APPLICATION FOR MANAGING VETERINARY POLYCLINIC

PROJECT GUIDE-MRS.PRANJALI DESHPANDE

1. SHALINI PRASANNA	*EXAM NO-B120204364*
2. T. PAVITHRA	*EXAM NO-B120204409*
3. SUPRIYA WAGHMARE	*EXAM NO-B120204404*
4. ASHLESHA WAIKOS	*EXAM NO-B120204424*

PROBLEM DEFINITION

Application for managing a Veterinary Polyclinic.

MOTIVATION

- *To automate the manually maintained record process.*
- *Due to the limitations of the currently used handwritten systems like data redundancy, data loss, data inconsistency.*

FUTURE SCOPE

- *A mobile application can be developed, to access clinical data via smartphones.*
- *Medicine inventory can be added as a part of the clinical dbms.*
- *The patients can make appointments using the system will be a part of the future development.*

OBJECTIVES AND PLANNED OUTCOME

- *Creating a web application for a veterinary polyclinic by the means of SQL database*
- *The patient records should be generated and recorded into the database systematically and can be looked up by the doctors when needed.*
- *The desired outcome is for the reports to be generated and displayed.*

LITERATURE SURVEY

Database management system is currently implemented in the Radiology department in the Malaysian hospitals[1].

1. *External Schema: Specifies the part of the database to be viewed.*
2. *Internal Schema: Specifies how data is physically stored and accessed.*
3. *Conceptual Schema: Specifies data stored in terms of data model.*

Hospital database workload and fault forecasting[2] paper, a system maintains the hospital records. It is called the Hospital Information System (HIS). It consists of 4 processes: Care, Clinical process, Management and Resource. AIDA (Agency for Integration, Diffusion and Archive of Medical Information.

- *The ship building industry[3] uses legacy system to introduce web based mobile technology. It is a cost involving process. SOAP based services have a standardized approach and can replace RPC. RESTful web services CPU be extended to web and module platform.*
- *In Web database application system optimization[4] paper, It has to face a large group of users. Therefore, system needs optimization. Optimization of server and Web application system optimization*

SYSTEM MODULES

1. *Login Module:*
    i. *A login page for authorization.*
    ii. *Input details authorised with the saved staff records.*

2. *Registration Module:*
    i. *For registering new patient details.*
    ii. *Registration module for the staff (doctors).*
    iii. *Patient and staff details saved in a database.*

3. *Departments / Inventory module:*

    i. MySQL database for every department.

    ii. Records can be viewed efficiently.

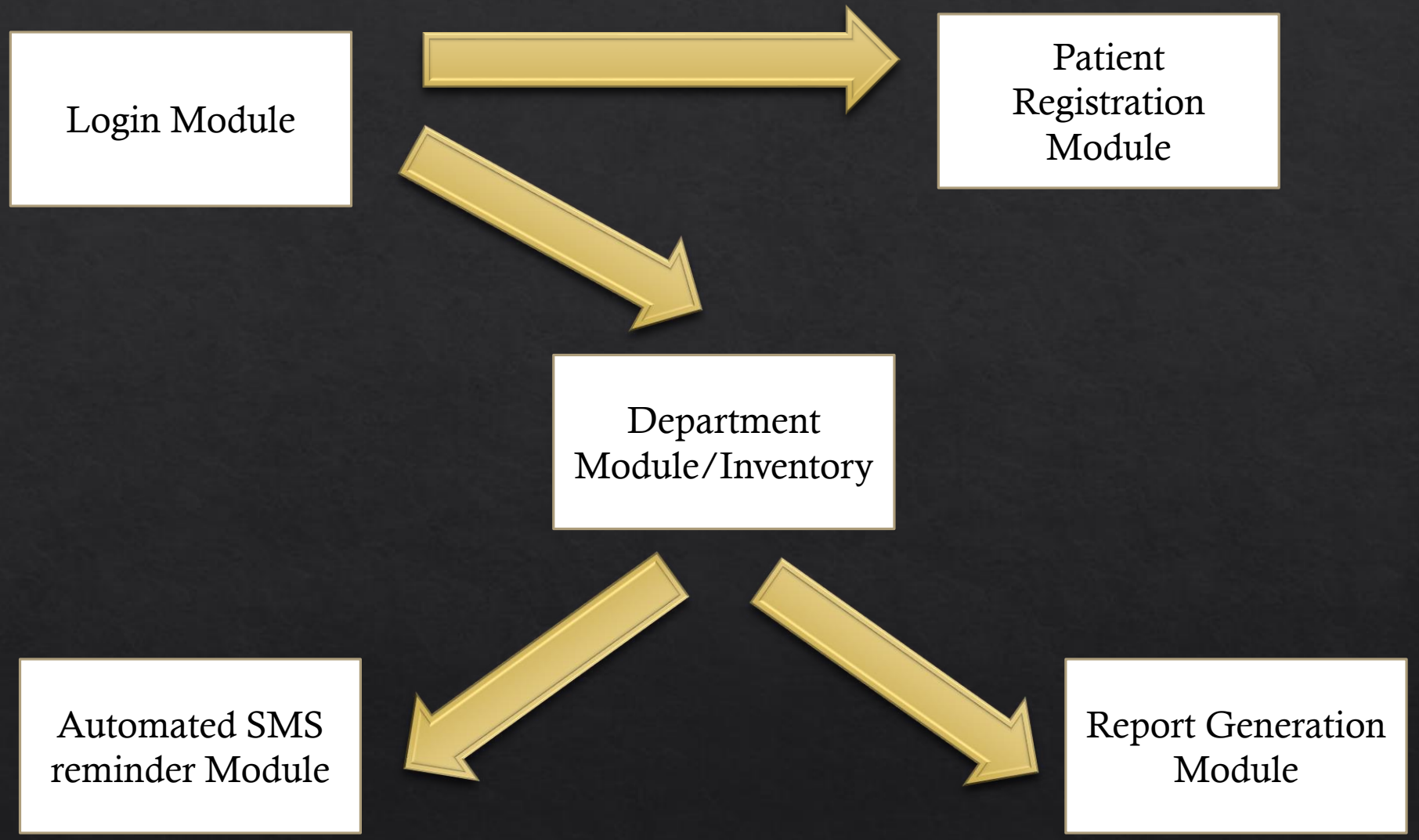
    iii. Inventory details of liquid nitrogen are maintained in a separate database.

4. Report generation:

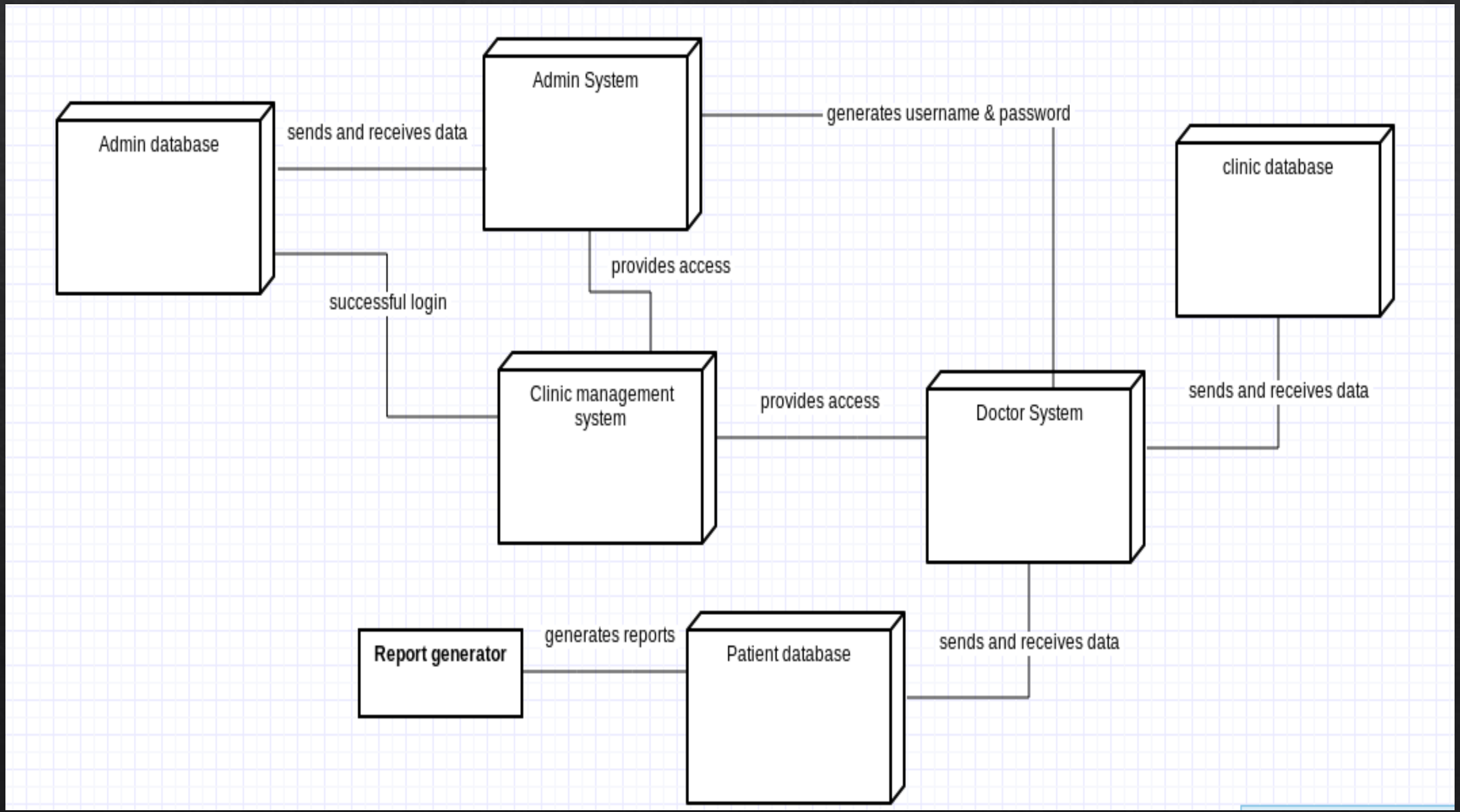
    i. Final reports of vaccination, liquid nitrogen inventory, surgery, revenue and summary generated.

5. SMS Remainder module:

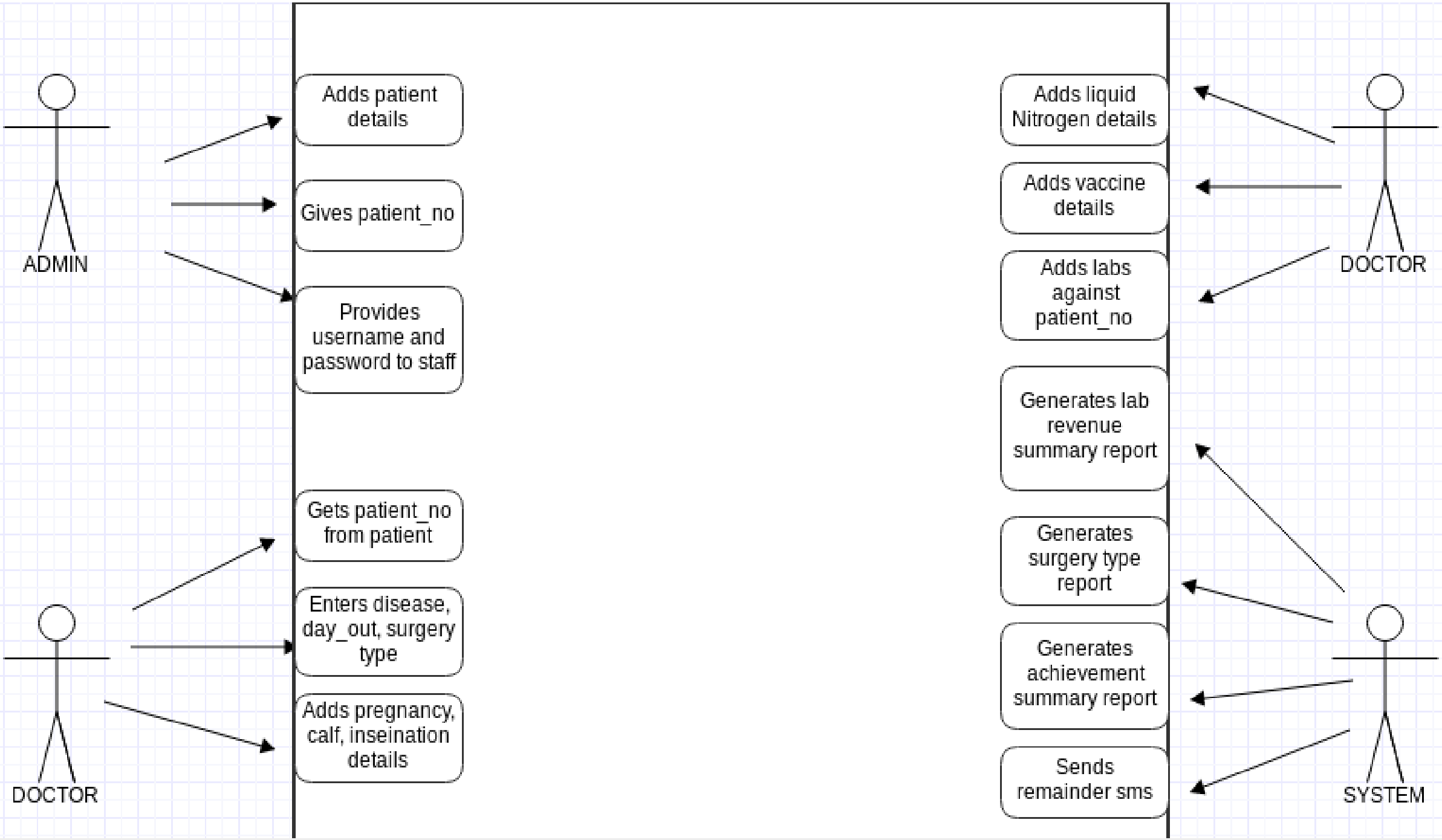
    i. Automated SMS Reminder system for the insemination patients.


Login Module
Patient Registration Module
Department Module/Inventory
Automated SMS reminder Module
Report Generation Module

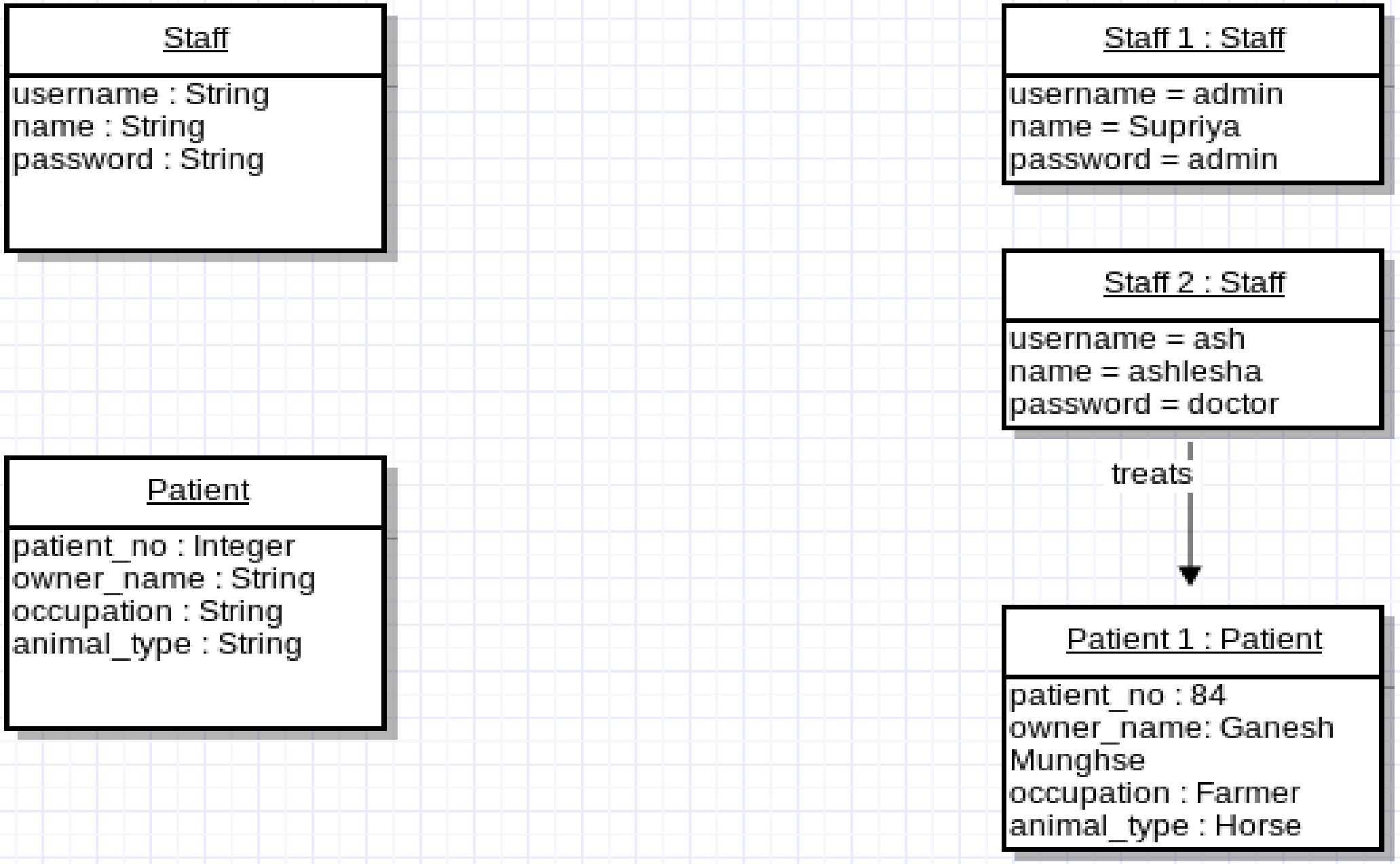
SYSTEM ARCHITECTURE

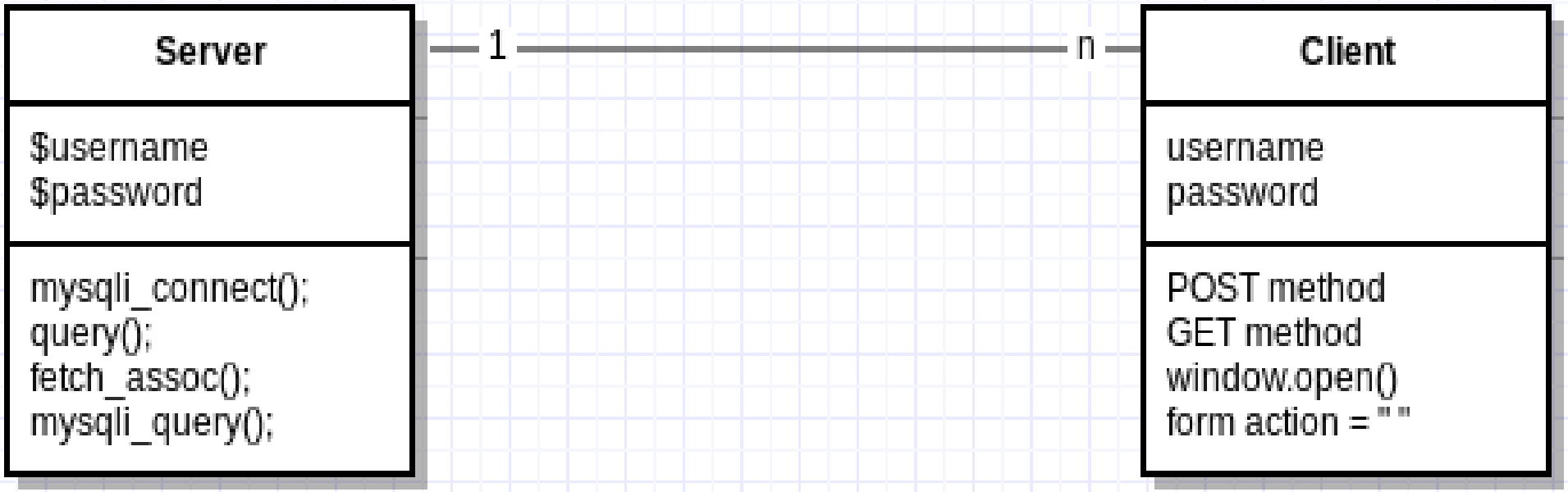

Admin System
Admin database
sends and receives data
generates username & password
clinic database
provides access
successful login
Clinic management system
provides access
Doctor System
sends and receives data
Report generator
generates reports
Patient database
sends and receives data

UNIFIED MODELLING LANGUAGE DIAGRAM

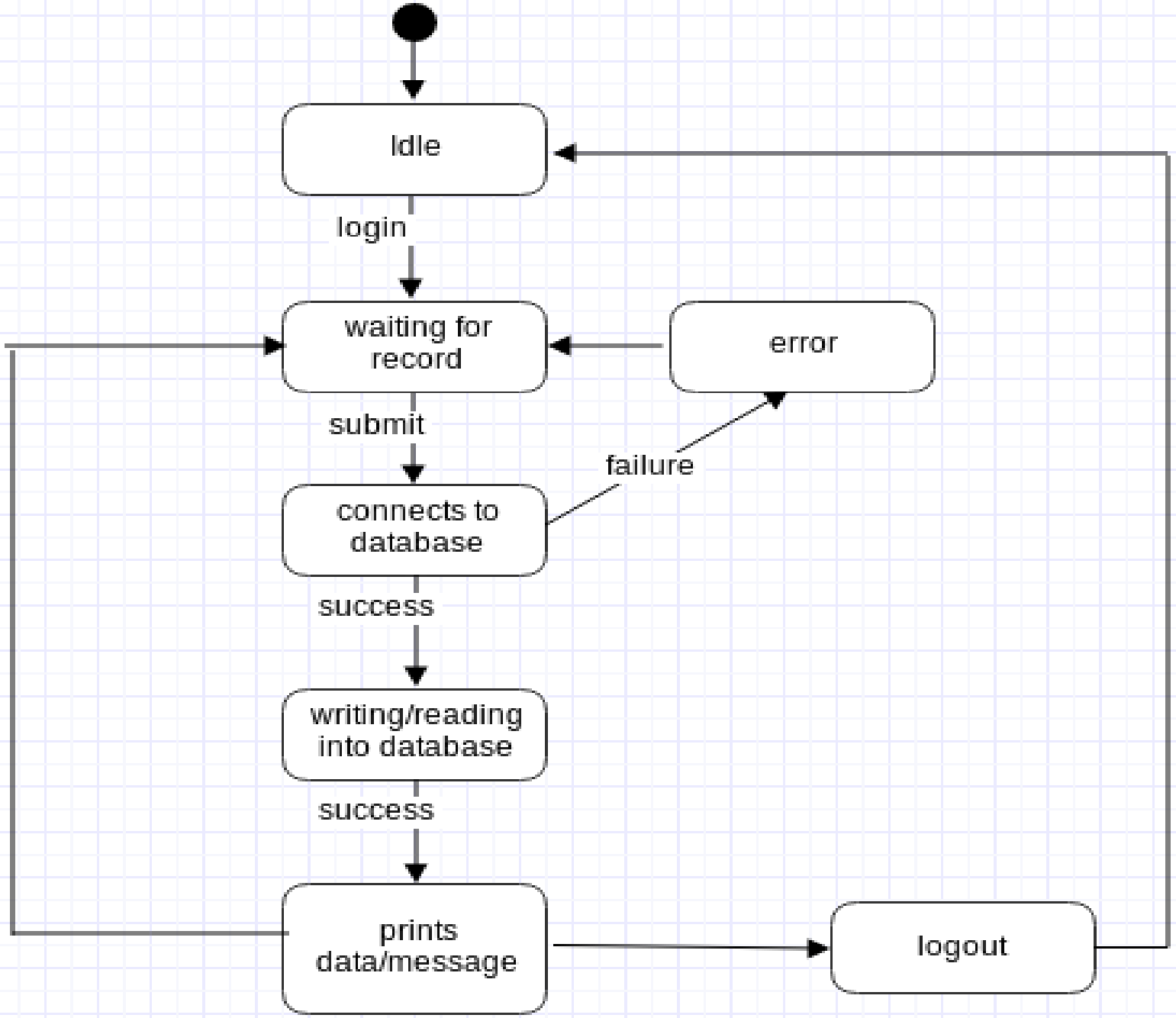

ADMIN
Adds patient details
Gives patient_no
Provides username and password to staff
DOCTOR
Gets patient_no from patient
Enters disease, day_out, surgery type
Adds pregnancy, calf, inseination details
Adds liquid Nitrogen details
Adds vaccine details
Adds labs against patient_no
DOCTOR
Generates lab revenue summary report
Generates surgery type report
Generates achievement summary report
Sends remainder sms
SYSTEM

CLASS DIAGRAMS

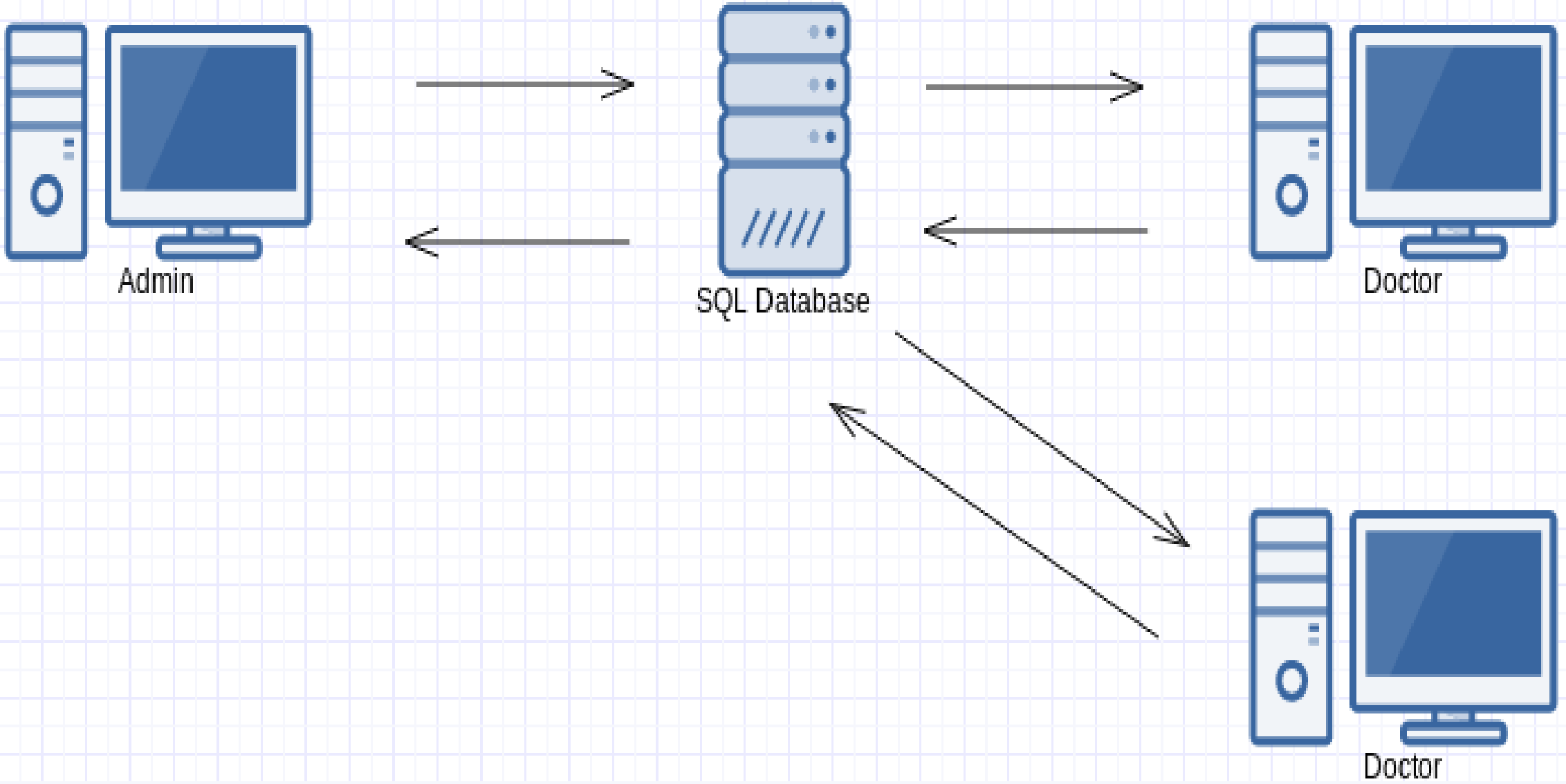

Staff
username : String
name : String
password : String
Patient
patient_no : Integer
owner_name : String
occupation : String
animal_type : String
Staff 1 : Staff
username = admin
name = Supriya
password = admin
Staff 2 : Staff
username = ash
name = ashlesha
password = doctor
treats
Patient 1 : Patient
patient_no : 84
owner_name: Ganesh Munghse
occupation : Farmer
animal_type : Horse


Server
$username
$password
mysqli_connect();
query();
fetch_assoc();
mysqli_query();
1
n
Client
username
password
POST method
GET method
window.open()
form action = ""

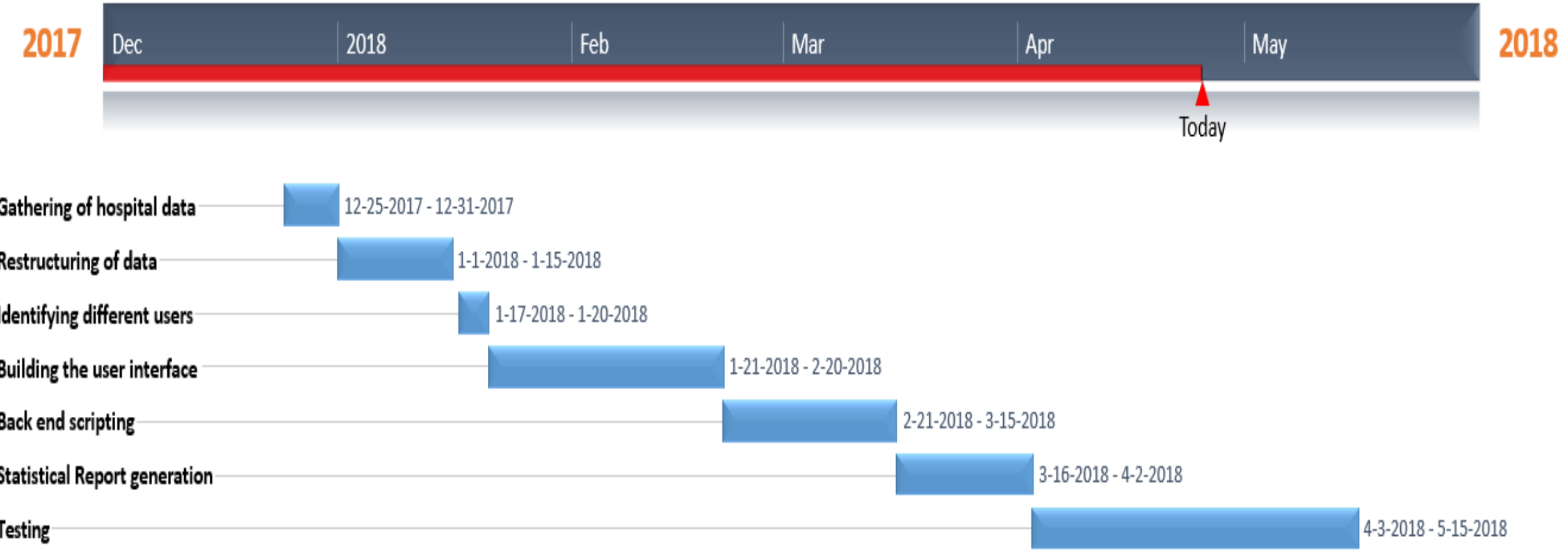
STATE TRANSITION DIAGRAM


Idle
login
waiting for record
error
submit
failure
connects to database
success
writing/reading into database
success
prints data/message
logout

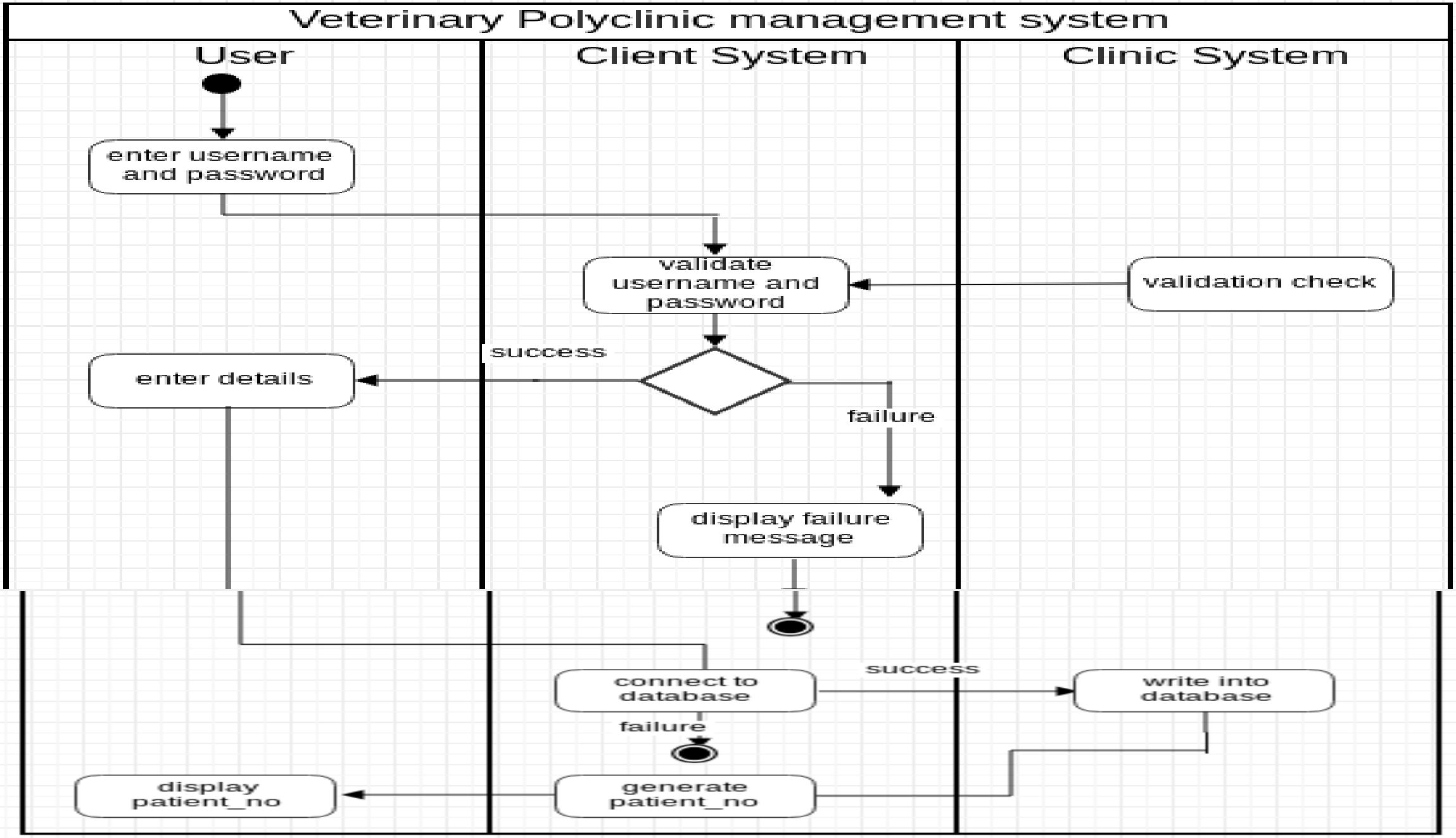
NETWORK DIAGRAM


Admin
SQL Database
Doctor
Doctor

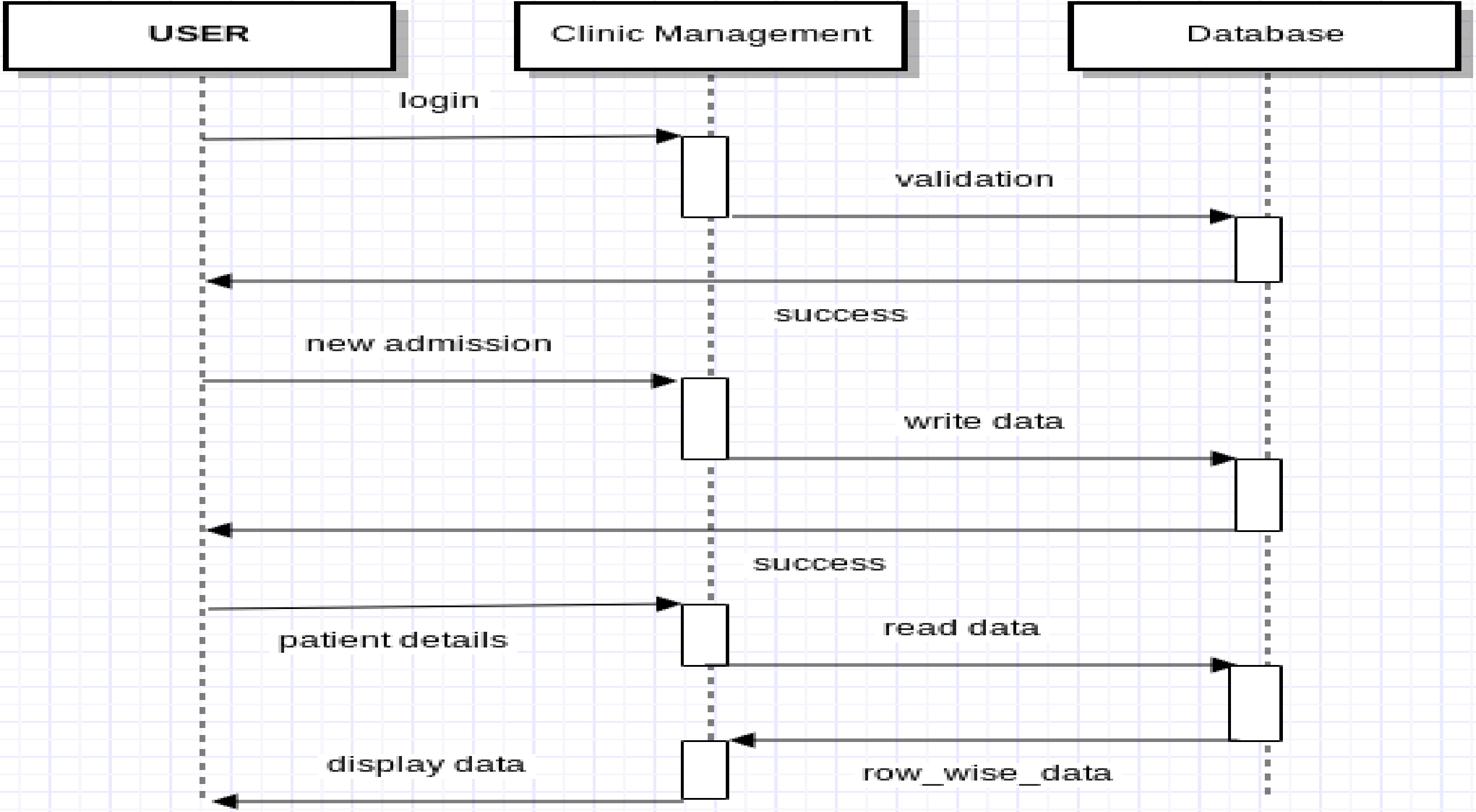
TIMELINE CHART


2017
Dec
2018
Feb
Mar
Apr
May
2018
Today
Gathering of hospital data
12-25-2017 - 12-31-2017
Restructuring of data
1-1-2018 - 1-15-2018
Identifying different users
1-17-2018 - 1-20-2018
Building the user interface
1-21-2018 - 2-20-2018
Back end scripting
2-21-2018 - 3-15-2018
Statistical Report generation
3-16-2018 - 4-2-2018
Testing
4-3-2018 - 5-15-2018

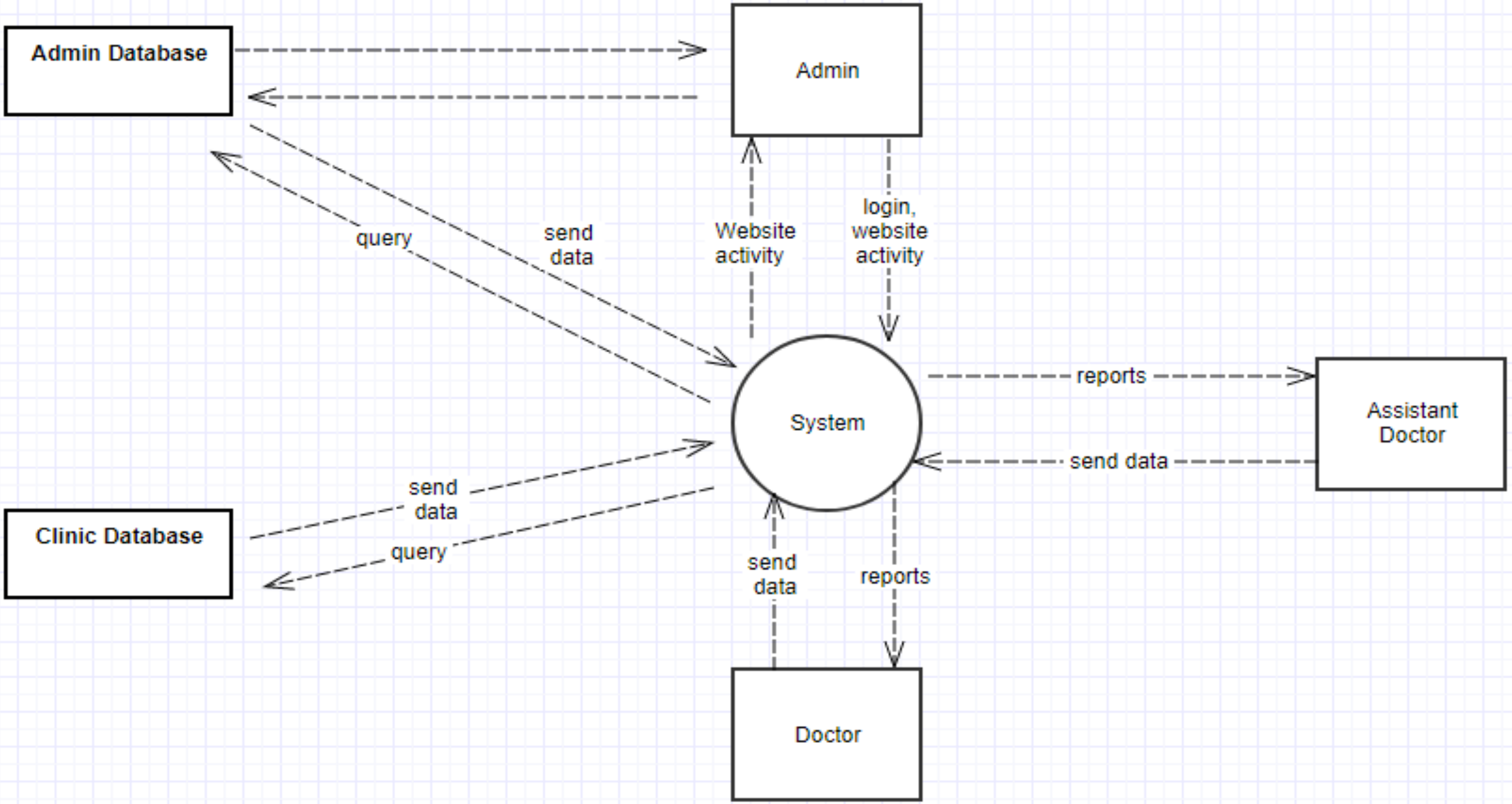
ACTIVITY DIAGRAM


Veterinary Polyclinic management system
User
Client System
Clinic System
enter username and password
validate username and password
validation check
success
enter details
failure
display failure message
connect to database
success
write into database
failure
display patient_no
generate patient_no

SEQUENCE DIAGRAM


USER
Clinic Management
Database
login
validation
success
new admission
write data
success
patient details
read data
display data
row_wise_data

DATA FLOW DIAGRAM


Admin Database
Admin
query
send data
Website activity
login, website activity
System
reports
Assistant Doctor
send data
Clinic Database
send data
query
send data
reports
Doctor

CONCLUSION

- *The system will automate all handwritten records.*
- *The system will have a higher efficiency.*
- *Low cost, better security and storage.*
- *Easy access from anywhere.*
- *Automated monthly/yearly reports for a better reference.*
- *Ensures data integrity, data persistency, data accessibility.*

REFERENCE

- *[1] K. S. Sim, T. K. Kho, F. S. Abas, F. F. Ting, V. Teh and C. S. Ee, "Computerized Brain Database Management System for Radiological Department in Hospital," International Conference of Robotics, Automation and Sciences(ICORAS), 2016.*
- *[2] Paulo Silva, Cesar Quintas, J´ulio Duarte, Manuel Santos, Jos´e Neves, Ant´onio Abelha and Jos´e Machado, "Hospital database workload and fault forecasting," IEEE-EMBS Conference on Biomedical Engineering and Sciences, pp. 63-68, 2012.*
- *[3] Jeong-cheol Jeon, Jaehwa Chung, "Developing a Prototype of REST-based Database Application for Shipbuilding Industry: A Case Study," International Conference on Platform Technology and Service (PlatCon), pp. 1-6, 2017.*
- *[4] Cheng Zhi, "The Web database application system optimization research," Seventh International Conference onMeasuring Technology and Mechatronics Automation, pp. 1329-1332, 2015.*

THANK YOU!!!!