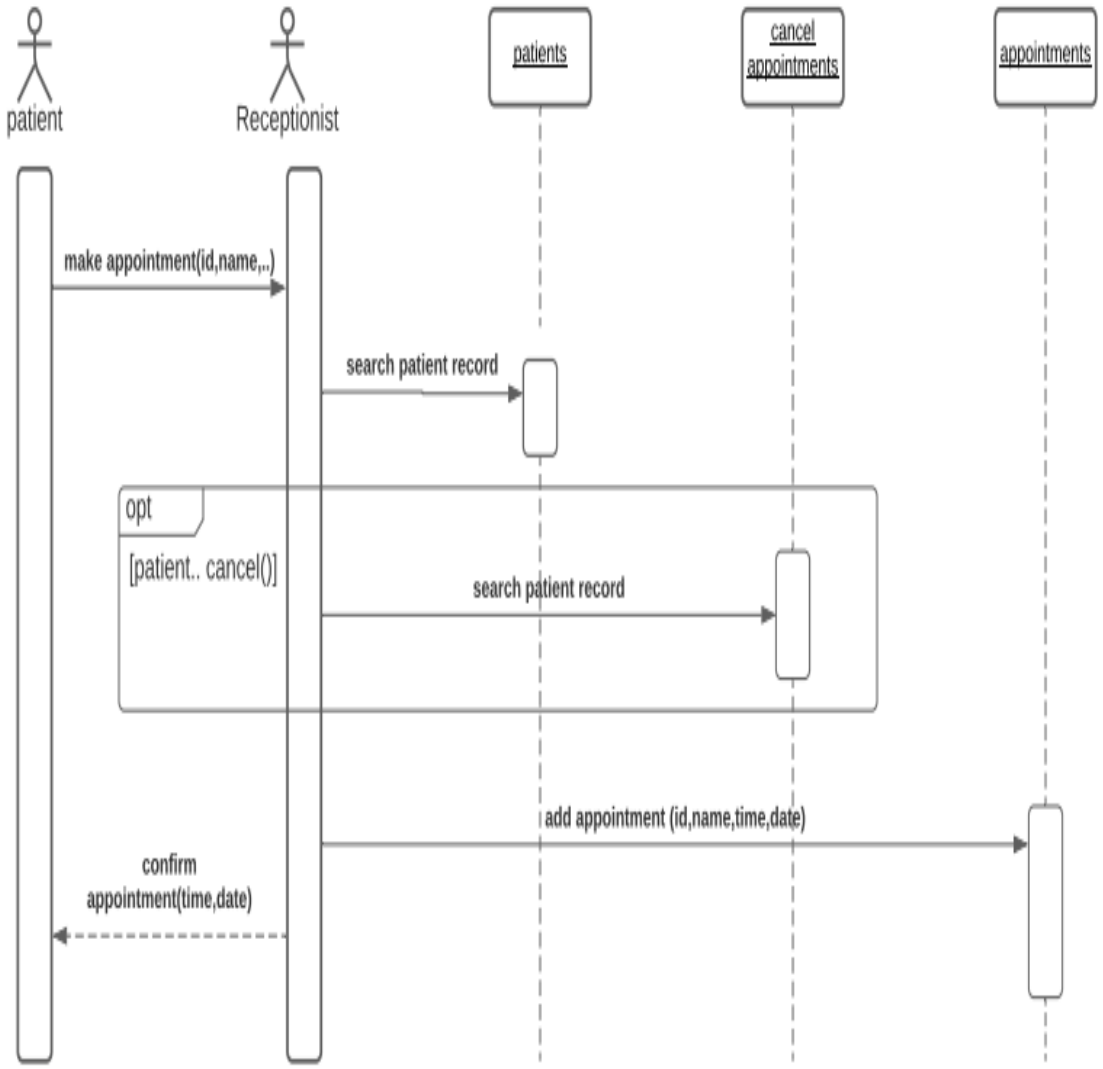

pharmacecautical
pharmacecautical
pharmacy
treatment
confirmation
5.0
provide treatment
available
5.1
checking in pharmacy

4-use case:-

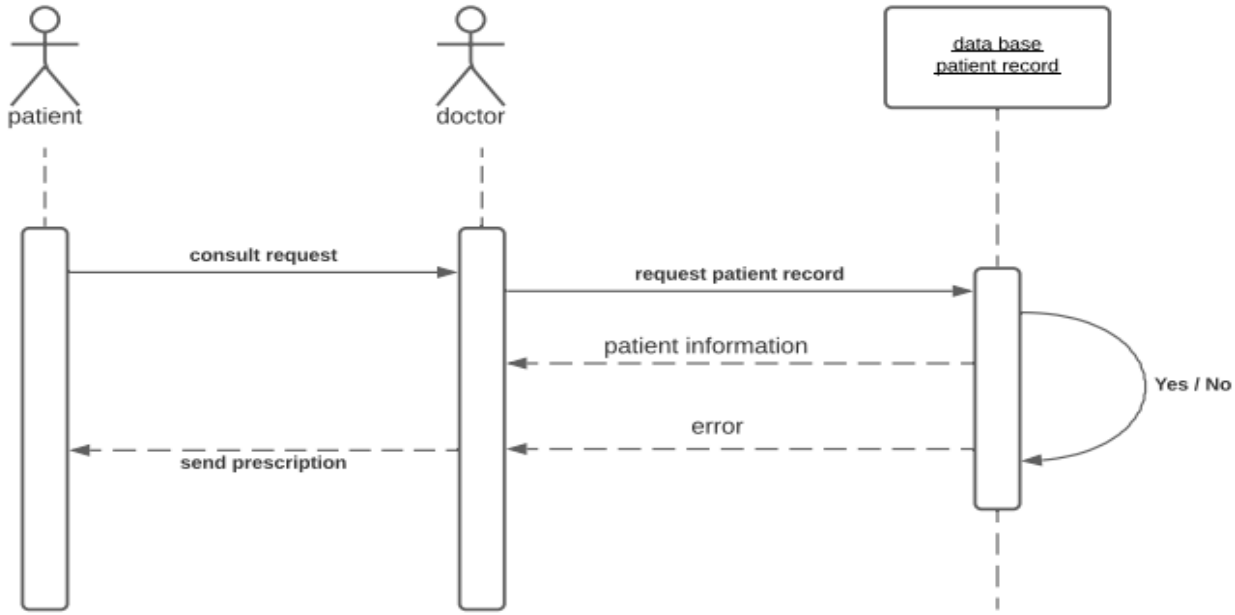

Hospital managment system
cancel appointment
Ask for appointment
patient
Receptionest
include
give patient details
include
give prescripe
doctor
Payment postponement
extend
payment
payment by health insurance
payment by credit
payment by cash
pharmacy
provide treatment
include
confirm

5-sequances:-

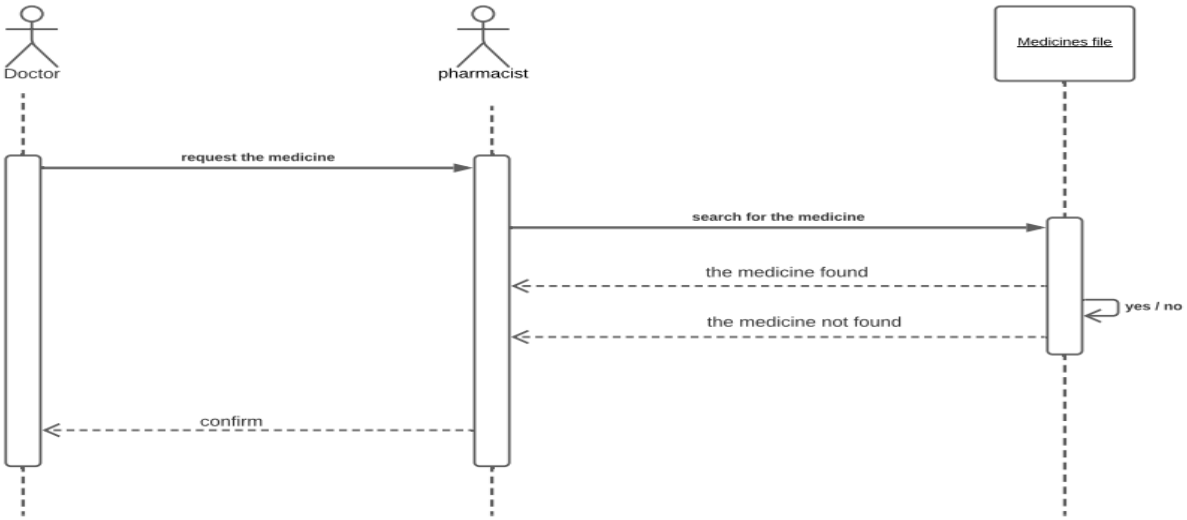
- Ask and Cancel an appointment.



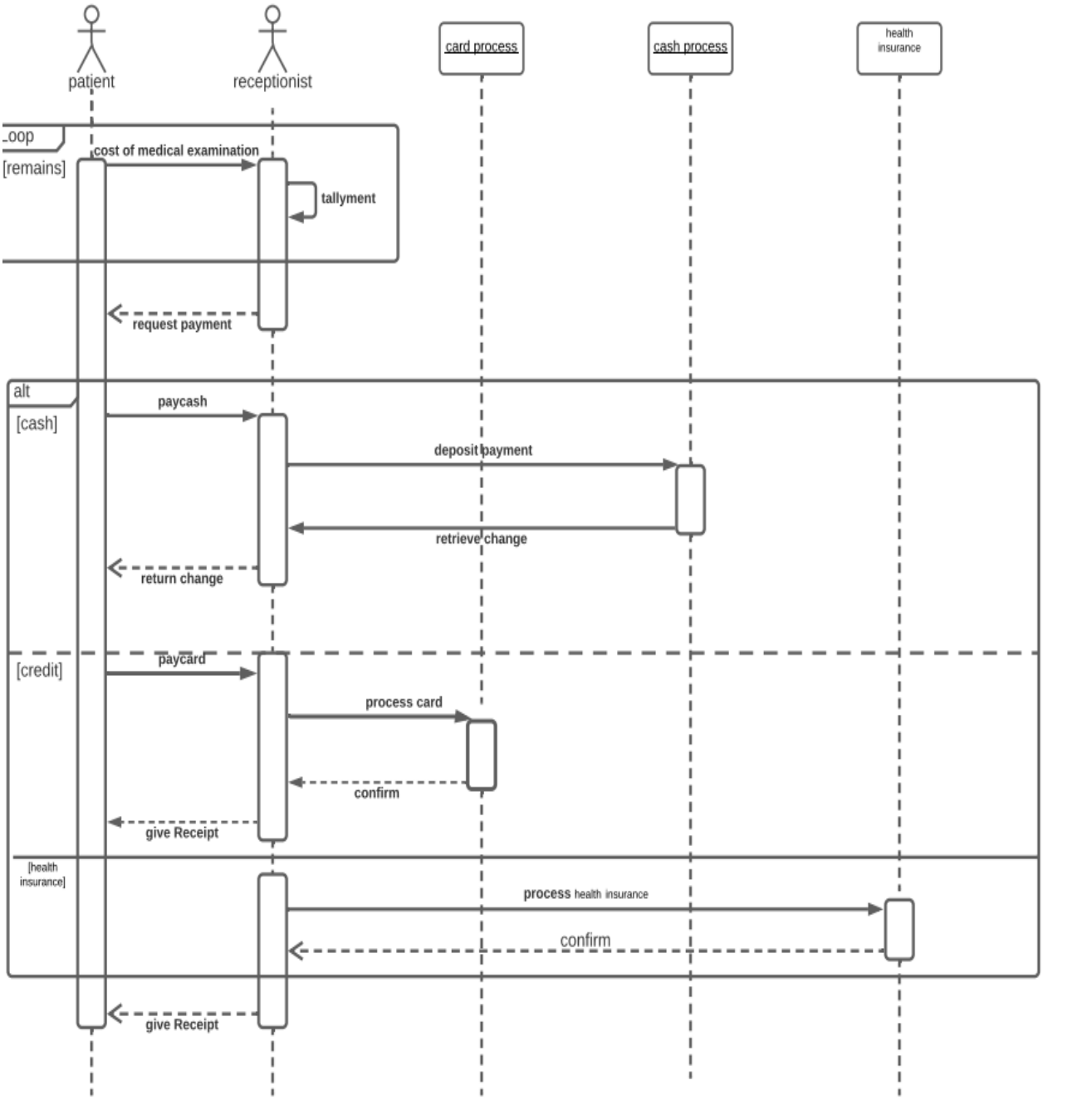
- Give prescription.



- Provide treatment.

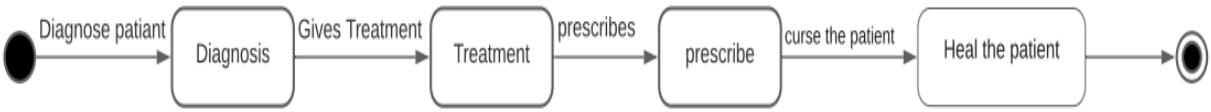


- Payment.

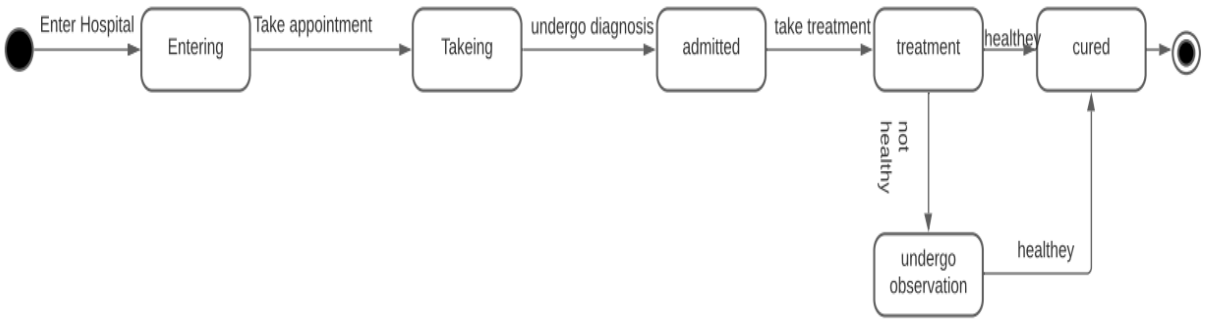

patient
receptionist
card process
cash process
health insurance
loop
[remains]
cost of medical examination
tallyment
request payment
alt
[cash]
paycash
deposit payment
retrieve change
return change
[credit]
paycard
process card
confirm
give Receipt
[health insurance]
process health insurance
confirm
give Receipt

6-states: -

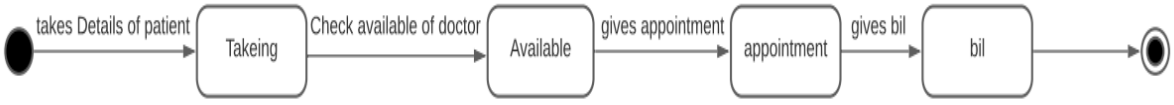
- State doctor.



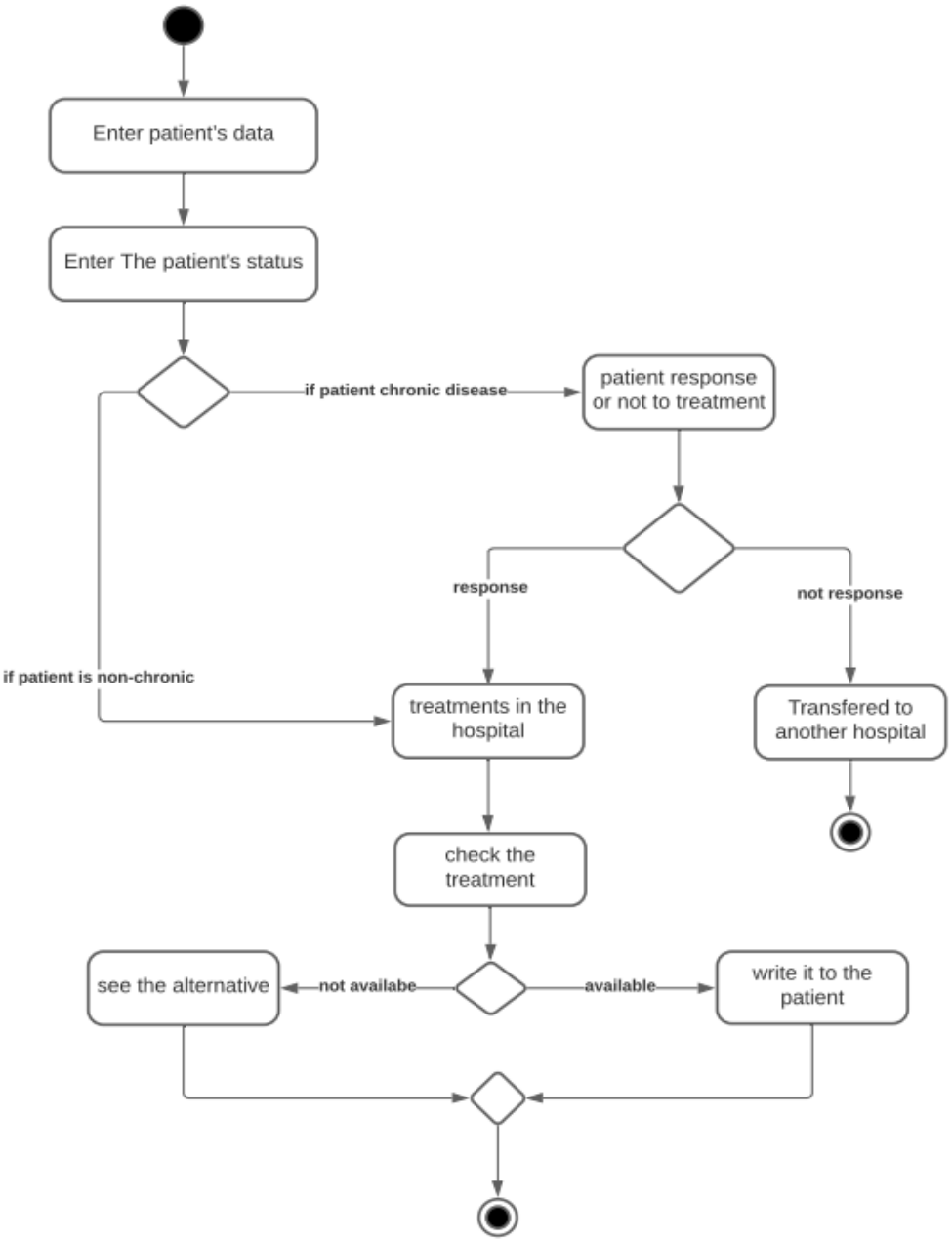
- State patient.



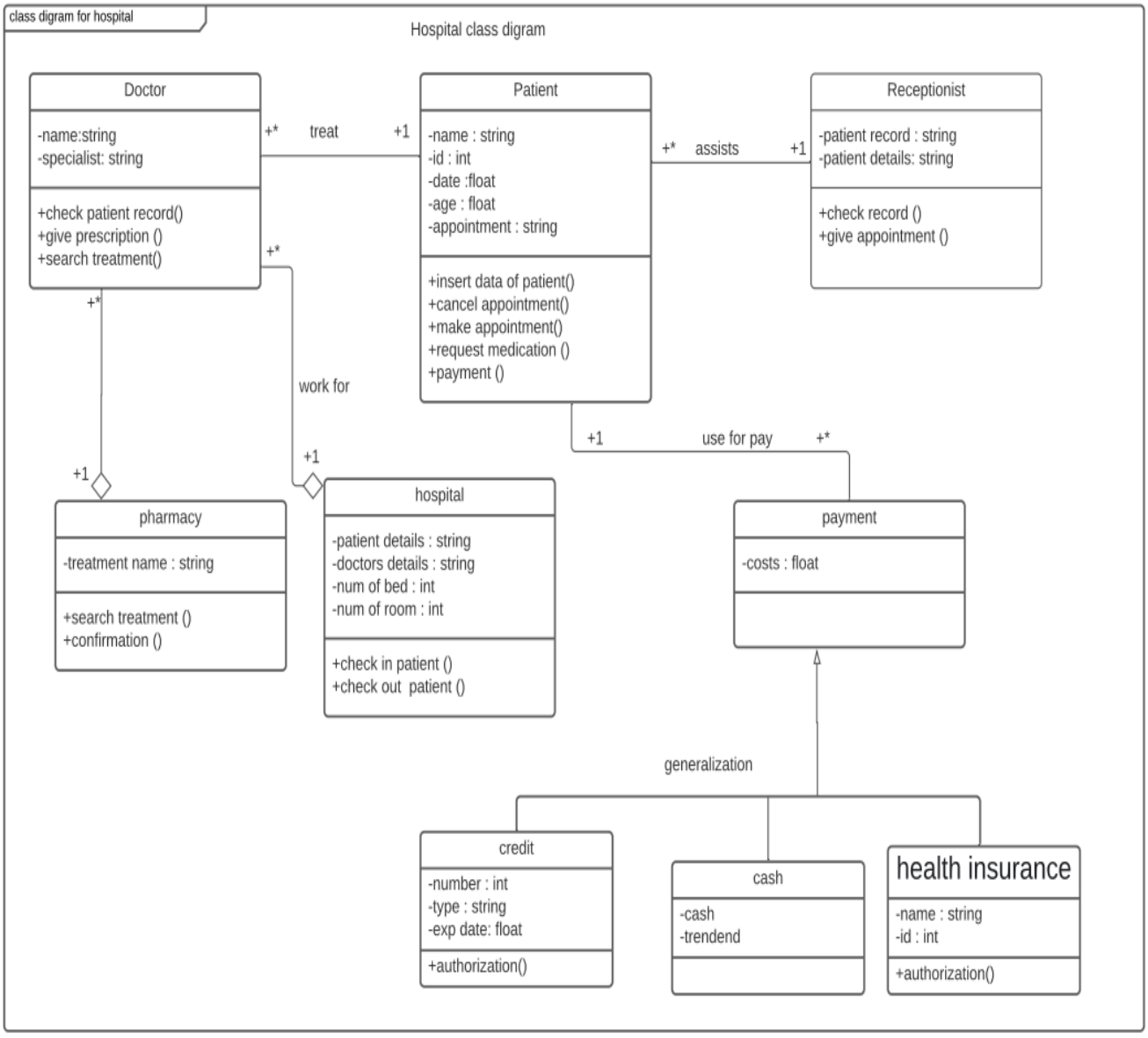
- State receptionist.



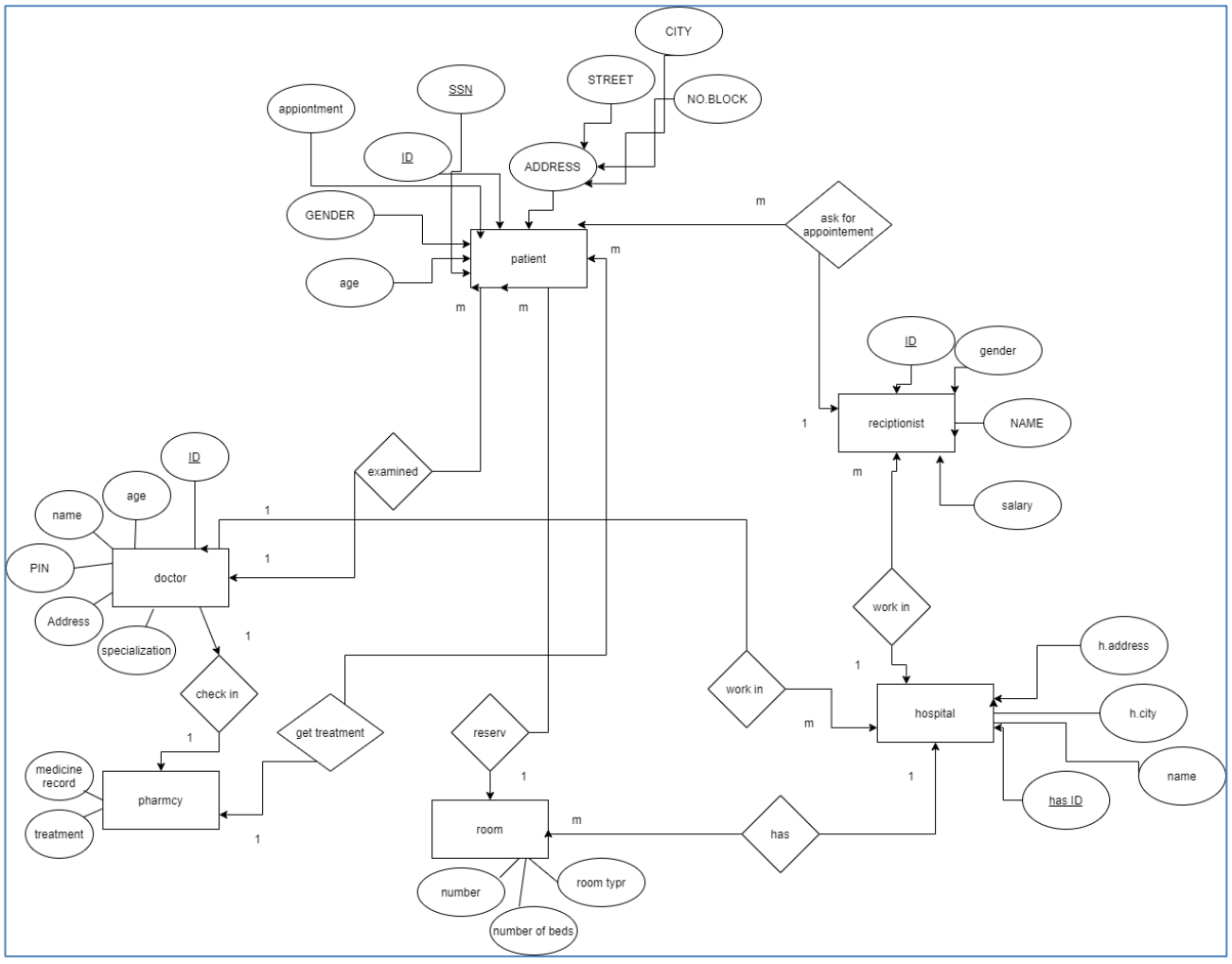
7-Activity: -


Enter patient's data
Enter The patient's status
if patient chronic disease
patient response or not to treatment
response
not response
if patient is non-chronic
treatments in the hospital
Transfered to another hospital
check the treatment
see the alternative
not availabe
available
write it to the patient

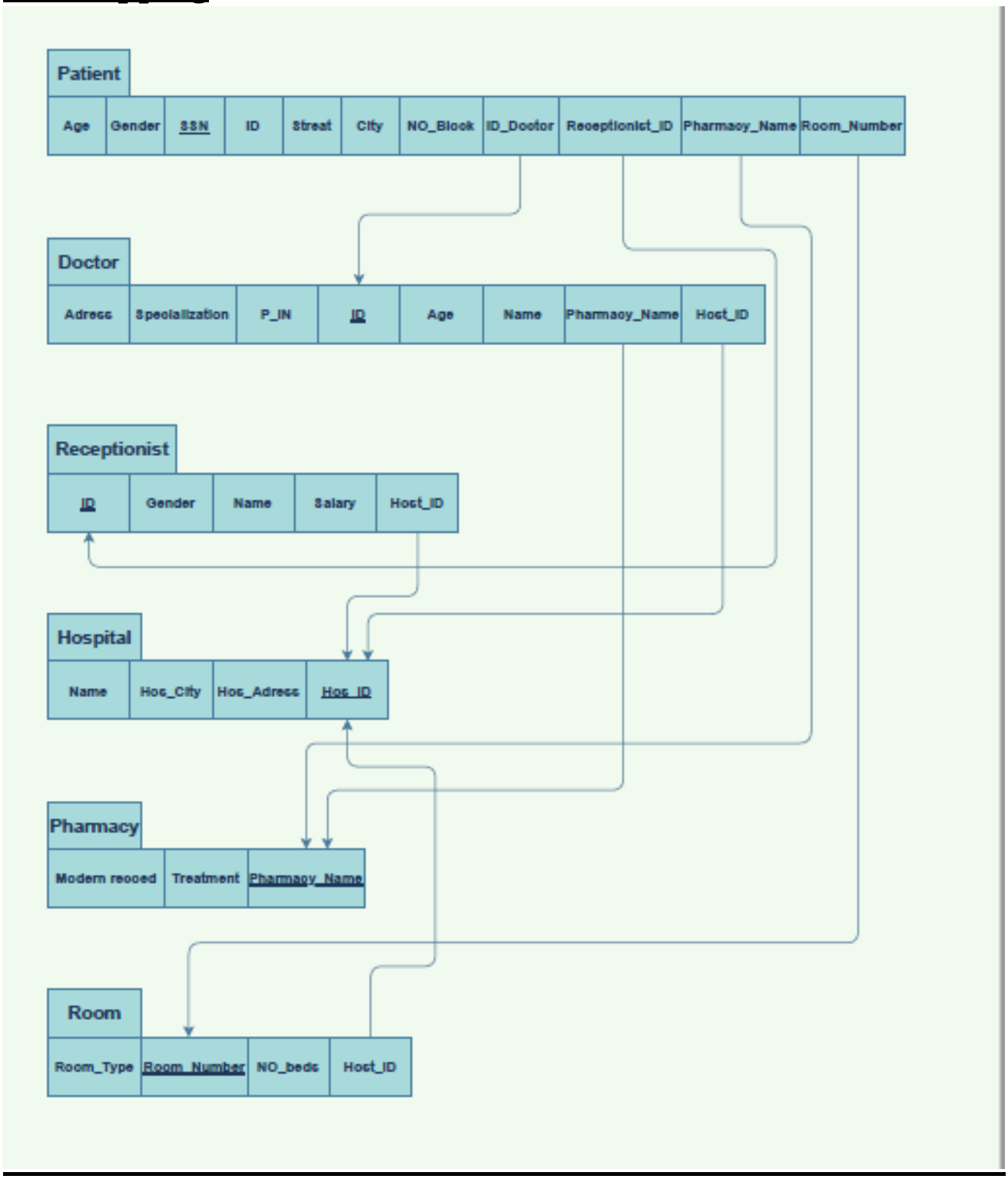
8-class: -


class digram for hospital
Hospital class digram
Doctor
-name:string
-specialist: string
+check patient record()
+give prescription ()
+search treatment()
Patient
-name : string
-id : int
-date :float
-age : float
-appointment : string
+insert data of patient()
+cancel appointment()
+make appointment()
+request medication ()
+payment ()
Receptionist
-patient record : string
-patient details: string
+check record ()
+give appointment ()
treat
assists
work for
use for pay
pharmacy
-treatment name : string
+search treatment ()
+confirmation ()
hospital
-patient details : string
-doctors details : string
-num of bed : int
-num of room : int
+check in patient ()
+check out patient ()
payment
-costs : float
generalization
credit
-number : int
-type : string
-exp date: float
+authorization()
cash
-cash
-trendend
health insurance
-name : string
-id : int
+authorization()

9-ERD: -


CITY
STREET
NO.BLOCK
SSN
appiontment
ID
ADDRESS
GENDER
age
patient
ask for appointement
m
m
m
m
ID
gender
reciptionist
NAME
salary
1
m
examined
ID
age
name
PIN
Address
specialization
doctor
1
1
1
check in
get treatment
reserv
work in
work in
h.address
h.city
name
has ID
hospital
1
m
1
1
medicine record
treatment
pharmcy
1
room
m
has
number
room typr
number of beds

10-:Mapping


Patient
Age
Gender
SSN
ID
Streat
City
NO_Block
ID_Doctor
Receptionist_ID
Pharmacy_Name
Room_Number
Doctor
Adress
Specialization
P_IN
ID
Age
Name
Pharmacy_Name
Host_ID
Receptionist
ID
Gender
Name
Salary
Host_ID
Hospital
Name
Hos_City
Hos_Adress
Hos_ID
Pharmacy
Modern recoed
Treatment
Pharmacy_Name
Room
Room_Type
Room_Number
NO_beds
Host_ID