A

MINI PROJECT REPORT

ON

HOSPITAL MANAGEMENT SYSTEM

Submitted By

SnehalThombare scsb333

Prajakta Yadav scsb342

Samruddhi Yadav scsb343

Guided By

Prof.Manish Giri

Acknowledgement

We wish to express our profound thanks to our Guide Prof.Manish Giri Sir for his guidance, the valuable time that he spent with us, discussing the ideas and helping us jump over any hurdles that would come our way.

We also want to thank our Head of Department, Computer Engineering. Dr.S.A.Jain and our respected director of MITAOE, Dr.Yogesh Bhalerao sir for providing us with the basic infrastructure

Ms.SnehalThombare

Ms.Prajakta Yadav

Ms.Samruddhi Yadav

ABSTRACT

The IT system has revolutionised the field of medicine. In this fast-paced world of medicine, it is a daunting task to manage a multi-speciality hospital. A hospital management system (HMS) is a computer or web based system that facilitates managing the functioning of the hospital or any medical set up[1]. This system or software will help in making the whole functioning paperless. It integrates all the information regarding patients, doctors, staff, hospital administrative details etc. into one software[4]. It has sections for various professionals that make up a hospital.

INTRODUCTION

These are the following specifications of entities in our system:

Doctors

This section includes the list of the doctors and their schedules[3]. It also includes doctors' emergency numbers. The doctor can check his schedule and that of other doctors too. This helps a doctor to edit his schedule accordingly. It includes list of the available medicines for specific diseases so that the doctor can easily look for an alternative when in need. The use of HMS makes the co-ordination between a doctor and patient easy and hassle free.

Patient information

New patients can be registered in the system. An electronic medical record system is in-built which stores all the basic and medical details of the patient[2]. One can also add a feature to store photos of the patients as identity proof which can also help in medico-legal cases of false identities or fraud[1].

Occupancy

Using HMS one can quickly check the availability of rooms/beds so that the receptionist can adjust transfer of patients from one ward to another or allot the bed

to the new patient. This data is constantly updated to keep a track of discharged patients. This section also includes the detailed schedule of the operation theatres. This helps the receptionist or the nurses to know which theatres are vacant to slot other surgeries[3].

Staff

It includes names and timings of the nurses and ward boys on duty with their respective ward numbers. The instructions given to the nurse for each patient are entered in the system.

Billing

A separate automated section is meant for billing purposes. HMS helps to sum up all the expenses of a patient at one time and produce a complete bill at the end of the consultation or at discharge. This saves time and effort for each department as they need not produce separate

Statistical Reports

All the data in a HMS is integrated and can be analysed. This helps in creating a statistical database for the internal use of the hospital which can be submitted to the administration[1]. This section helps the administration in summarizing the expenses of the hospital and evaluating the necessary and unnecessary expenditure.

Additional feature(Future scope).

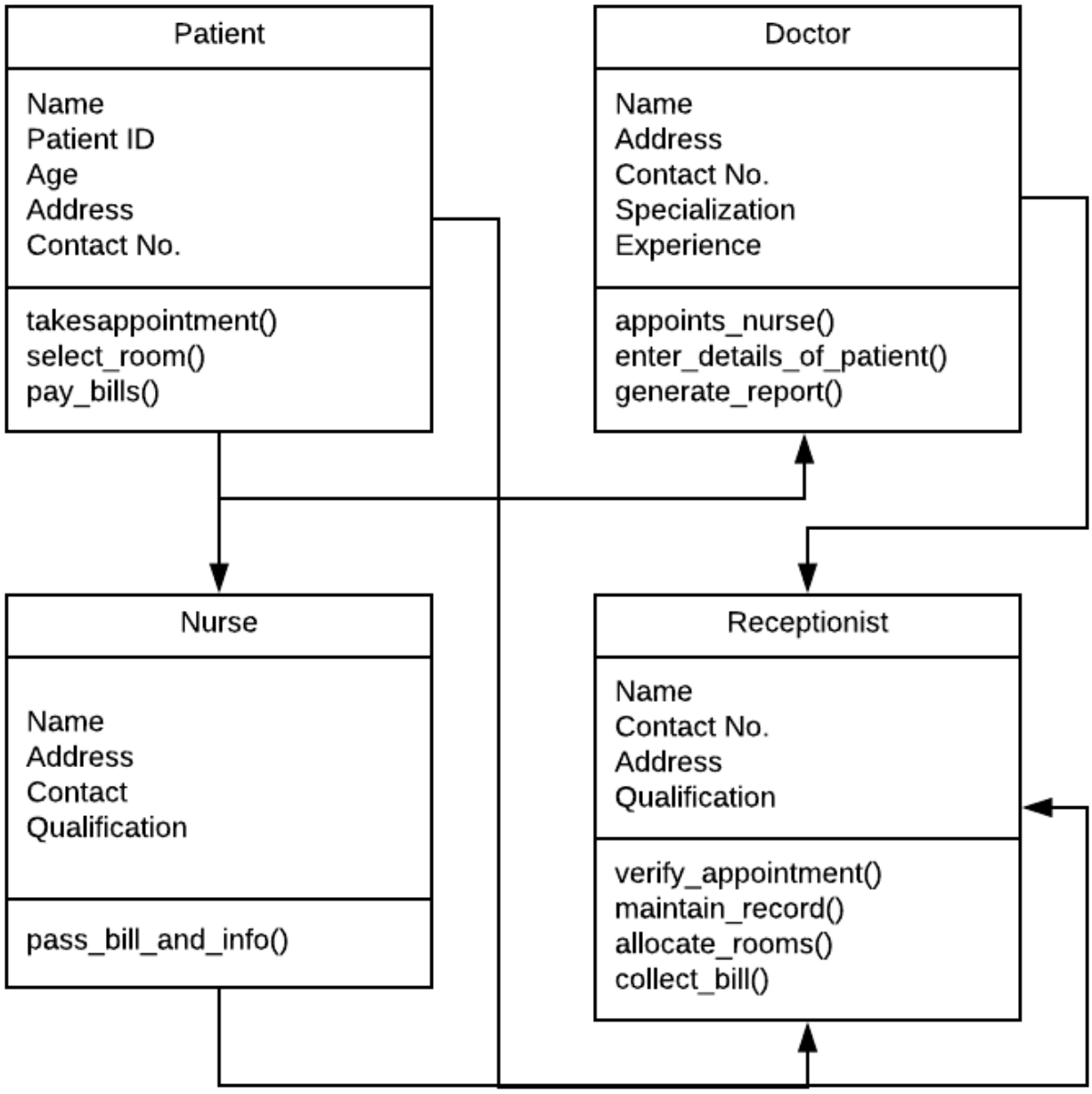
Telehealthcare

A Web based HMS can be used for providing online services to patients, appointments and obtaining opinions of consultants sitting away from the hospital set up.

One does worry about the security aspect of the data. Hence, a HMS has passwords, photo identifications etc. to prevent any leakage of important and A hospital management system acts like an interface between the patient and the hospital administration. With the help of this system one can access all the essential information anytime and anywhere. Another advantage is that it can be modified and customized to suit a small hospital or a big multi-speciality hospital[4]. As it provides multiple facilities, it helps in reducing hospital costs, which in turn reduces the expense of quality healthcare for the patient.

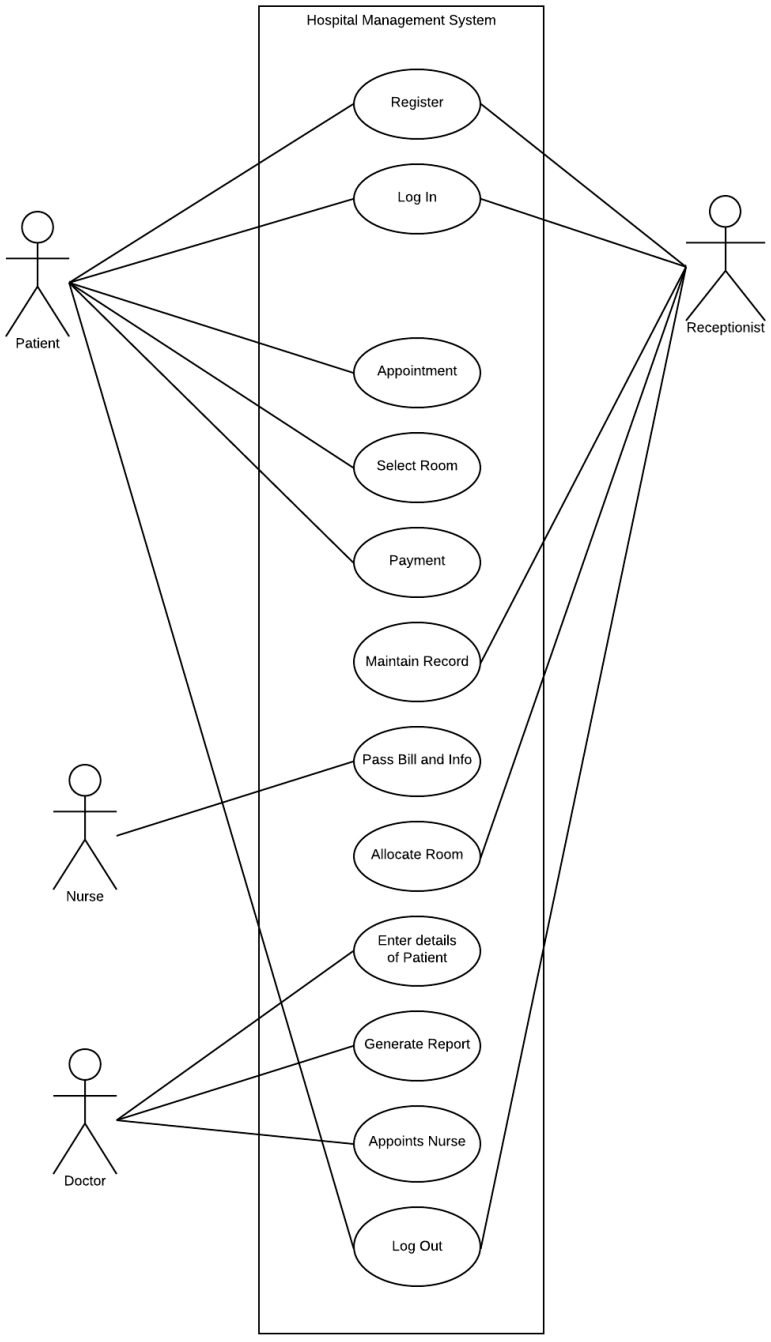
DATA STRUCTURES THAT CAN BE USED :

1. To fulfill the given task of the system the best suited data structure which can be used is array,binary search tree with the fusion of doubly linked list.
2. Bst is the most fundamental algorithm which stores key in the nodes in a way that searching, insertion and deletion can be done efficiently.BST has simple implementation as compared to other complex data structure.
3. In doubly linked list the traversal can be done in both the directions, making it easy and efficient dainamic structure.

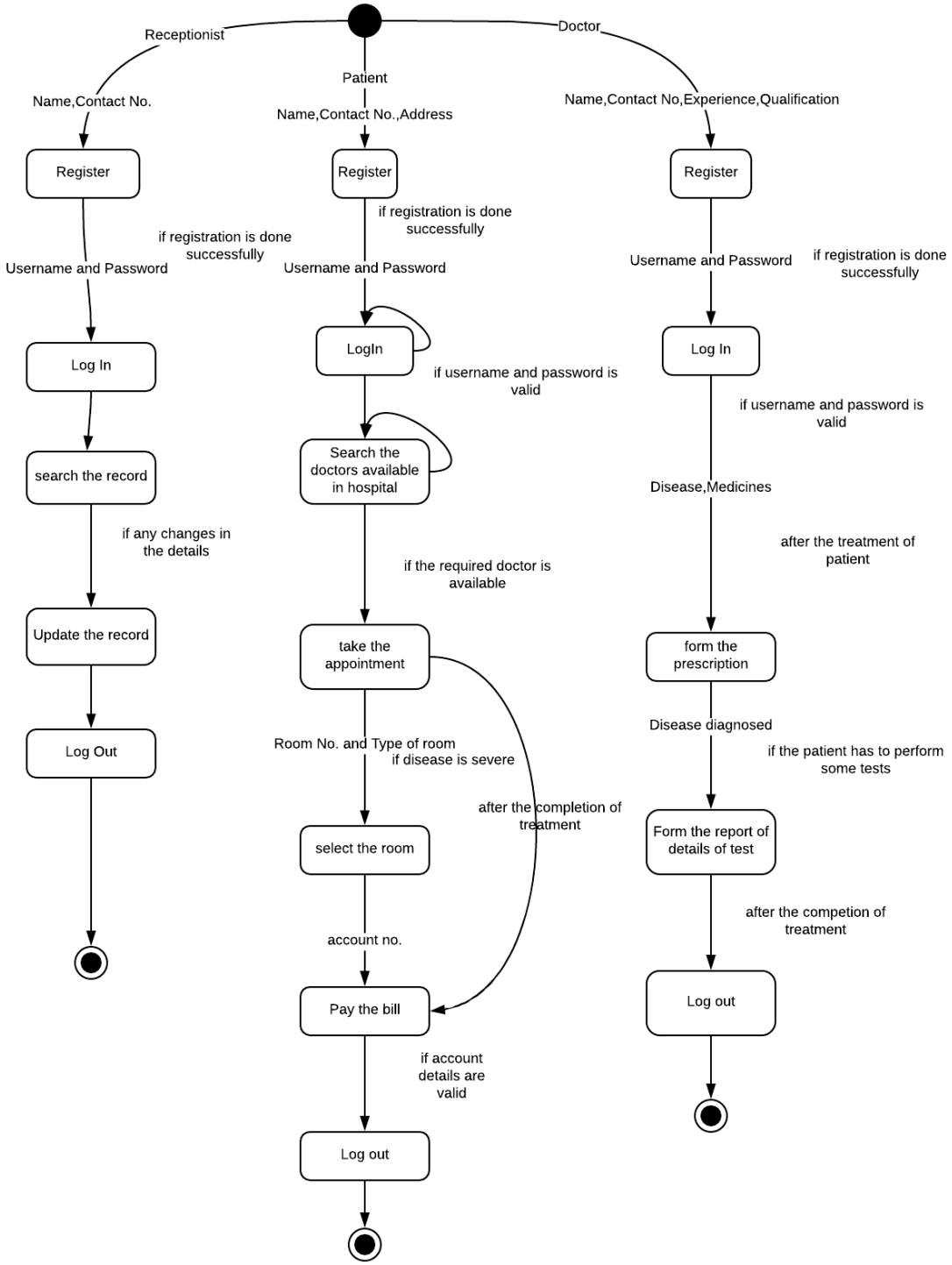


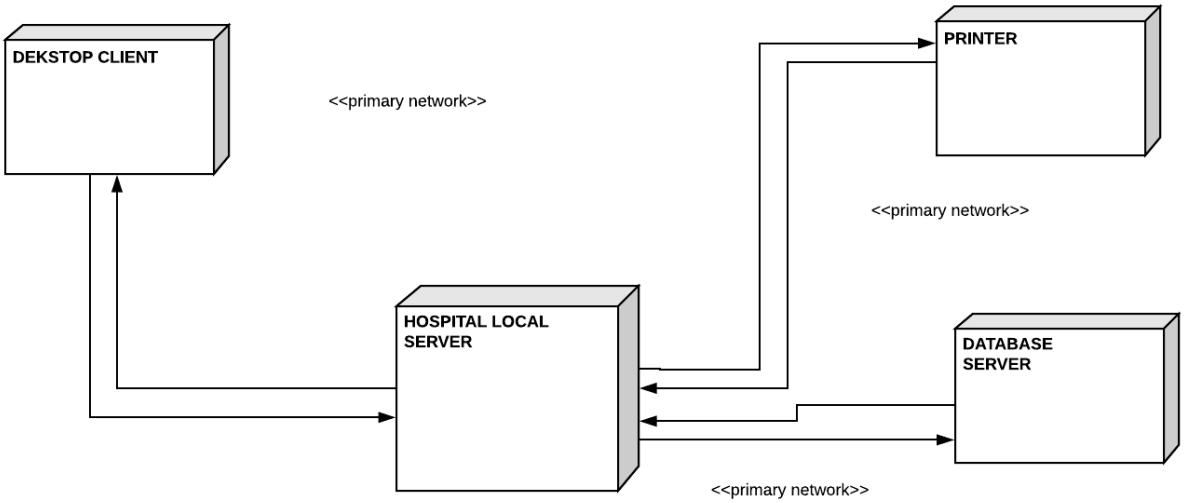
Class Diagram

ENTITY RELATIONSHIP DIAGRAM

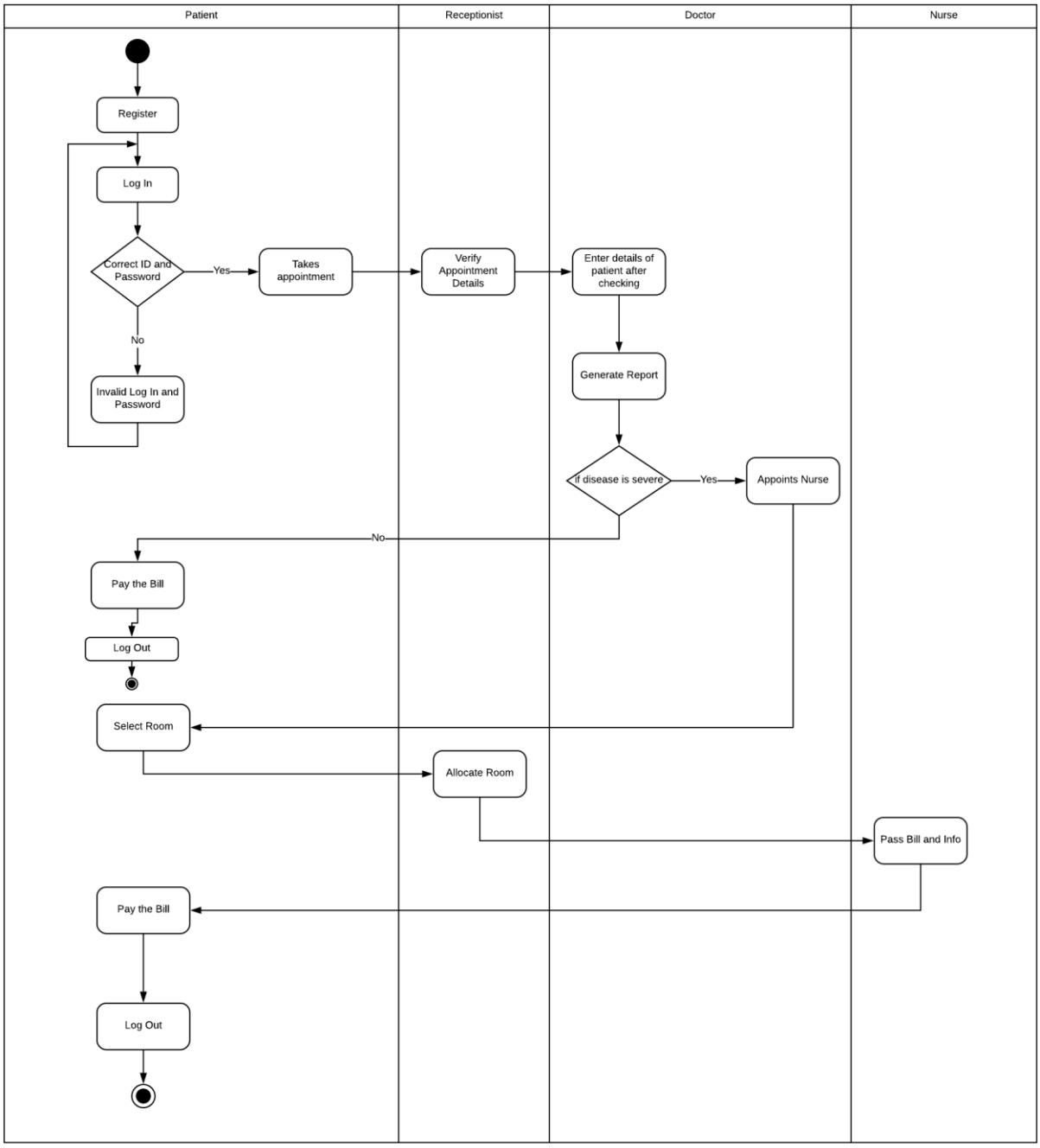


Use Case Diagram


Receptionist
Patient
Doctor
Name,Contact No.
Name,Contact No.,Address
Name,Contact No,Experience,Qualification
Register
Register
Register
if registration is done successfully
if registration is done successfully
if registration is done successfully
Username and Password
Username and Password
Username and Password
Log In
LogIn
Log In
if username and password is valid
if username and password is valid
search the record
Search the doctors available in hospital
Disease,Medicines
if any changes in the details
after the treatment of patient
if the required doctor is available
Update the record
take the appointment
form the prescription
Log Out
Room No. and Type of room
if disease is severe
Disease diagnosed
if the patient has to perform some tests
after the completion of treatment
select the room
Form the report of details of test
after the competion of treatment
account no.
Pay the bill
Log out
if account details are valid
Log out



DEPLOYMENT DIAGRAM



Activity Diagram

OUTCOME:

Design an hospital management system to provide various facilities to patients doctors and its employees. The main objective of system is to fulfill the basic needs of the patient . The main objective function of the system is taking the appointments from doctor if he is available. If disease is severe patient can select the room and he also pay the bill and various other physical hospital activities can be done efficiently.