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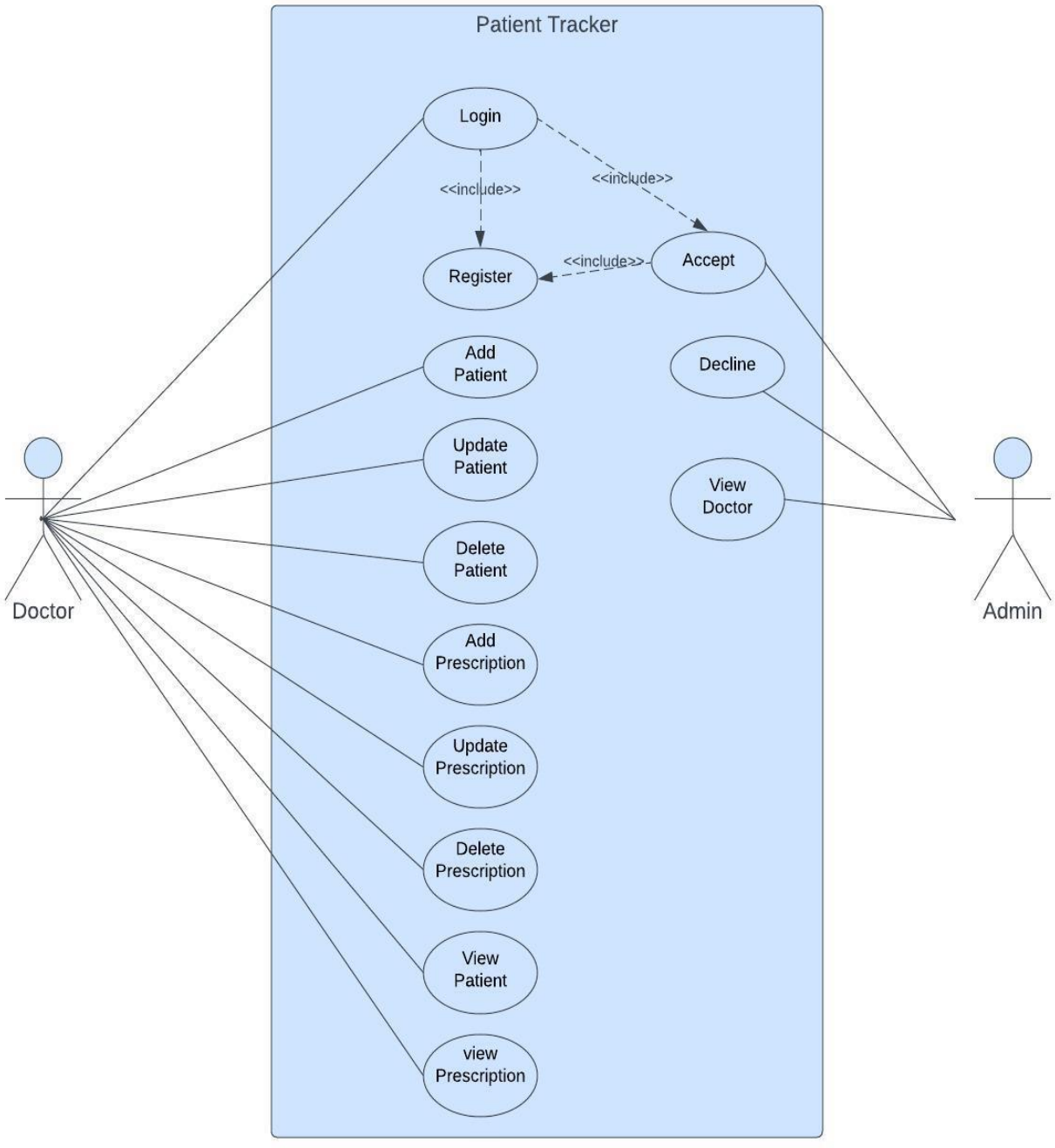
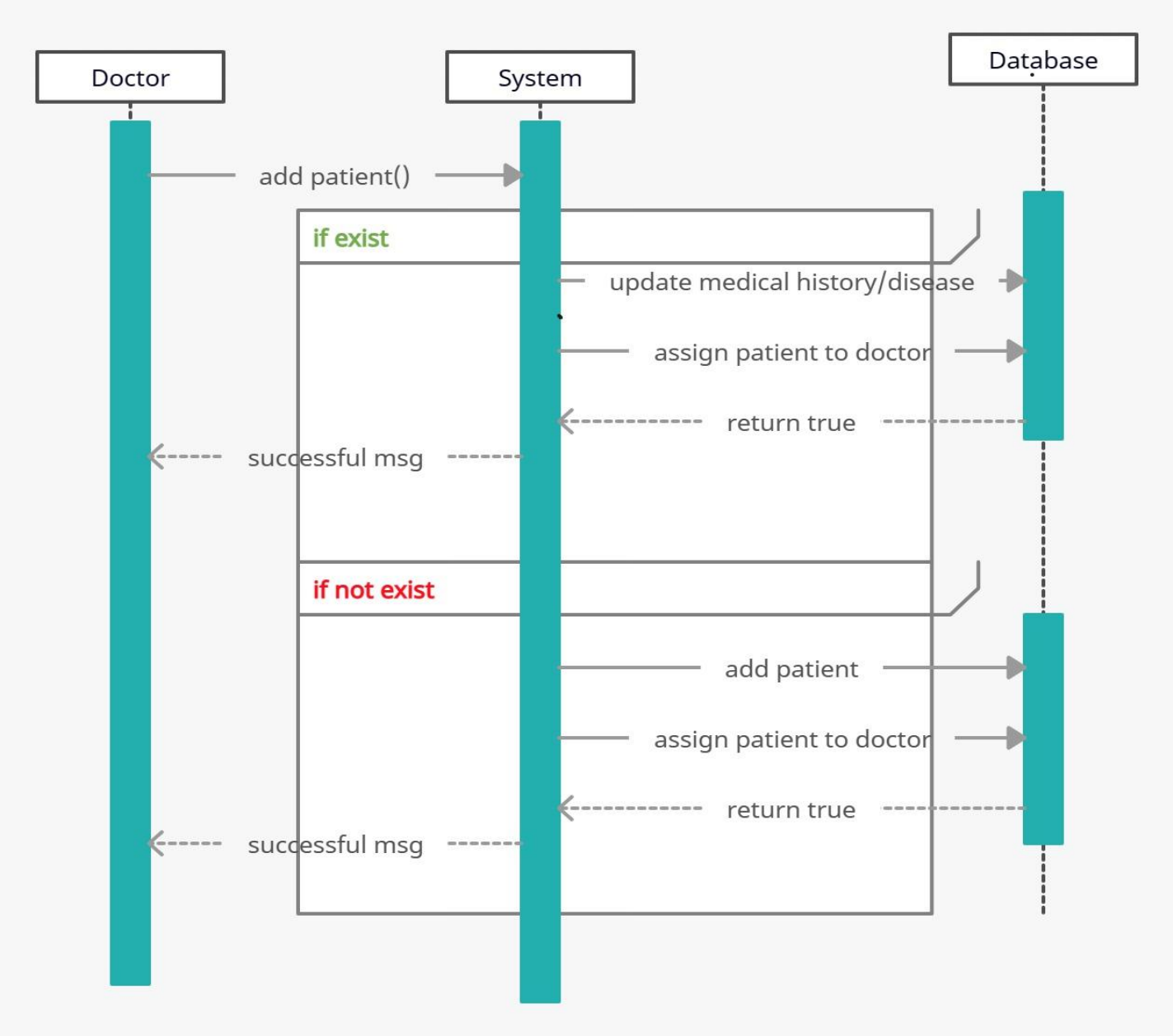
I. UML Diagrams :

1- Use Case :

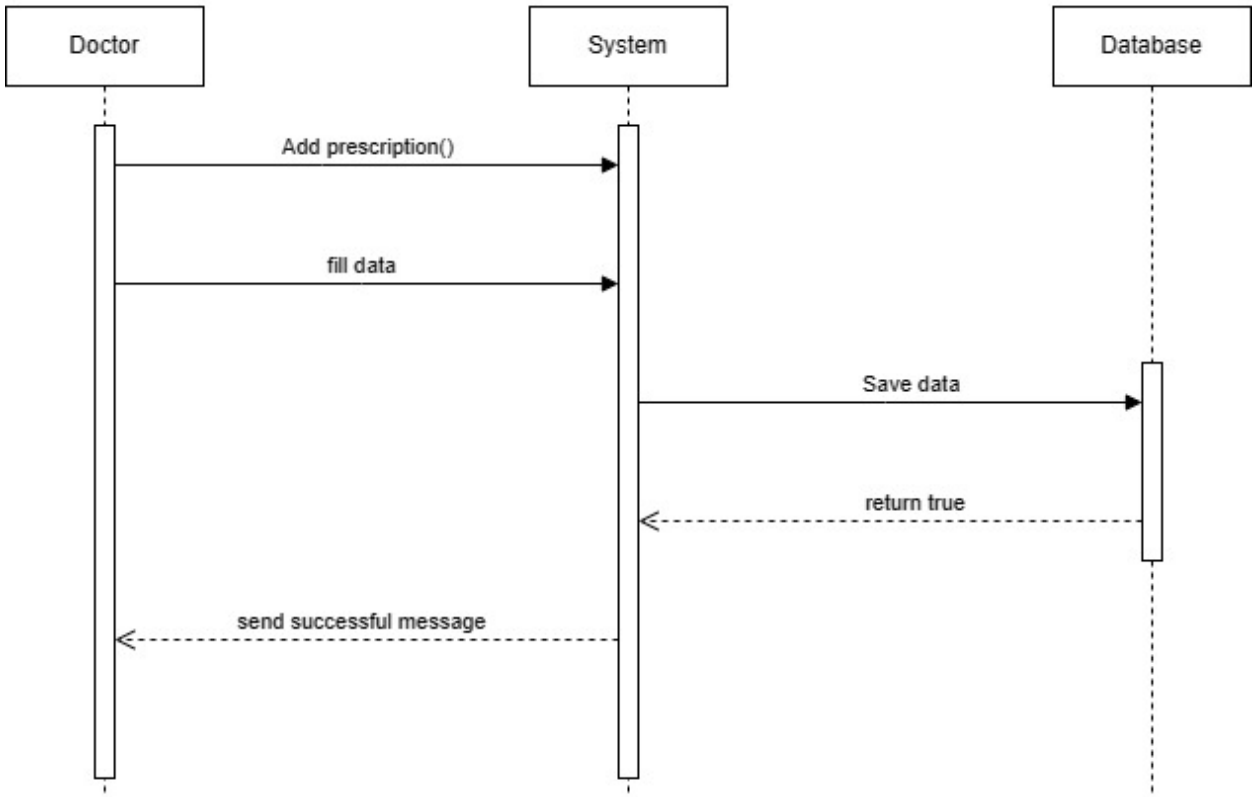


2- Sequence Diagram :

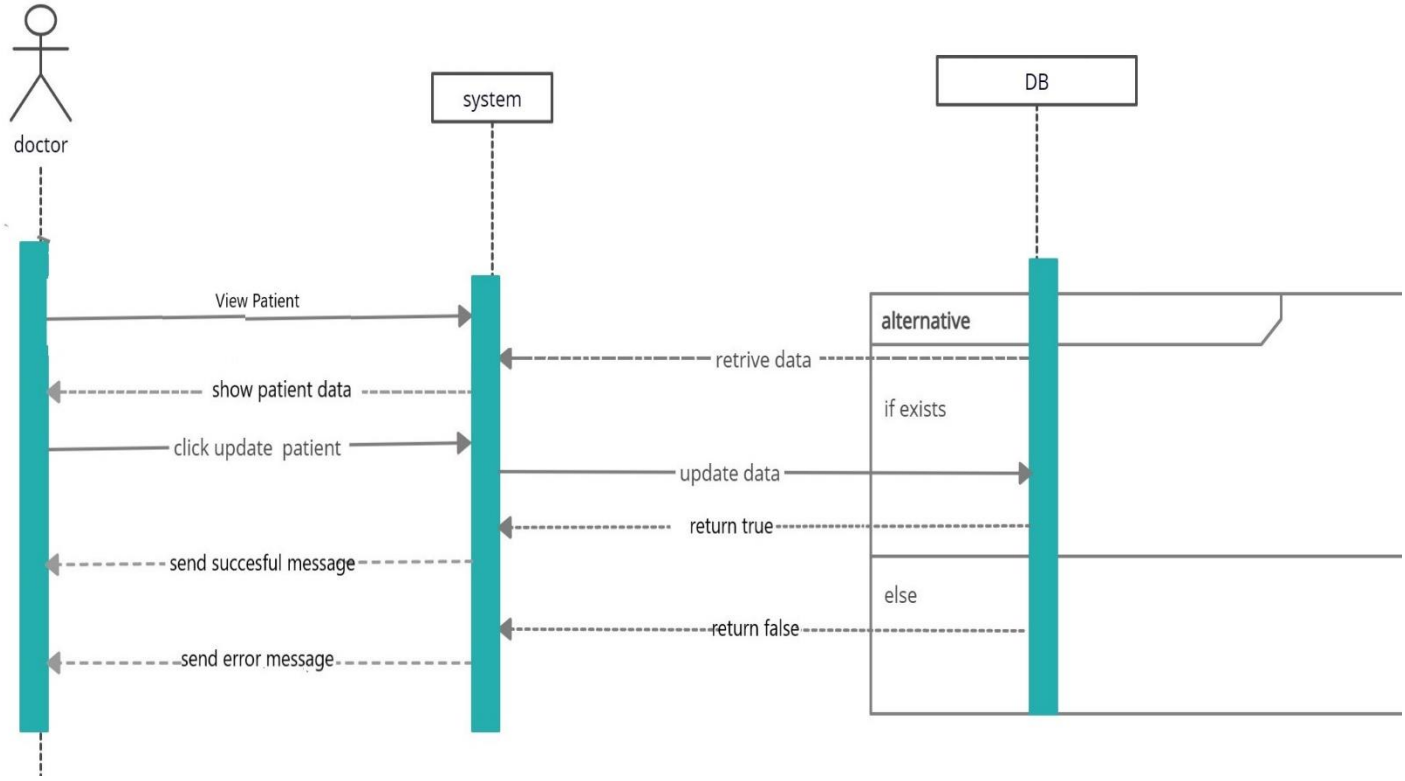
2.1 – Add Patient



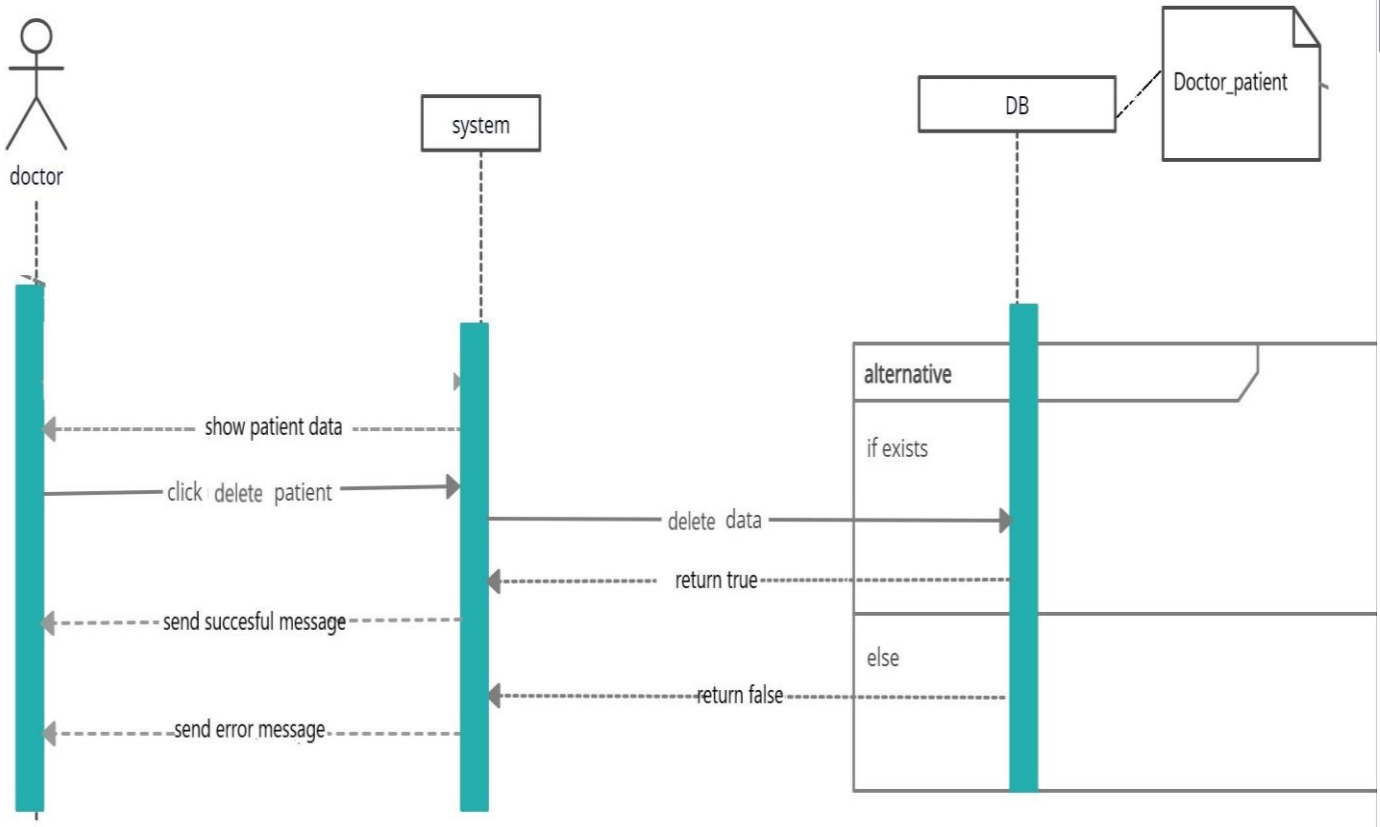
2.2 – Add Prescription



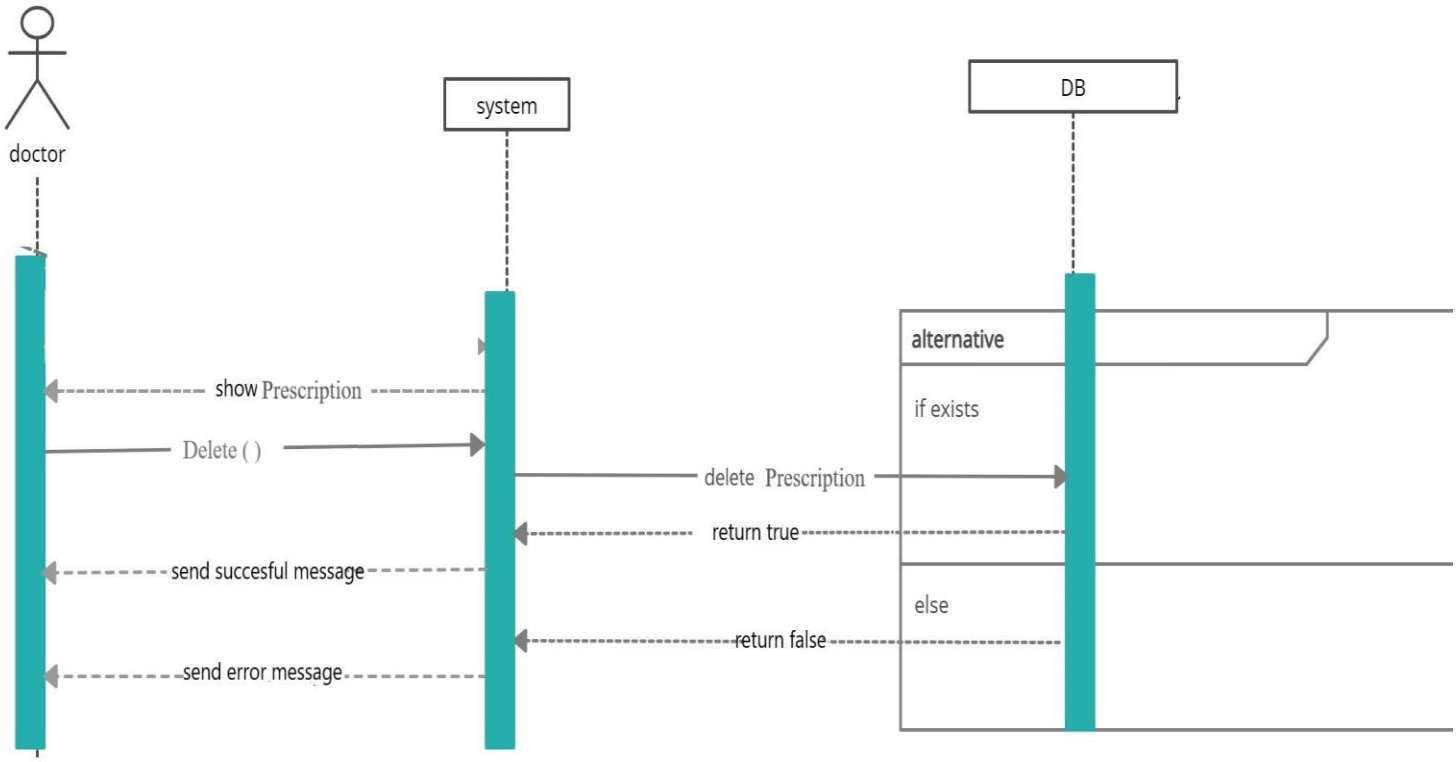
2.3- Update Patient / Prescription



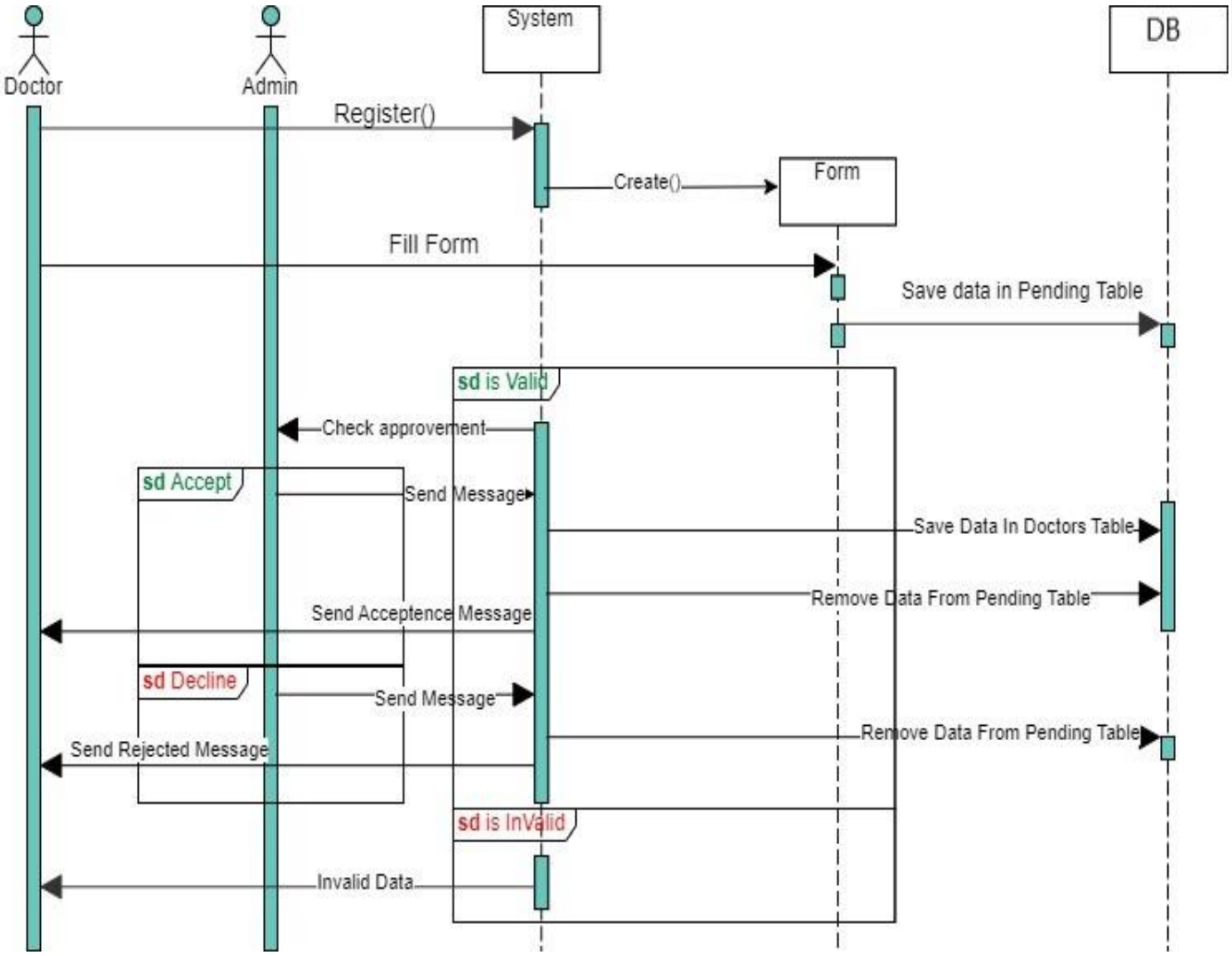
2.4- Delete Patient



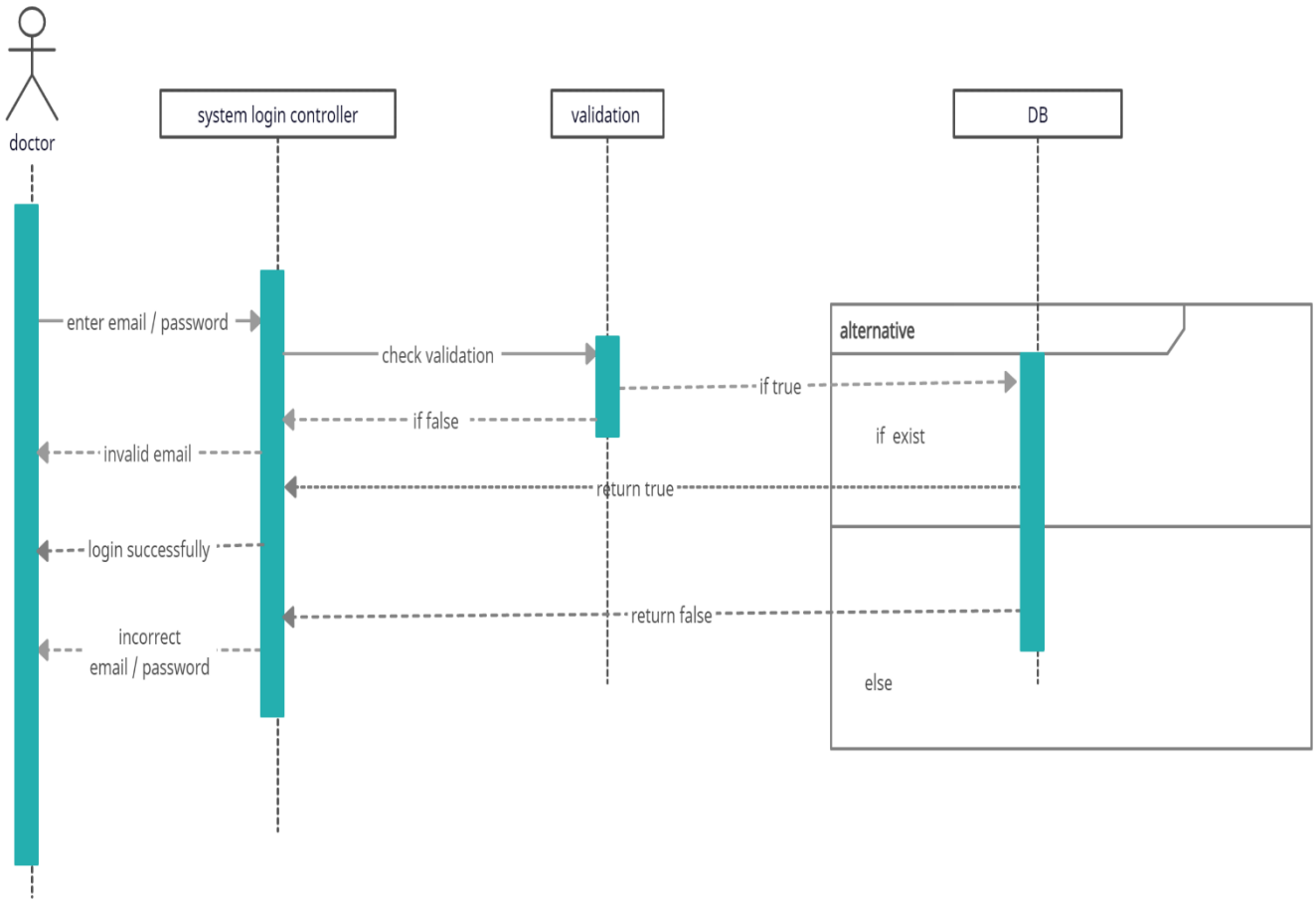
2.5- Delete Prescription



2.6- Register / Approve

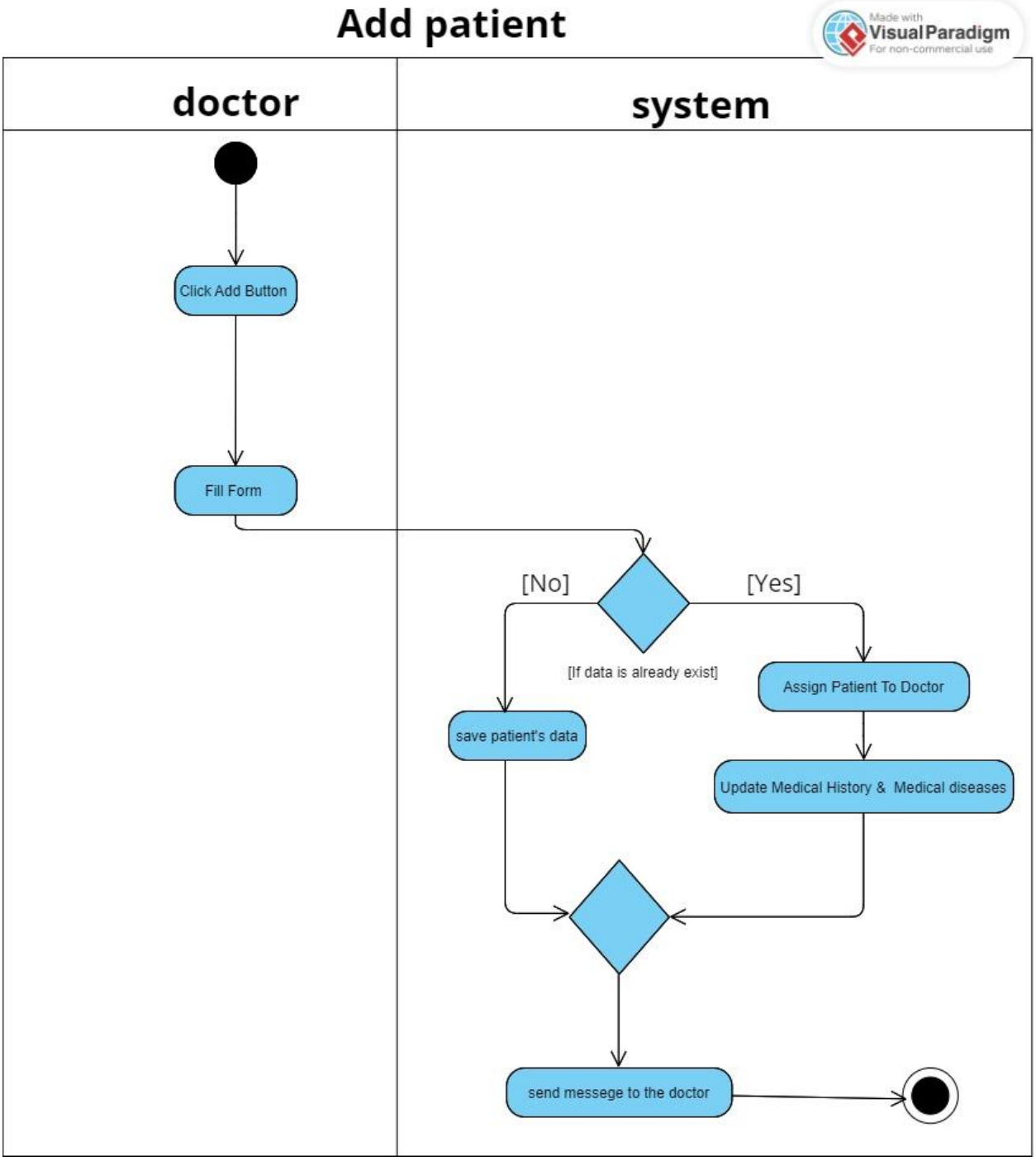


2.7 – login

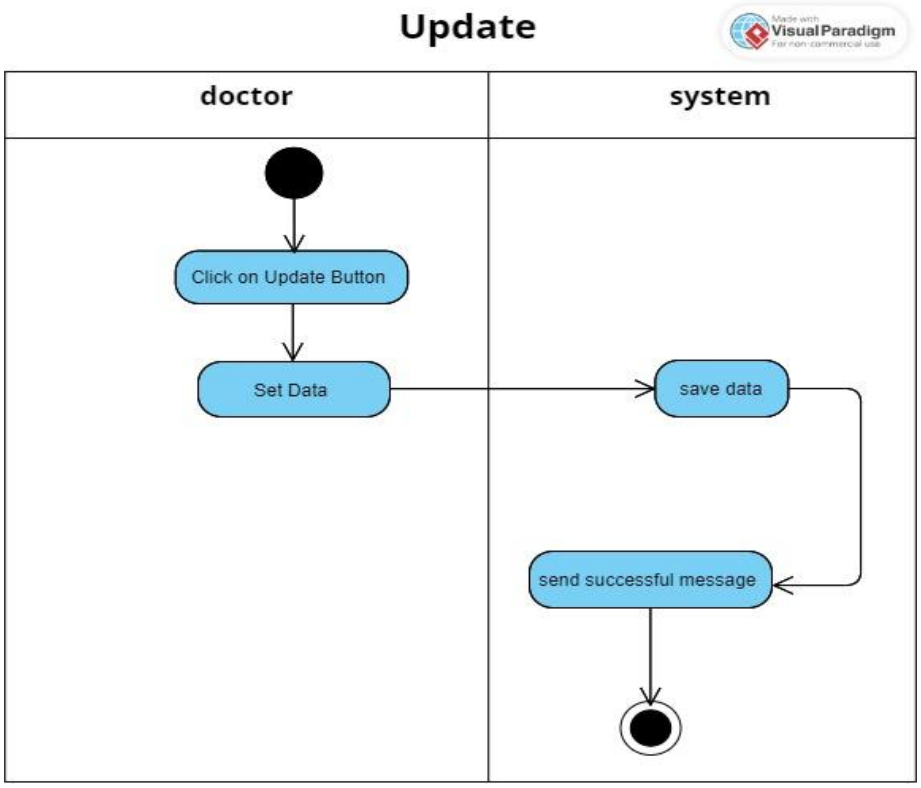

doctor
system login controller
validation
DB
enter email / password
check validation
if true
alternative
if false
if exist
invalid email
return true
login successfully
return false
incorrect
email / password
else

3- Activity Diagram :

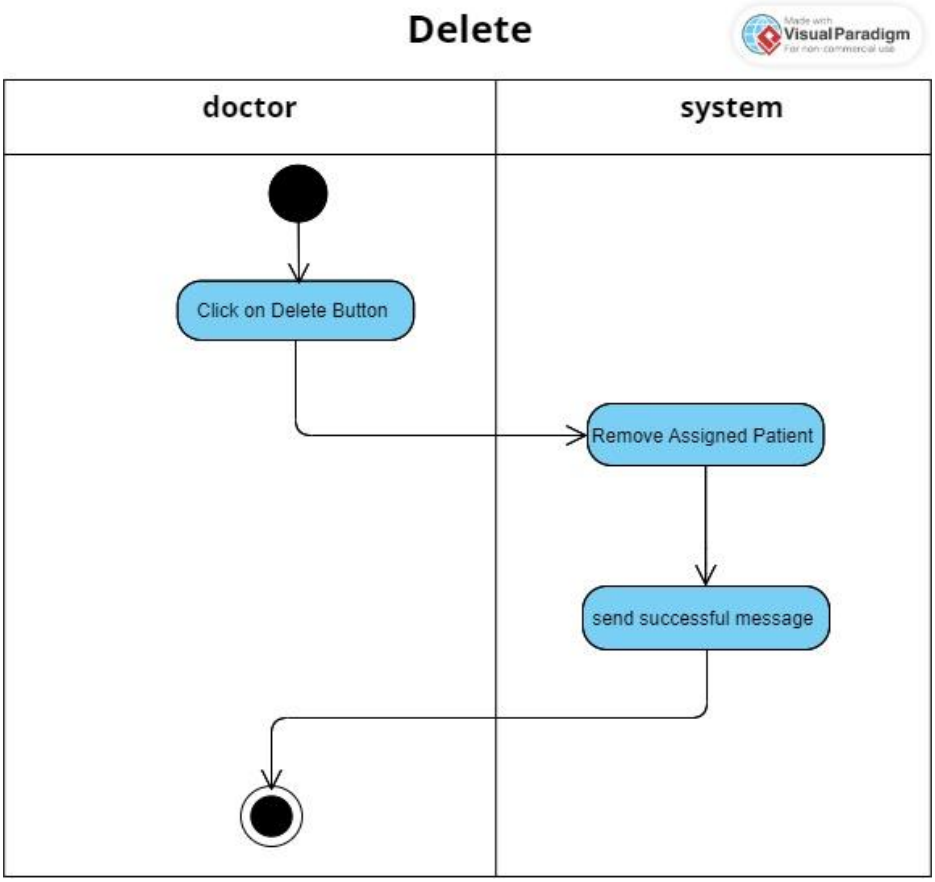
3.1 – Add patient



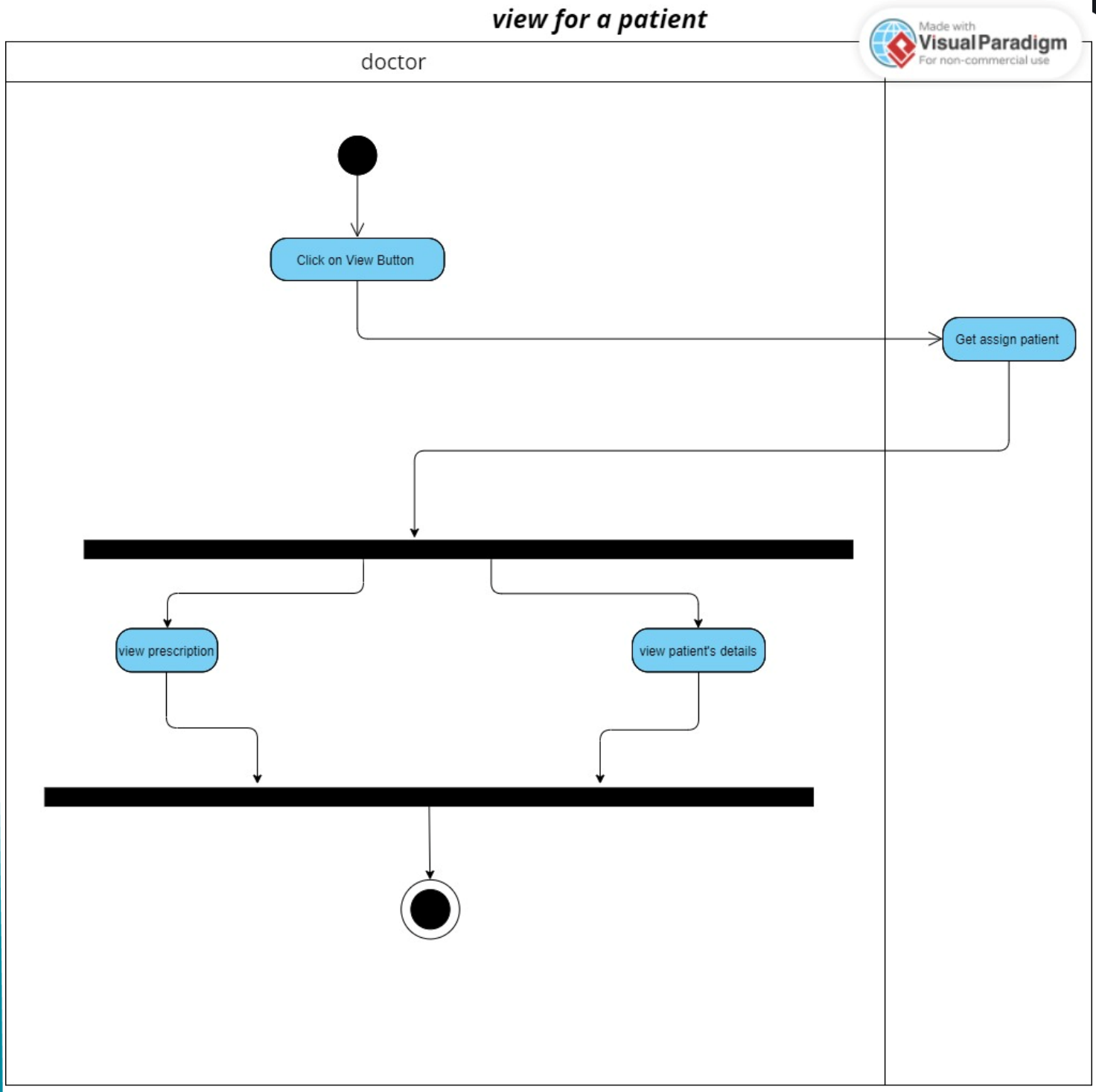
3.2 – Update patient / Prescription



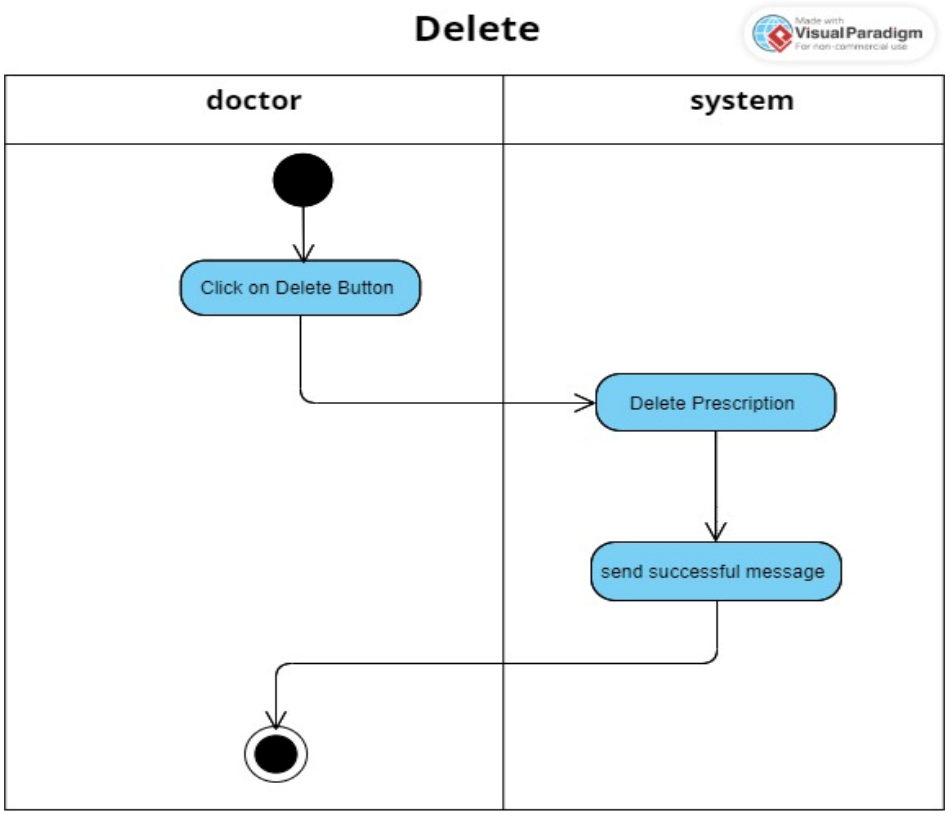
3.3 – Delete patient



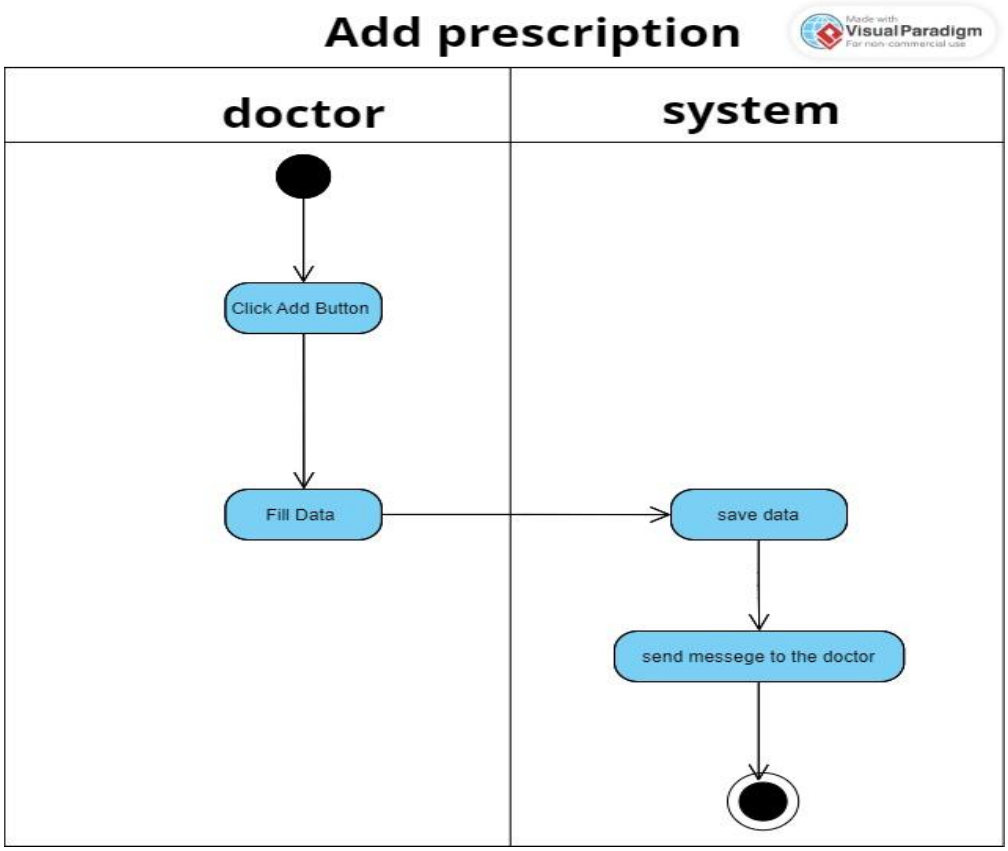
3.4 – View patient



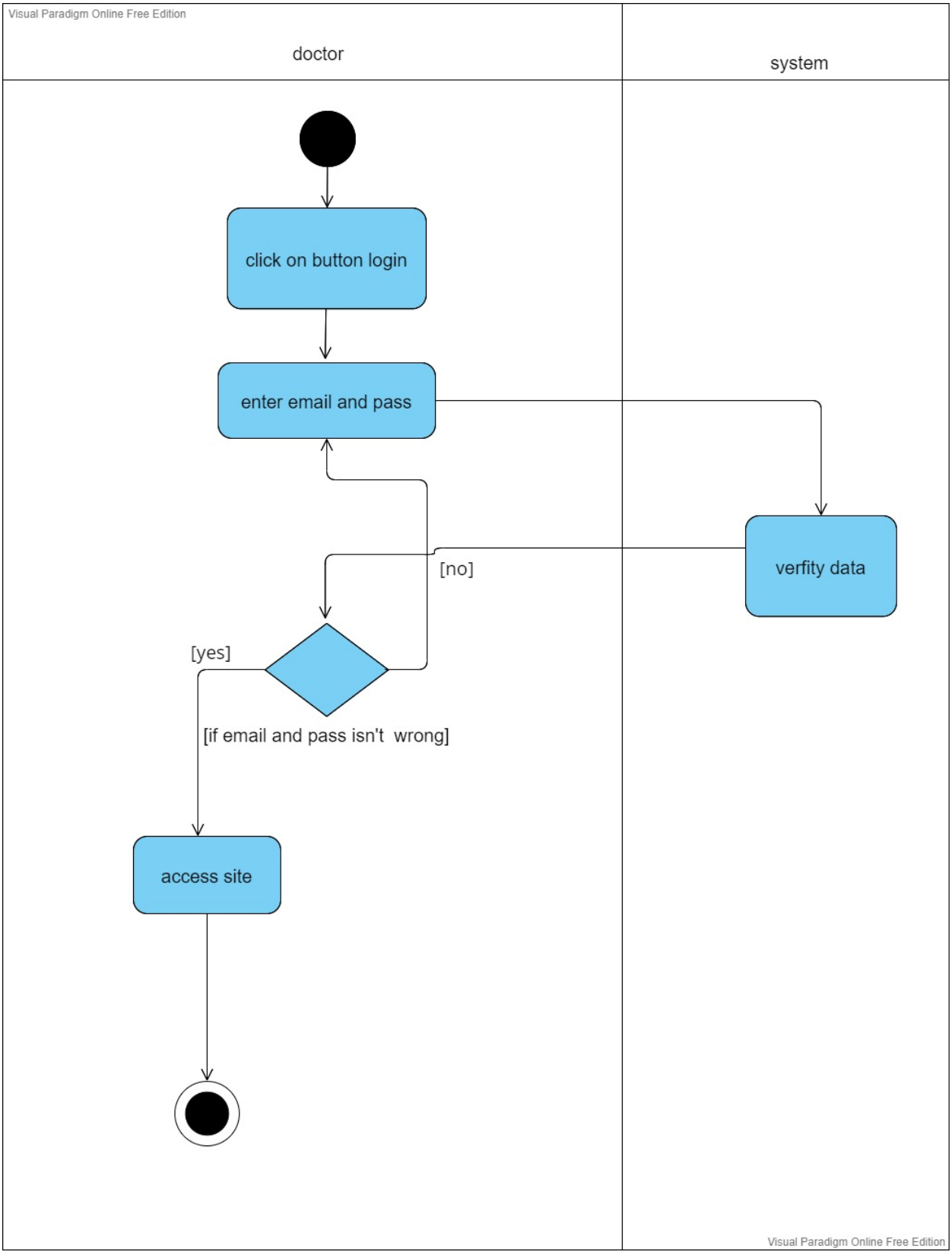
3.5- Delete Prescription



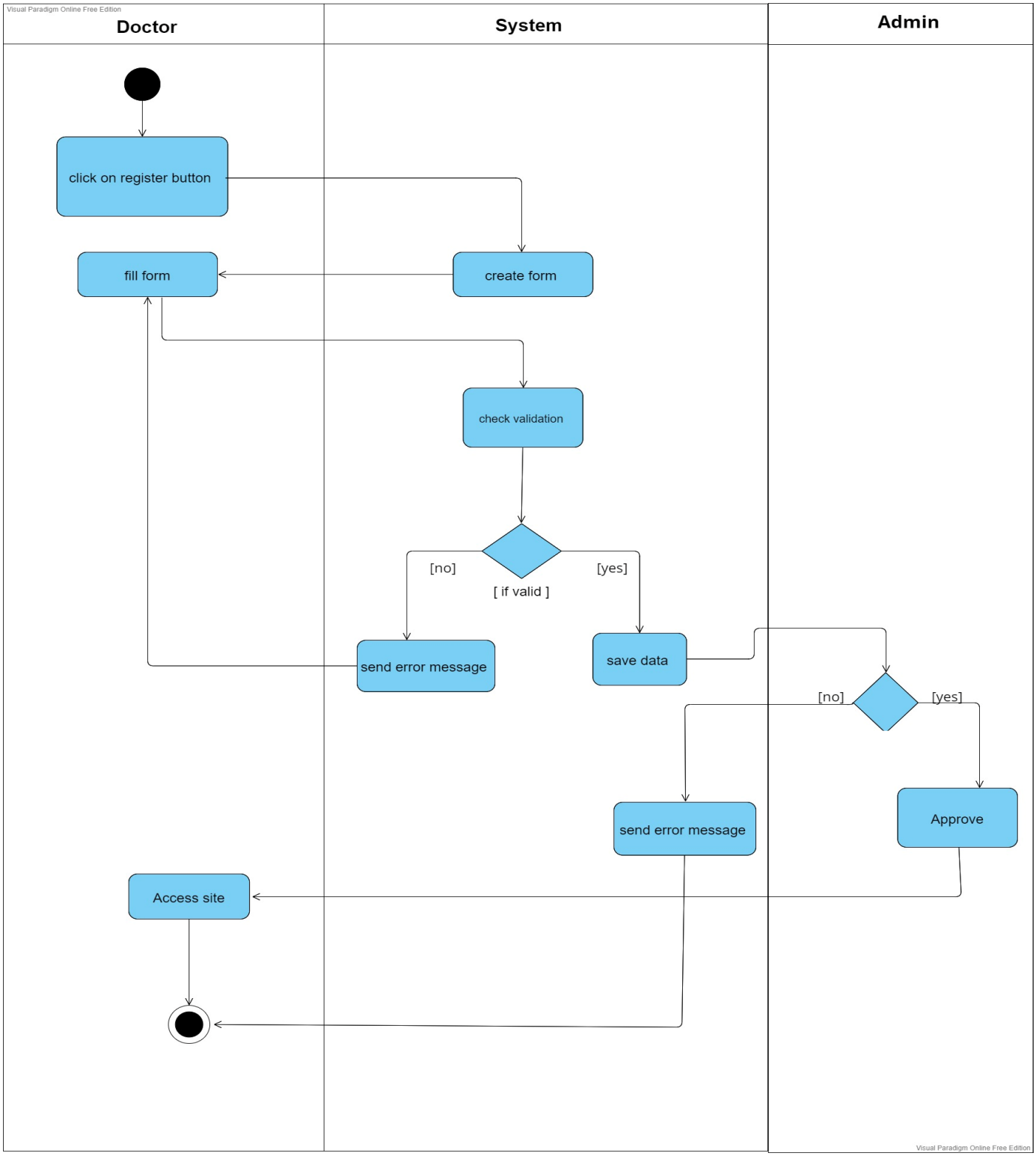
3.6- Add Prescription



3.7 – login

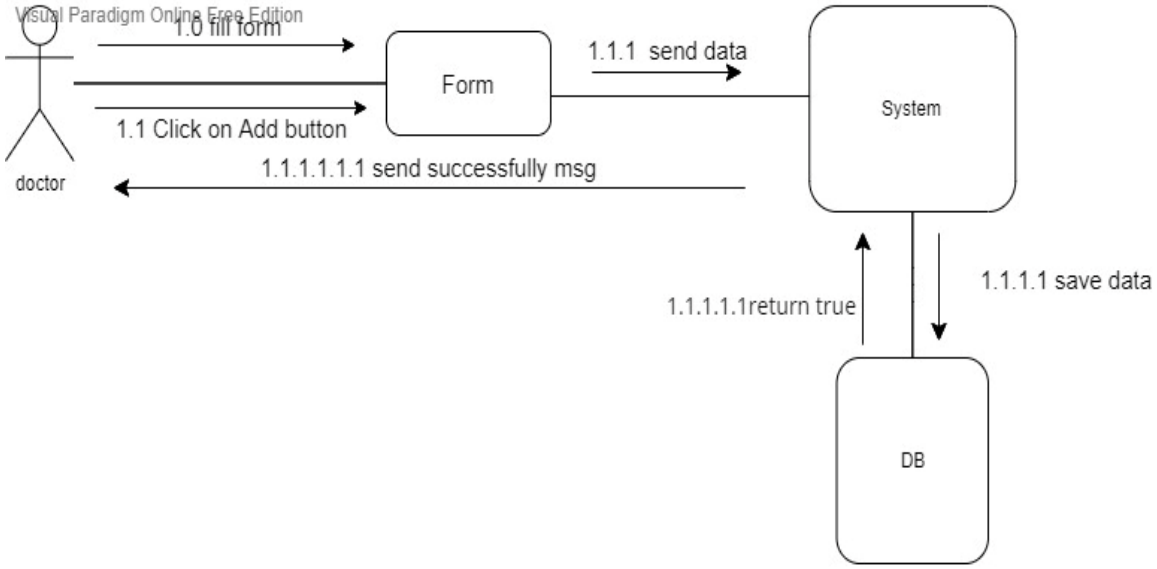

Visual Paradigm Online Free Edition
doctor
system
click on button login
enter email and pass
verfity data
[no]
[yes]
[if email and pass isn't wrong]
access site
Visual Paradigm Online Free Edition

3.8– Register

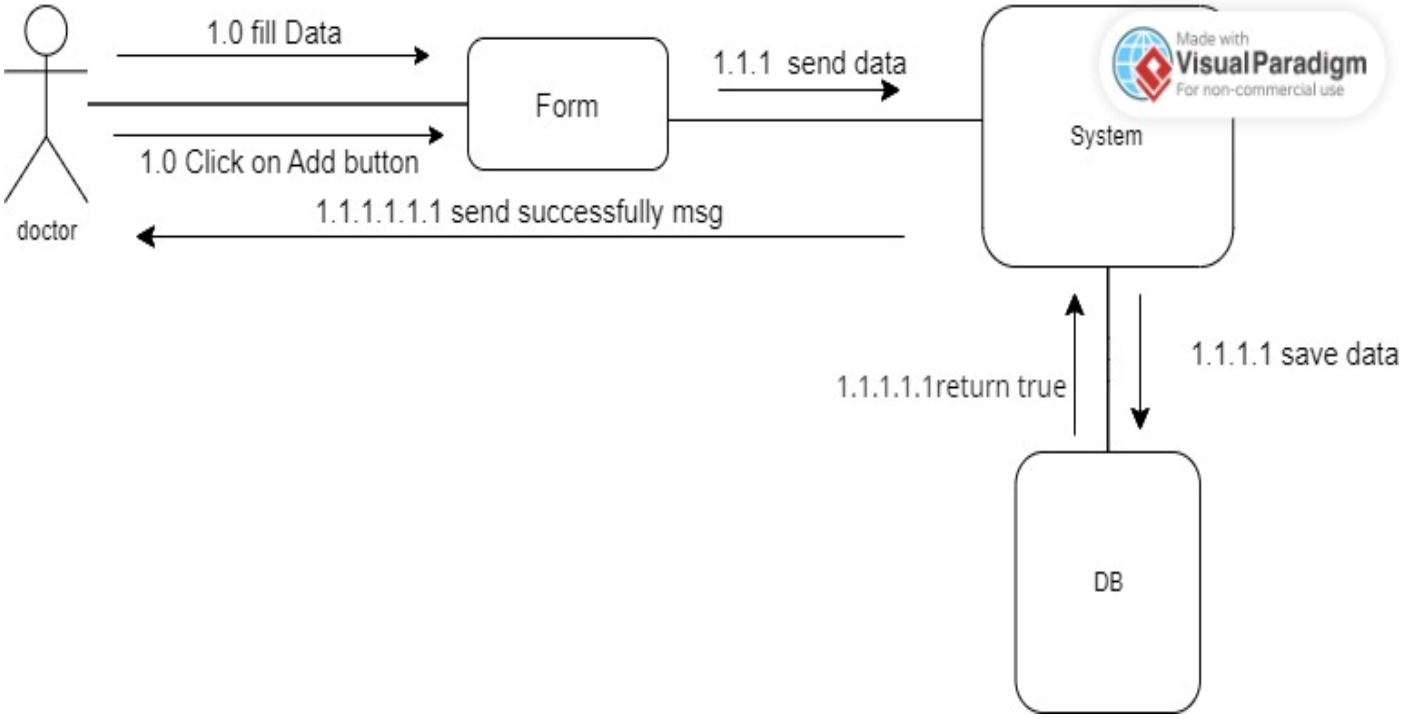

Visual Paradigm Online Free Edition
Doctor
System
Admin
click on register button
fill form
create form
check validation
[no]
[yes]
[if valid]
send error message
save data
[no]
[yes]
send error message
Approve
Access site
Visual Paradigm Online Free Edition

4- Communication Diagram :

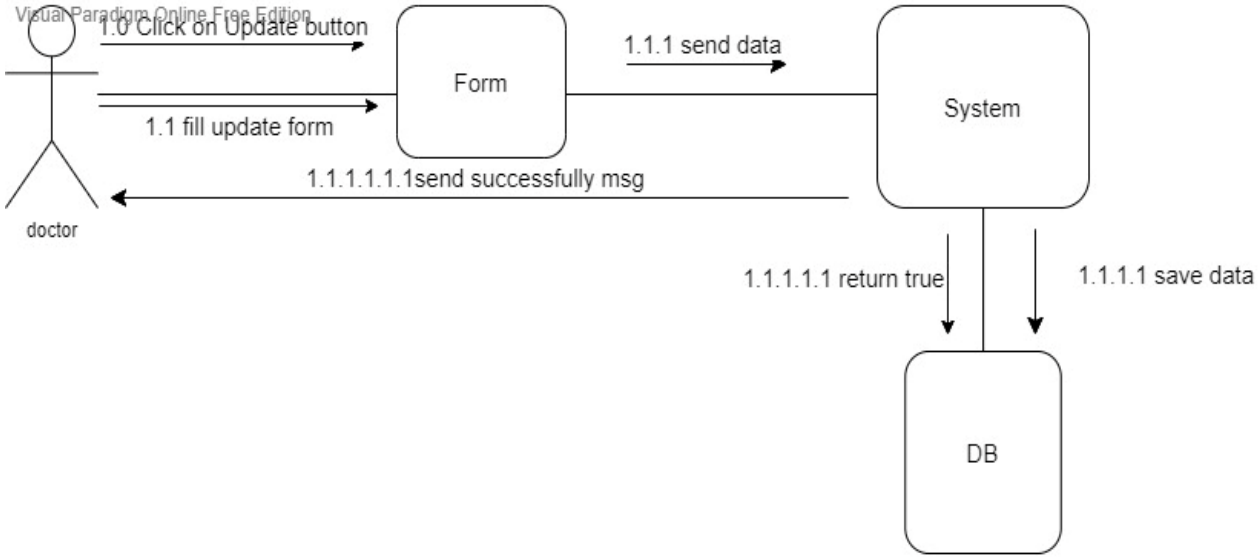
4.1 – Add patient



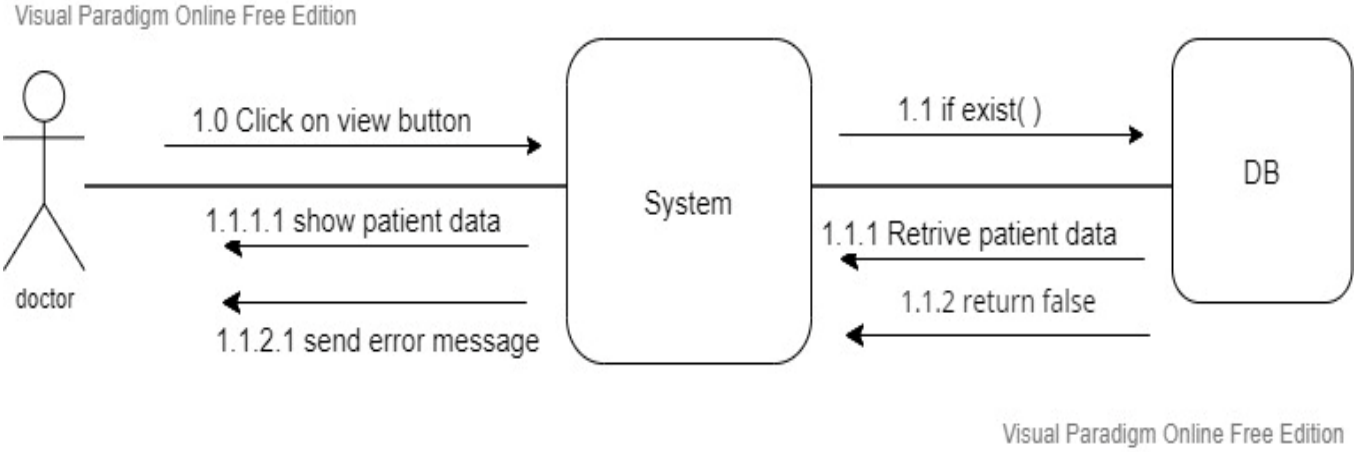
4.2 – Add Prescription



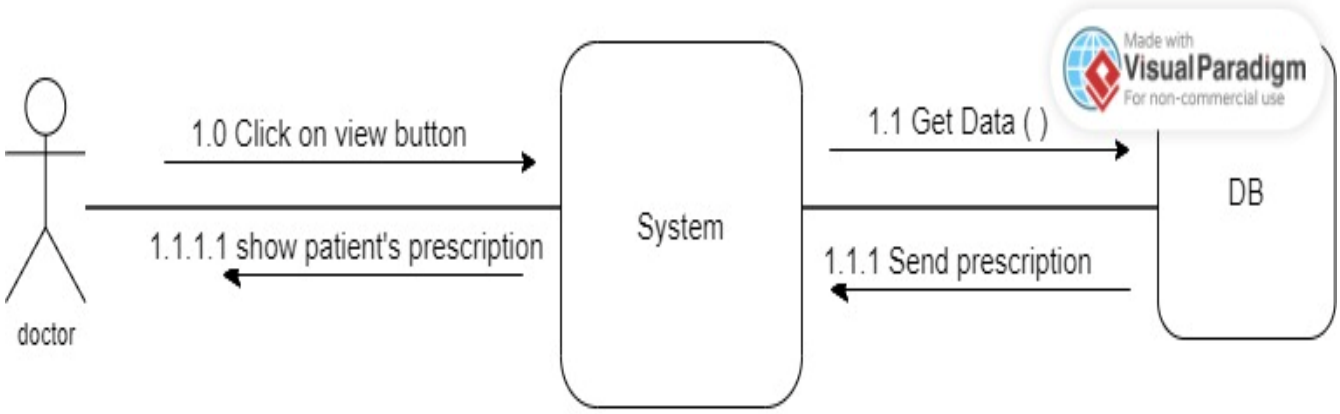
4.3 – Update Patient / Prescription



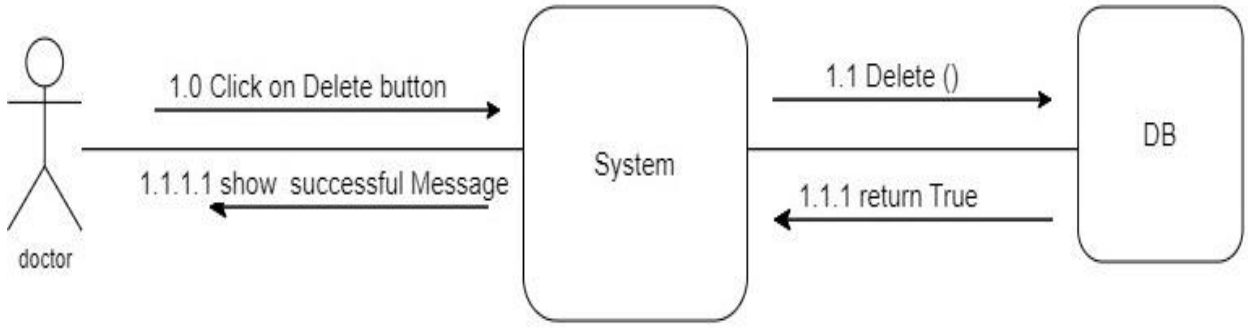
4.4- View Patient



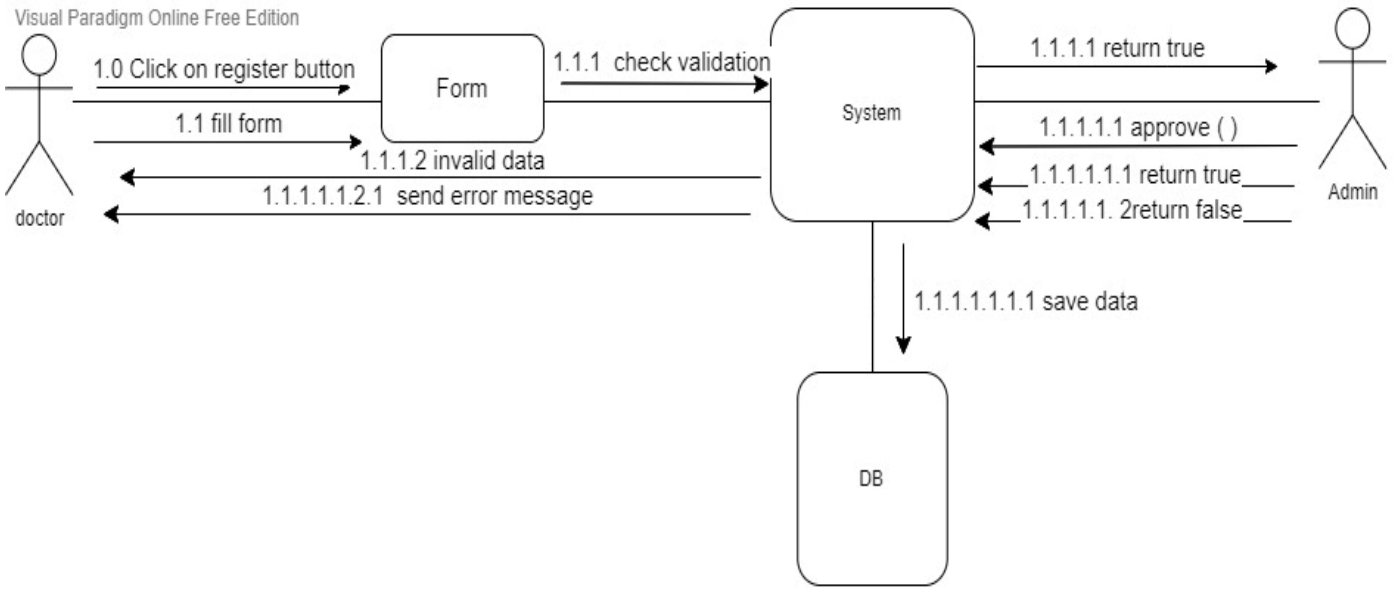
4.5 – View Prescription



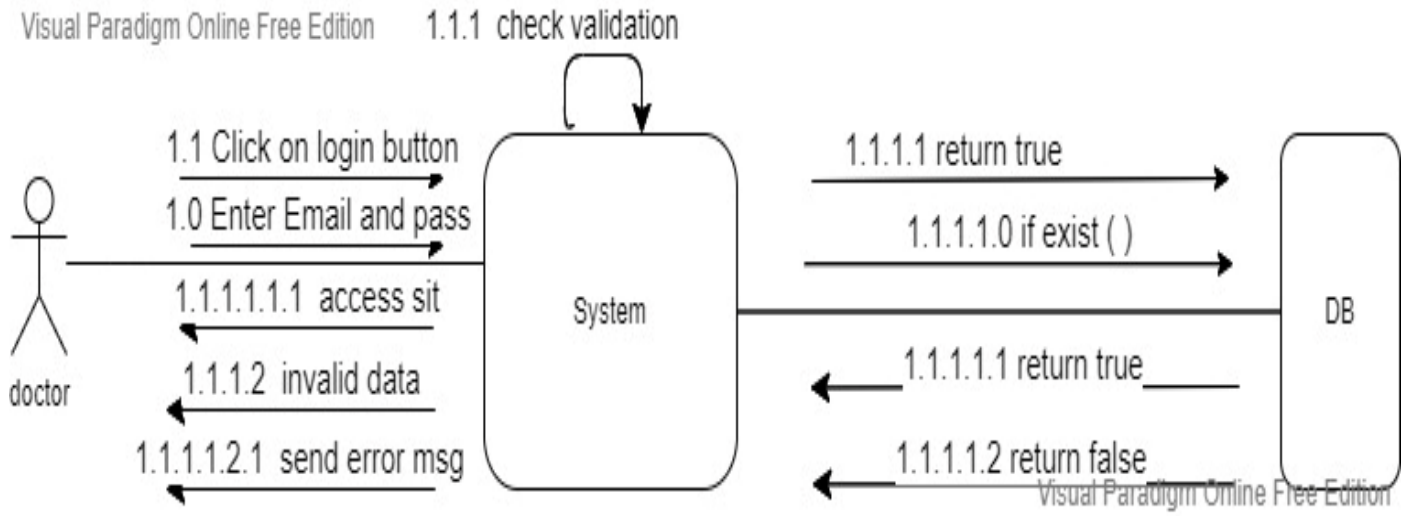
4.6- Delete Patient/ Prescription



4.4- login

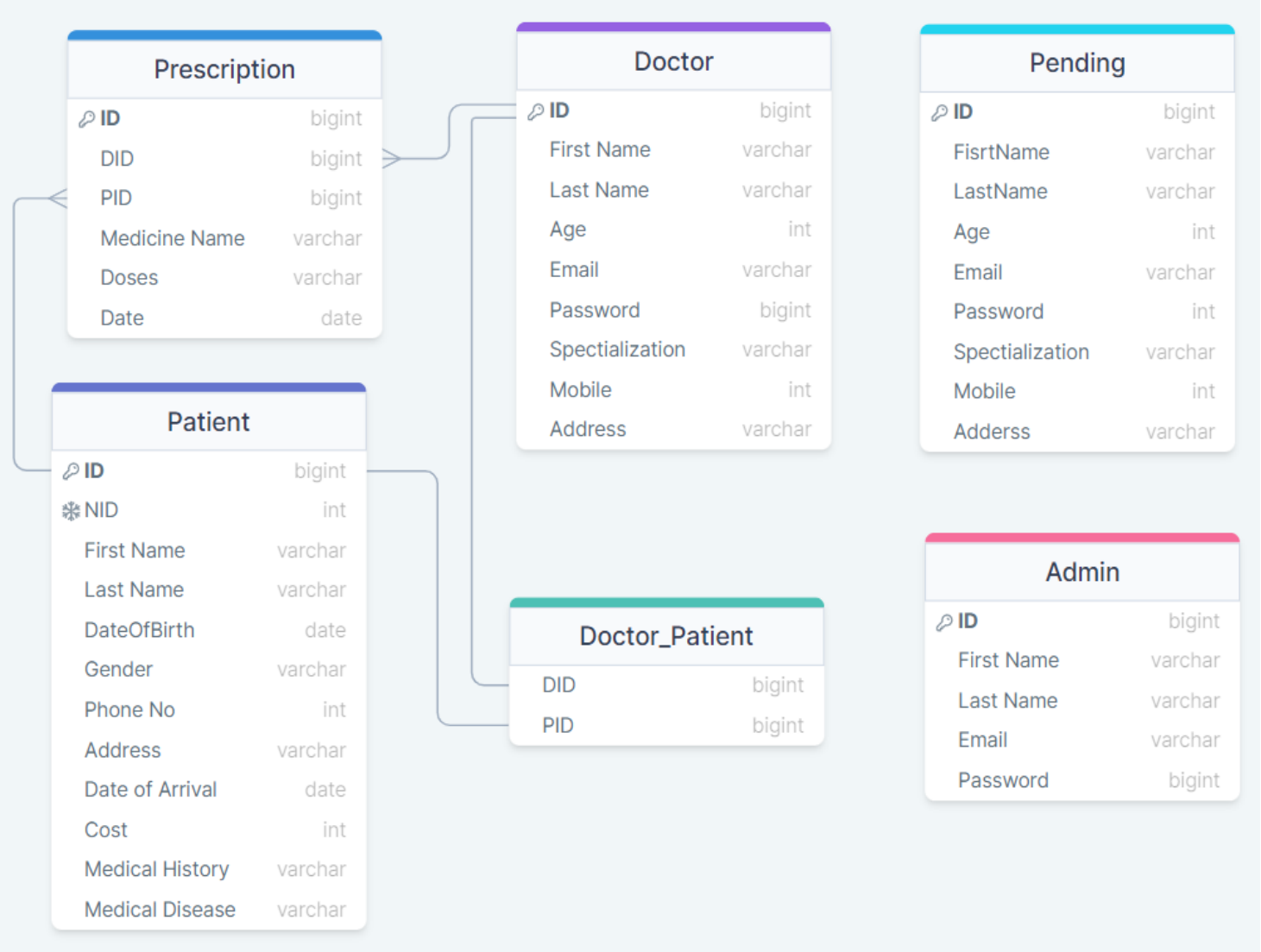


4.5 – Register

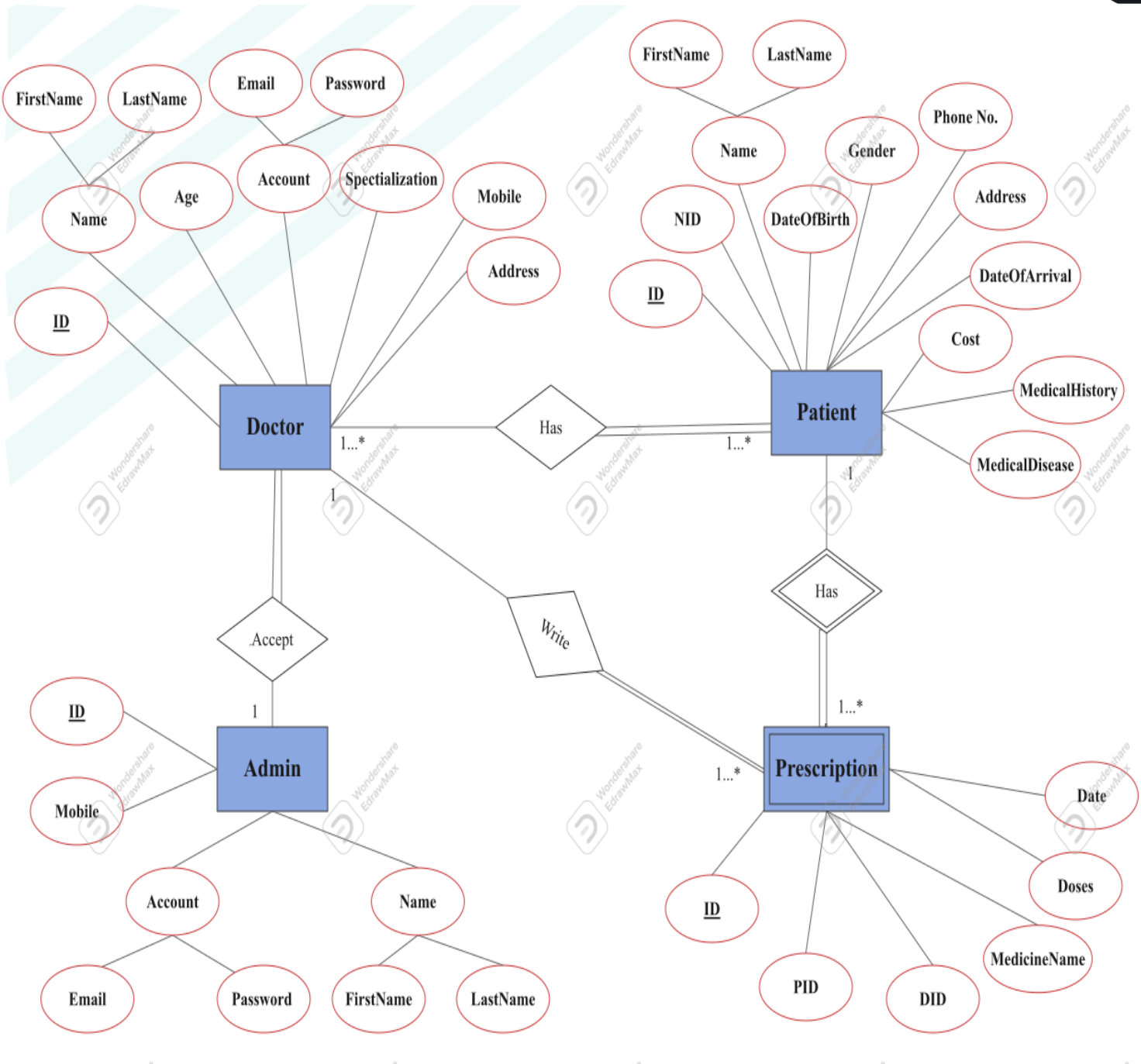


5- DB Architecture

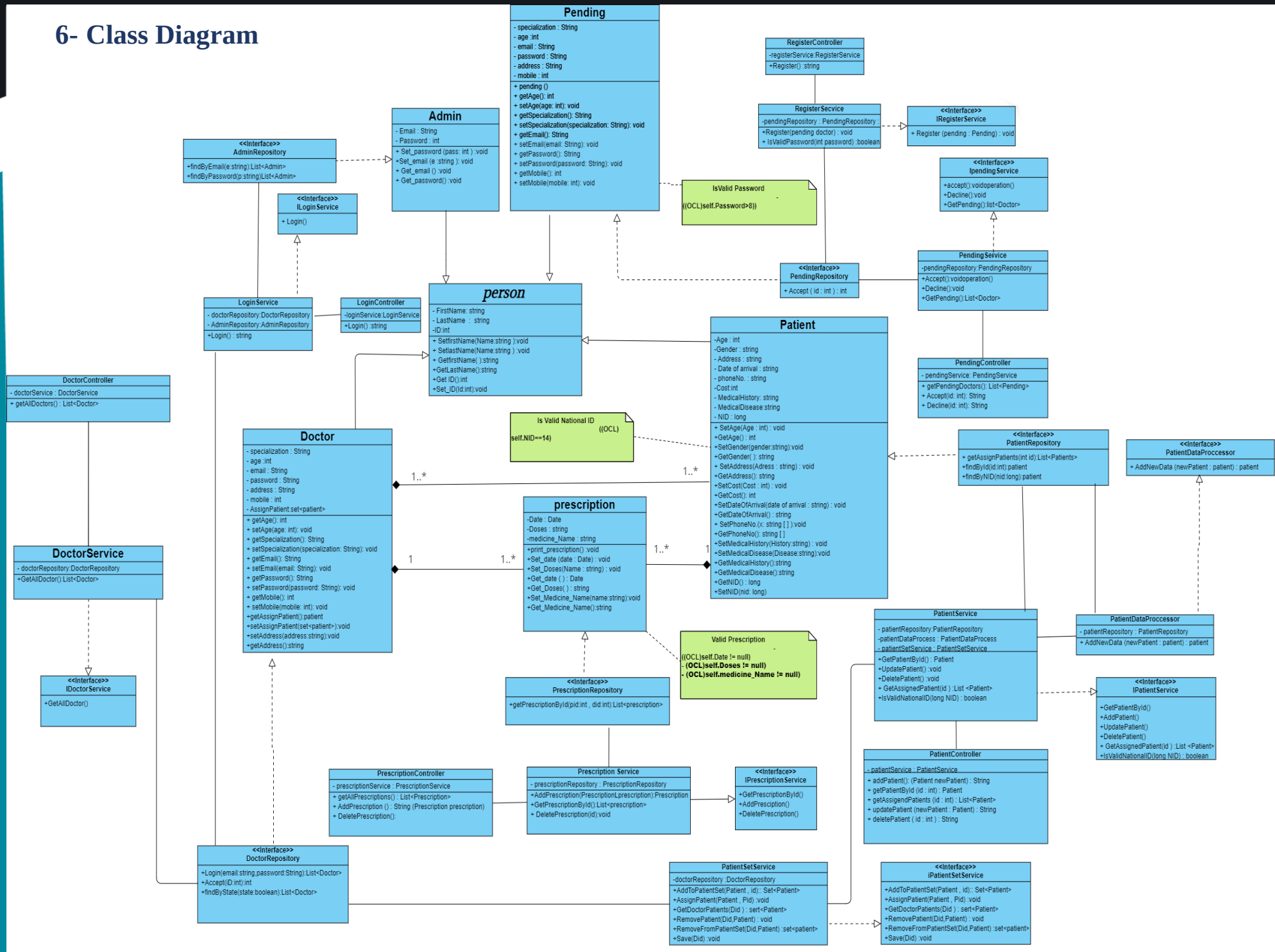
5.1 – Schema



5.2 – ERD

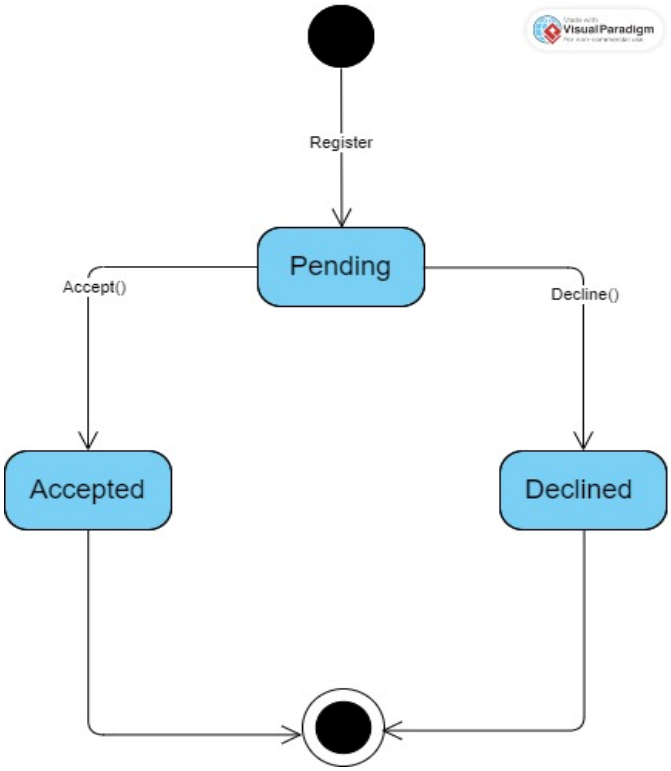

FirstName
LastName
Email
Password
Name
Age
Account
Specialization
Mobile
Address
ID
Doctor
1...*
Has
1...*
Patient
FirstName
LastName
Name
Gender
Phone No.
NID
DateOfBirth
Address
ID
DateOfArrival
Cost
MedicalHistory
MedicalDisease
1
Has
1...*
Accept
Write
1
ID
Admin
Mobile
Account
Name
Email
Password
FirstName
LastName
1...*
Prescription
Date
Doses
ID
MedicineName
PID
DID

6- Class Diagram

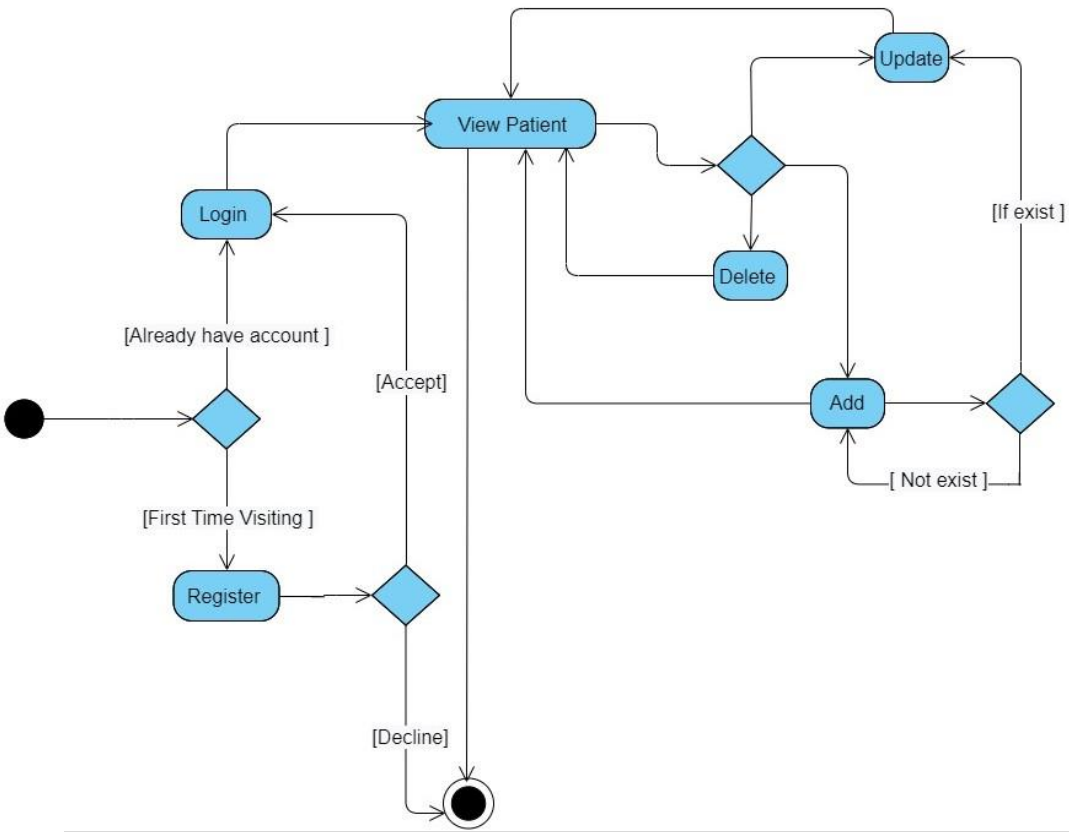


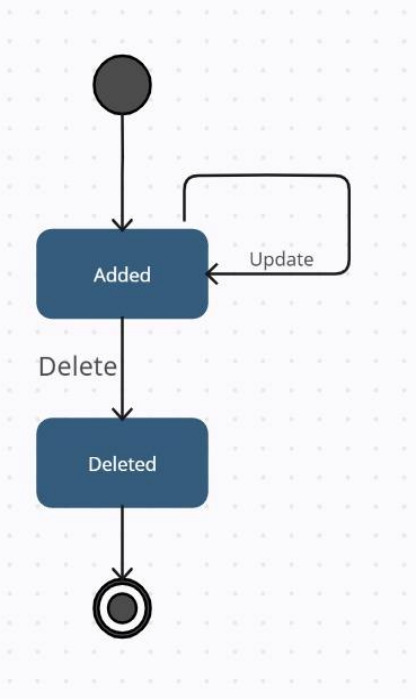
7- State Diagram

7.1 – Doctor state

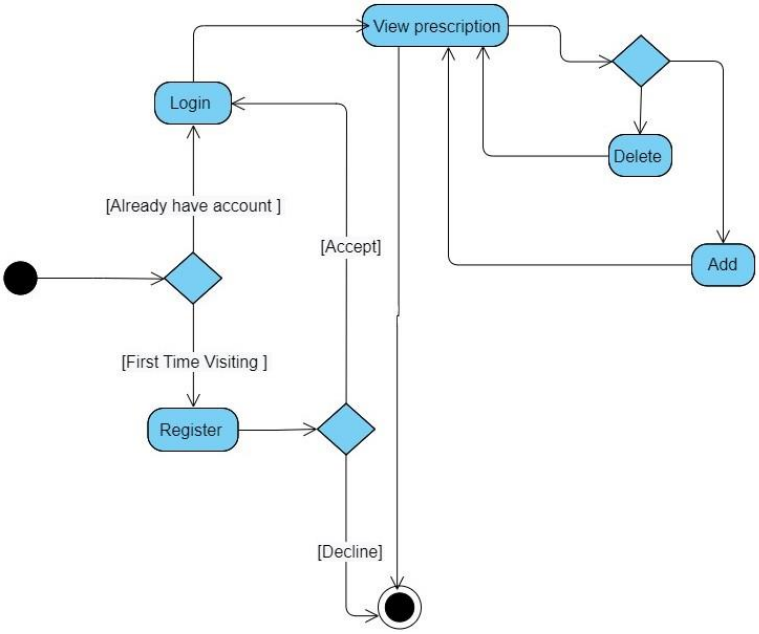


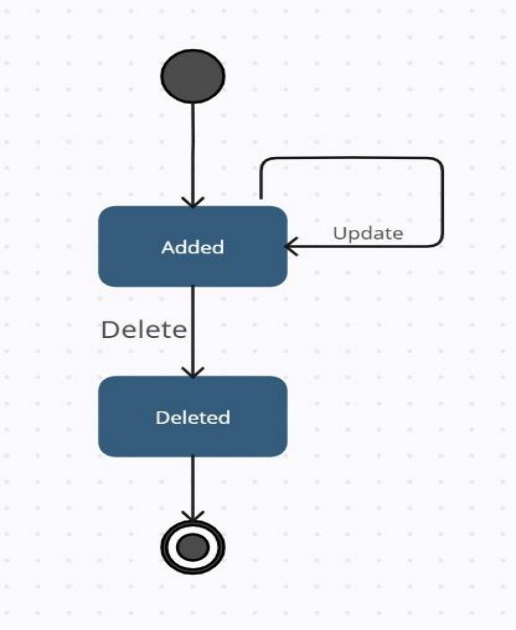
7.2- Patient State





7.3- Prescription State





II. OCL Constrains :

1- Context pending invariant:
Self. Password >= 8

2- Context Patient invariant:
Self. NID. length () ==14

3- Context Patient invariant:
Not Self. Doctor. oclIsUndefined ()

4- Context patient invariant:
Self. Prescription -> notEmpty ()

5- Context Prescription invariant:
Self. medicineName ! = Null

6- Context Prescription invariant:
Self. Doses ! = Null

7- Context Prescription invariant:
Self. Date ! = Null