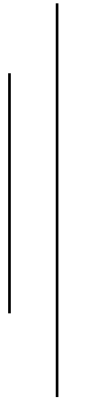




TRIBHUVAN UNIVERSITY

IOE Paschimanchal Campus

Lamachaur, Pokhara



PROJECT REPORT ON HOSPITAL MANAGEMENT SYSTEM WITH OPD

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1. INTRODUCTION:

Hospital Management System Project is a software developed for monitoring and maintaining various activities in the Hospital. We can improve the hospital's productivity by computerizing some of its functions overcoming the limitations of the current system. Hospital Management System Project will play a key role in minimizing human strain and errors. Moreover, it will be instrumental in data processing and improving security. Other advantages of Hospital management system project are as follows.

- ❖ Easy record-keeping
- ❖ Data consistency
- ❖ Easy information refreshing

Hospital Management System Project will work and update the patient's records, OPD records, doctor's records, appointments records, pharmacy record, pharmaceutical company records, contracts records. Hospital Management System Project is additionally used to add doctors, add patients, prescribe patients, and see available drugs. It monitors the number of patients, doctors and pharmacies. It helps the hospital from the manual work from which it is tough to find the patients' records, OPD records, doctor's records, appointments records. In short, it is a comprehensive tool that can efficiently record, maintain, and manage hospital affairs. It can be further customized to work for large or small hospitals.

1.1 ADVANTAGE OF HOSPITAL MANAGEMENT SYSTEM:

- ❖ Easy for doctors to prescribe their patients
- ❖ Easy to add doctors and patients
- ❖ Data security and correct data retrieval made possible
- ❖ Reduces scope for Error
- ❖ Improved Efficiency by avoiding human errors
- ❖ Time-saving Technology
- ❖ Easy monitoring of drugs in inventory
- ❖ Easy access to patient data with correct patient history
- ❖ Easy monitoring of drugs in inventory
- ❖ Easy to Manage commonly and recently used medicines.

2. PROBLEM STATEMENT:

1. Lack of immediate retrievals:

The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the patient's history and the doctor's and their related patient, the user has to go through various registers. This results in in convenience and wastage of time.

2. Lack of immediate information storage:

The information generated by various transactions takes time and efforts to be stored at right place.

3. Lack of prompt updating:

Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.

4. Error prone manual calculation:

Manual calculations are error prone and take a lot of time this may result in incorrect information.

5. Preparation of accurate and prompt reports:

This becomes a difficult task as information is difficult to collect from various register.

3. OBJECTIVE:

The aim of this project is to develop a software for the effective management of hospital management system with OPD that will be able to achieve the following objectives:

- ❖ To manage the details of Drugs, Pharmacy, Sells.
- ❖ To minimize human errors.

4. PROPOSED SYSTEM:

- ❖ The new proposed system stores and maintains all the doctors and patients details.
- ❖ Admin should be able to add, delete and update doctors, patients, pharmacies and provide unique primary key for each.
- ❖ System should be able to keep track of available drugs and their manufactures.
- ❖ Doctors should be able to manage/prescribe their respective patients and no other doctor can manage other doctor's patients.

5. METHODOLOGY:

5.1 FRONT END DEVELOPMENT:

Flutter has been used to develop frontend for this application. Flutter is an open source framework by Google for building beautiful, natively compiled, multi-platform applications from a single codebase based on dart language

5.2 BACK END DEVELOPMENT:

PHP has been used for backend. PHP is a server-side scripting language designed specifically for web development. It is open-source which means it is free to download and use. It is very simple to learn and use. The files have the extension “.php”.

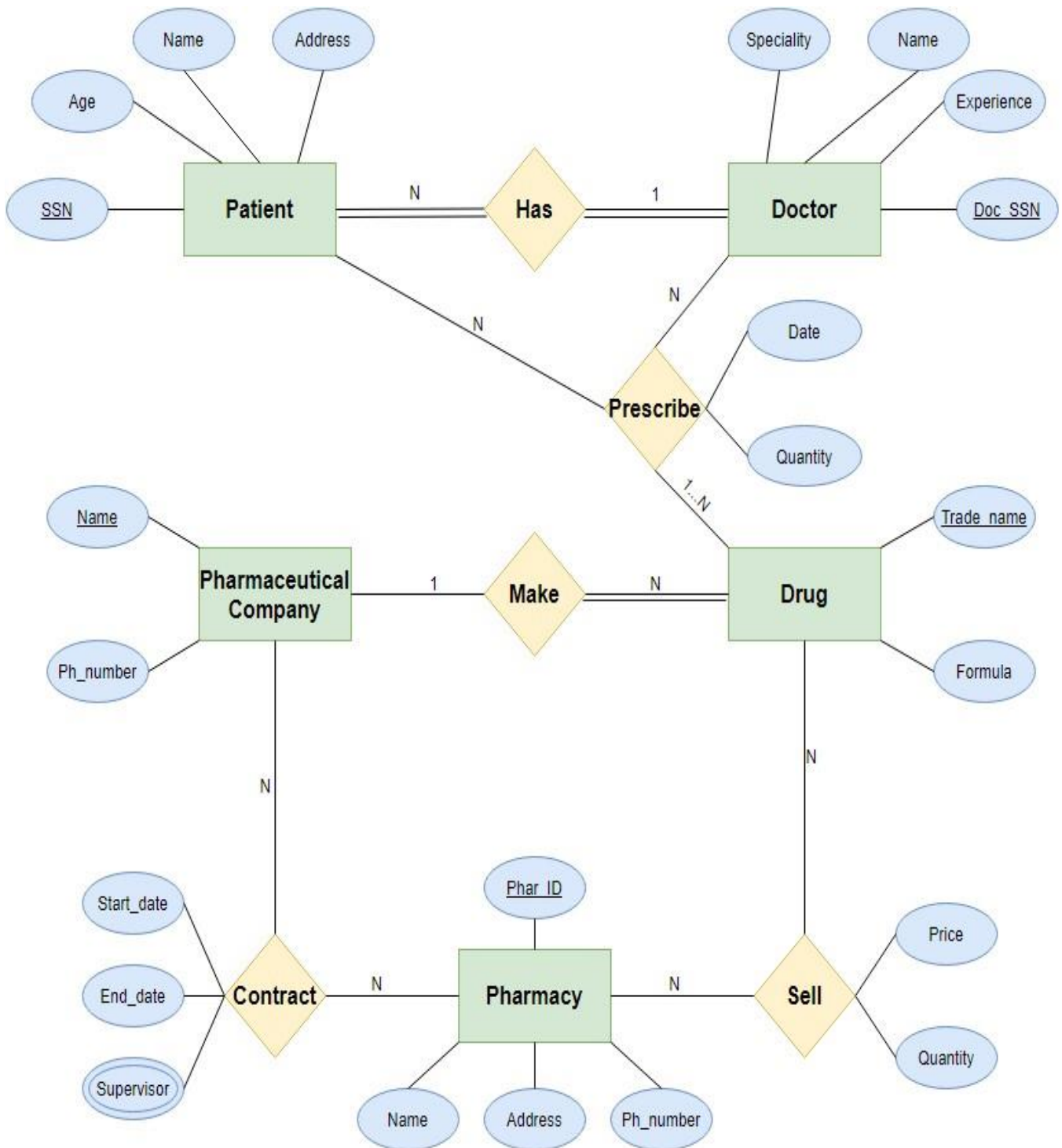
5.3 DATABASE:

MySQL has been used as a database. MySQL is developed, distributed, and supported by Oracle Corporation. MySQL is a Database system used on the web it runs on a server. MySQL is ideal for both small and large Applications. It is very fast, reliable, and easy to use. It supports standard SQL. MySQL can be compiled on number of platforms.

5.4 XAMPP:

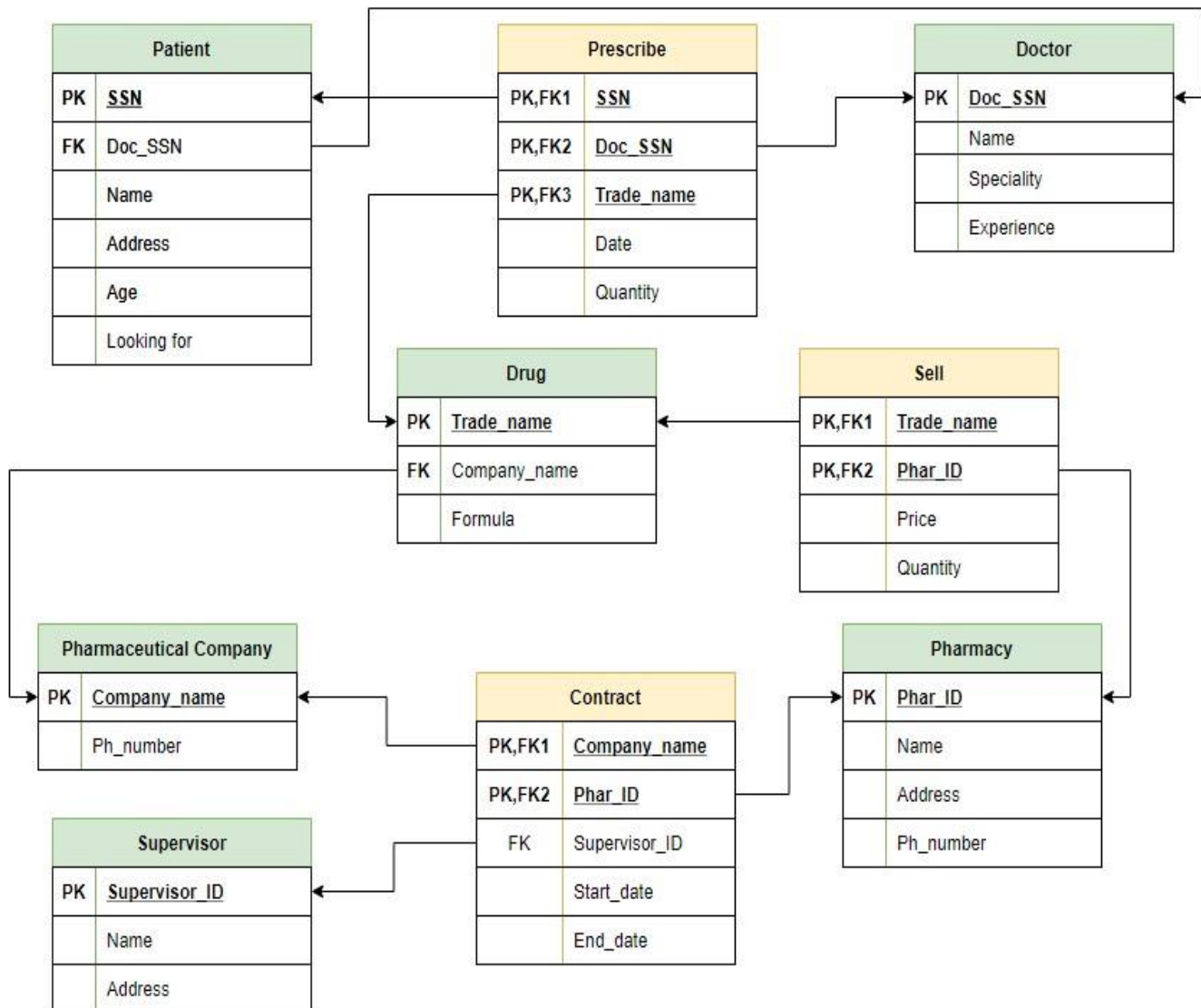
We use XAMPP for server hosting and managing ports of the system.

ERD OF PHARMACY MANAGEMENT SYSTEM:



RELATIONAL SCHEMA OF PHARMACY MANAGEMENT

SYSTEM:



6. ENTITIES:

6.1 Doctor:

Doctors are identified by an SSN. For each doctor, the name, specialty, and years of experience are recorded. Every doctor has at least one patient and can prescribe one or more drugs to his/her patient.

6.2 Patient:

Patients are identified by an SSN, and their names, addresses, and ages must be recorded.

6.3 Drug:

Drug has the trade name and formula. Each drug is sold by a given pharmaceutical company, and the trade name identifies a drug uniquely from among the products of that company.

6.4 Pharmacy:

Pharmacy has a name, address, and phone number. A pharmacy can contract with several pharmaceutical companies.

6.5 Pharmaceutical Companies:

Each pharmaceutical company is identified by name and has a phone number. A pharmaceutical company can contract with several pharmacies. and

6.6 Supervisor:

Supervisor has a Supervisor ID, name and address. Pharmacies appoint a supervisor for each contract. There is supervisor for each contract, but the contract supervisor can change over the lifetime of the contract.

QUERIES USED IN THIS PROJECT.

1. \$query="SELECT COUNT(*) FROM `doctor`";

2. \$query="SELECT company_name FROM pharmaceutical_company

WHERE company_name not in (SELECT company_name FROM contract WHERE phar_id='".\$phar_id.'");";

3. \$query="SELECT COUNT(*) FROM `patient`";

4. \$query="SELECT COUNT(*) FROM `pharmacy`";

5. \$query="DELETE FROM `pharmaceutical_company` WHERE Company_name = '\$id'";

6. \$query="DELETE FROM `doctor` WHERE Doc_SSN = '\$id'";

7. \$query="DELETE FROM `drug` WHERE Trade_name = '\$id'";
8. \$query="DELETE FROM `patient` WHERE SSN = '\$id'";
9. \$query="DELETE FROM `pharmacy` WHERE Phar_ID = '\$id'";
10. \$query="DELETE FROM `supervisor` WHERE supervisor_ID = '\$id'";
11. \$query="SELECT `Doc_SSN` , `Name` FROM `doctor`";
12. \$query="SELECT `Trade_name` FROM `drug`";
13. \$query="INSERT INTO `pharmaceutical_company` (`Company_name`, `Ph_number`)

VALUES ('\$name', '\$Ph_number')";
14. \$query="INSERT INTO `contract` (`Phar_ID`, `Company_name`, `supervisor_ID`, `start_date`,
`end_date`)

VALUES ('\$Phar_ID', '\$Company_name', '\$supervisor_ID', '\$start_date', '\$end_date')";
15. \$query="INSERT INTO `doctor` (`Doc_SSN`, `Name`, `Speciality`, `Experience`)

VALUES ('\$Doc_SSN', '\$name', '\$speciality', '\$experience')";
16. \$query="INSERT INTO `drug` (`Trade_name`, `Formula`)

VALUES ('\$Trade_name', '\$Formula')";
17. \$query="INSERT INTO `patient` (`SSN`, `Name`, `Address`, `Age`, `Doc_SSN`)

VALUES ('\$SSN', '\$name', '\$address', '\$age', '\$Doc_SSN')";
18. \$query="INSERT INTO `pharmacy` (`Phar_ID`, `Name`, `address`, `ph_number`)

VALUES ('\$Phar_ID', '\$name', '\$address', '\$phnumber');" ;

19. \$query="INSERT INTO `prescribe`(`SSN`,`Doc_SSN`,`Quantity`) VALUES
('\$SSN','\$Doc_SSN',0)";

20. \$query="INSERT INTO `sell`(`Trade_name`,`Phar_ID`,`Price`,`Quantity`)
VALUES ('\$Trade_name','\$Phar_ID','\$Price','\$Quantity')";

21. \$query="INSERT INTO `supervisor`(`supervisor_ID`,`Name`,`Address`)
VALUES ('\$supervisor_ID','\$name','\$Address')";

22. \$query="SELECT * FROM `doctor` WHERE Doc_SSN = '\$doc_ssn.'" AND Name
=" '\$name.'";

23. \$query="SELECT * FROM `pharmacy` WHERE Phar_ID = '\$Phar_ID.'" AND Name =
" '\$name.'";

24. \$query="SELECT * FROM `prescribe` WHERE Doc_SSN = '\$doc_ssn.'";

25. \$query="SELECT Trade_name, SUM(Quantity) FROM `sell` GROUP BY Trade_name";

26. \$query="SELECT supervisor_id, name FROM supervisor ";

27. \$query="SELECT `Trade_name` FROM `drug`";

28. \$query="UPDATE `pharmaceutical_company` SET
`Company_name`='\$name',`Ph_number`='\$Ph_number' WHERE `Company_name`='\$oldName';

29. \$query="UPDATE `doctor` SET
`Name`='\$name',`Speciality`='\$speciality',`Experience`='\$experience' WHERE
`Doc_SSN`='\$Doc_SSN';

30. \$query ="UPDATE `drug` SET `Trade_name`='\$Trade_name',`Formula`='\$Formula' WHERE
`Trade_name`='\$oldName';

31. \$query ="UPDATE `patient` SET `Name`='\$name',`address`='\$address',`age`='\$age' WHERE
`SSN`='\$SSN';

32. \$query ="UPDATE `pharmacy` SET
`Name`='\$name',`address`='\$address',`Ph_number`='\$Ph_number' WHERE `Phar_ID`='\$Phar_ID';

33. \$query ="UPDATE `prescribe` SET
`Trade_name`='\$Trade_name',`Prescribe_date`='\$Prescribe_date',`Quantity`='\$Quantity'

34. \$query =" UPDATE `supervisor` SET `Name`='\$name',`Address`='\$address' WHERE
`supervisor_ID`='\$Supervisor_ID';

35. \$query ="SELECT * FROM `pharmaceutical_company`";

36. \$query ="SELECT * FROM `contract` WHERE `Phar_ID`='".\$Phar_ID."'";

37. \$query ="SELECT * FROM `doctor`";

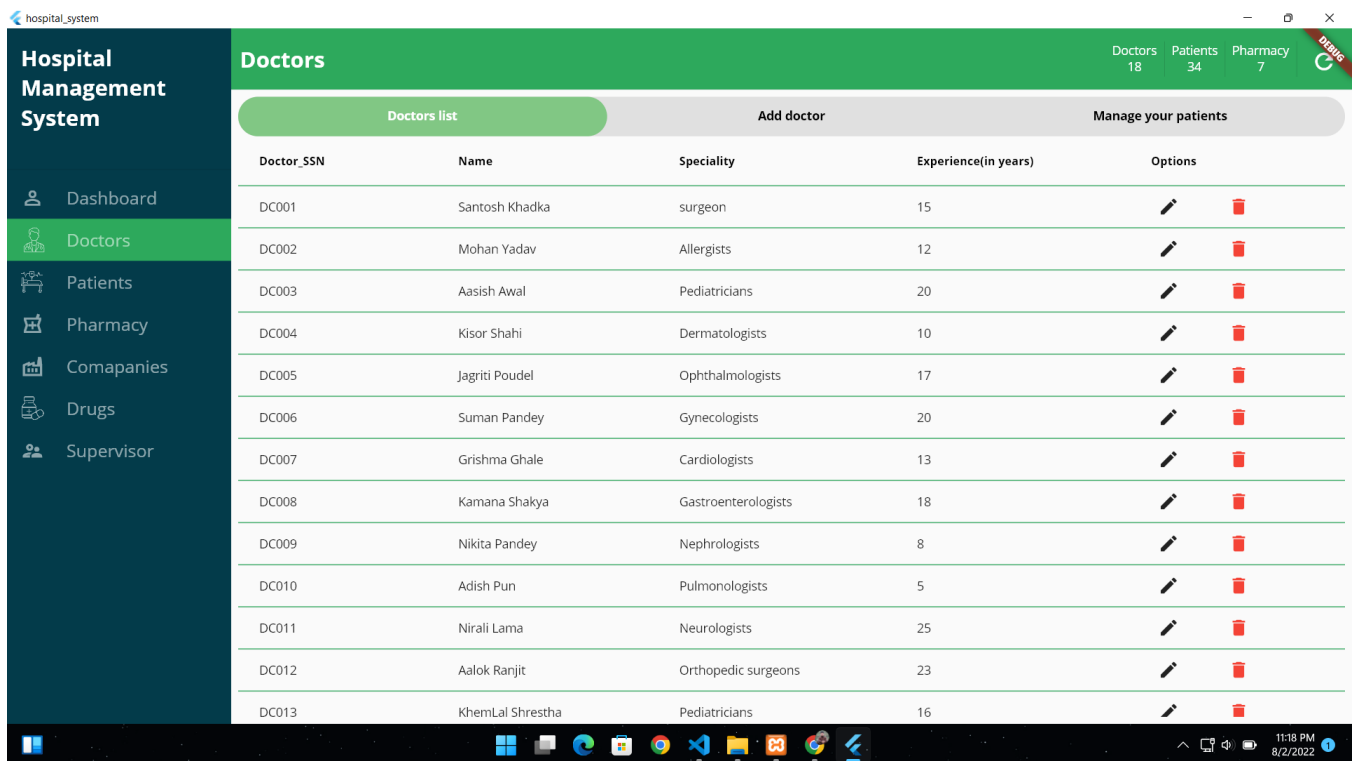
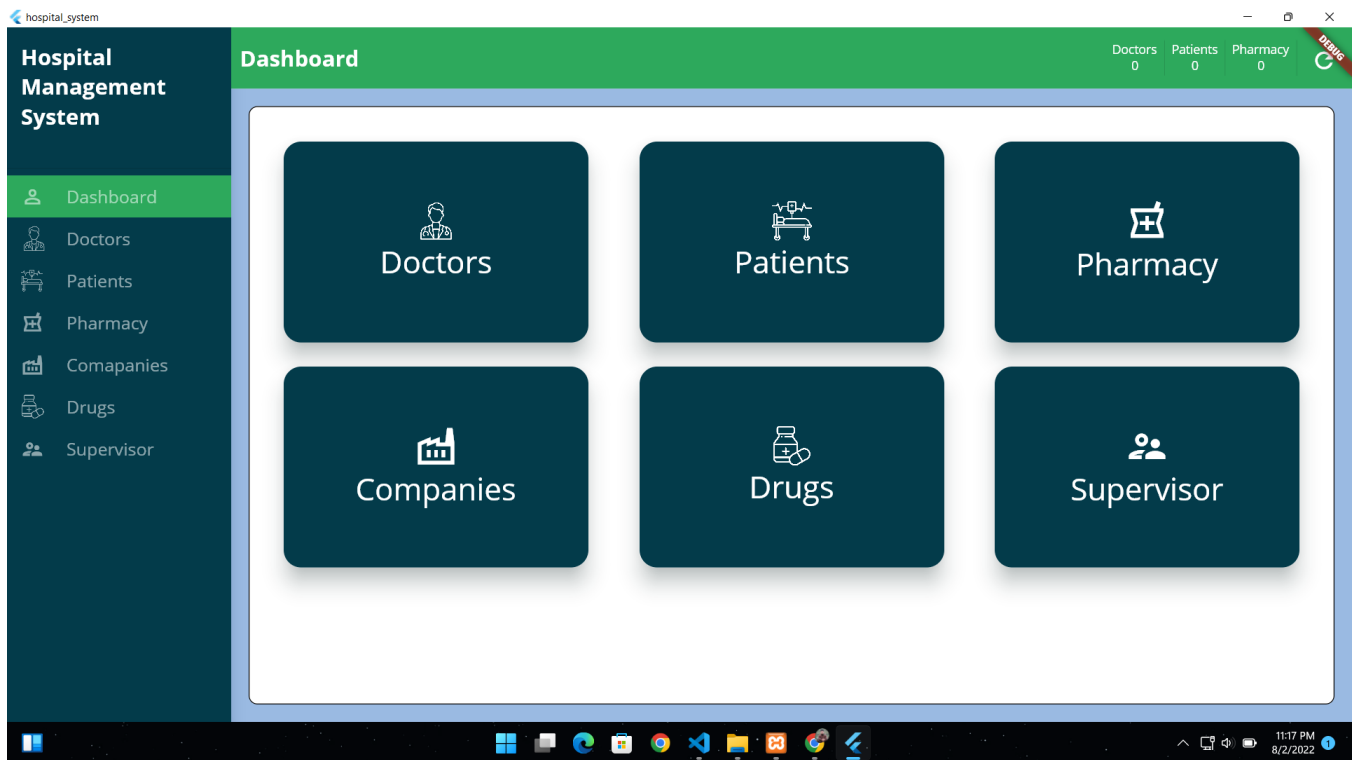
38. \$query ="SELECT * FROM `drug`";

39. \$query ="SELECT * FROM `patient`";

40. \$query ="SELECT * FROM `pharmacy`";

41. \$query ="SELECT * FROM `supervisor`";

7. SCREENSHOTS OF THE PROJECT:



hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Doctors

Doctors list

Add doctor

Manage your patients

Doctor SSN :

DC019

Name :

Speciality :

Experience :

Insert

Cancel

Windows taskbar

11:20 PM

8/2/2022

hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Manage your patients

Doctors 18

Patients 34

Pharmacy 7

Save

Your Patients

Patient SSN	Select Drug	Quantity	Prescribed Date	Options
PT003	Atorvastatin	10	2022-08-02	Prescribe
PT004	Decold	25	2022-08-02	Prescribe
PT020	Neems	14	2022-08-02	Prescribe
PT021	Sinex	3	2022-08-02	Prescribe
PT023	Insulin Lispro	4	2022-08-02	Prescribe
PT024	Ketamine	10	2022-08-02	Prescribe

➡

Windows taskbar

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hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Doctors

Doctors 18

Patients 34

Pharmacy 7

save

Doctors list

Add doctor

Manage your patients

Doctor SSN

Name

Log In

24°C Cloudy

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hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Patients

Doctors 19



























Patients 34

Pharmacy 7

save

Patients list

Add Patient

Patient_SSN	Name	Address	Age	Appointed to	Options
PT002	Ram gurun	Iamachaur	12	DC002	 
PT003	hari kumar sharma	bagar	65	DC001	 
PT004	Ayush Neupane	Mangalpur	17	DC001	 
PT005	Kripa Paudel	Rampur	18	DC007	 
PT006	Balaram Khagi	Ghorahi	25	DC003	 
PT007	Sundar Goswami	Itahari	51	DC002	 
PT008	Nirupama Thapa	Kalaiya	12	DC003	 
PT009	Anul Shahi	Butwal	45	DC004	 
PT010	Megha Bista	Tulsipur	23	DC006	 
PT011	Nikhil Ranjit	Dharan	15	DC011	 
PT012	Bibek Rana	Nepalgunj	26	DC008	 
PT013	Dhrishti Giri	Thumshe	19	DC010	 
PT014	Bibek Rana	Biratnazar	45	DC011	 

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hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Patients

Doctors19

Patients34

Pharmacy7

Patients list

Add Patient

Patient SSN :

PT036

Name :

Address :

Age :

Doctor_SSN :

Insert

Cancel

24°C Cloudy

11:22 PM

8/2/2022

hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Pharmacy

Doctors19

Patients34

Pharmacy7

Pharmacies list

Add Pharmacy

Manage your contract

Pharmacy ID :

PH008

Name :

Address :

Phone number :

Insert

Cancel

24°C Cloudy

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hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Pharmacy

Doctors19

Patients34






















Pharmacy7

save


Pharmacies list

Add Pharmacy

Manage your contract

Pharmacy ID	Name	Address	Phone number	Options
PH001	Delight Pharmacy	Bagar	9845145445	  
PH002	Live Pharmacy	Lamachaur	9801245457	  
PH003	Bit Pharmacy	Bharatput	9845744512	  
PH004	Union Pharmacy	Parsa	9822314784	  
PH005	Stream Pharmacy	Humla	9810045745	  
PH006	Infinity Pharmacy	Mahendrapool	9862345989	  
PH007	HighTech Pharmacy	Lalitpur	9844178558	  

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hospital_system

Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Pharmacy

Doctors19

Patients34

Pharmacy7

save

Pharmacies list

Add Pharmacy

Manage your contract

Pharmacy ID


ph001

Name

delight pharmacy

Log In

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hospital_system

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Windows Taskbar

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Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Manage your Contracts

Doctors 19

Patients 34

Pharmacy 7

Logout

Your Contracts

Sign Contract

Company Name	Supervisor ID	Start Date	End Date
Choice Medicines	SP002	2022-08-02	2024-07-31
Retina Medicines	SP004	2022-08-02	2026-07-31
Saint Medicines	SP005	2020-08-02	2024-07-31

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Windows Taskbar

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hospital_system

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Windows Taskbar

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Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Manage your Contracts

Doctors 19

Patients 34

Pharmacy 7

Logout

Your Contracts

Sign Contract

Pharmacy ID :

ph001

Company Name :

Supervisor :

Duration(in years) :

Start Date :

2022-08-02

Sign

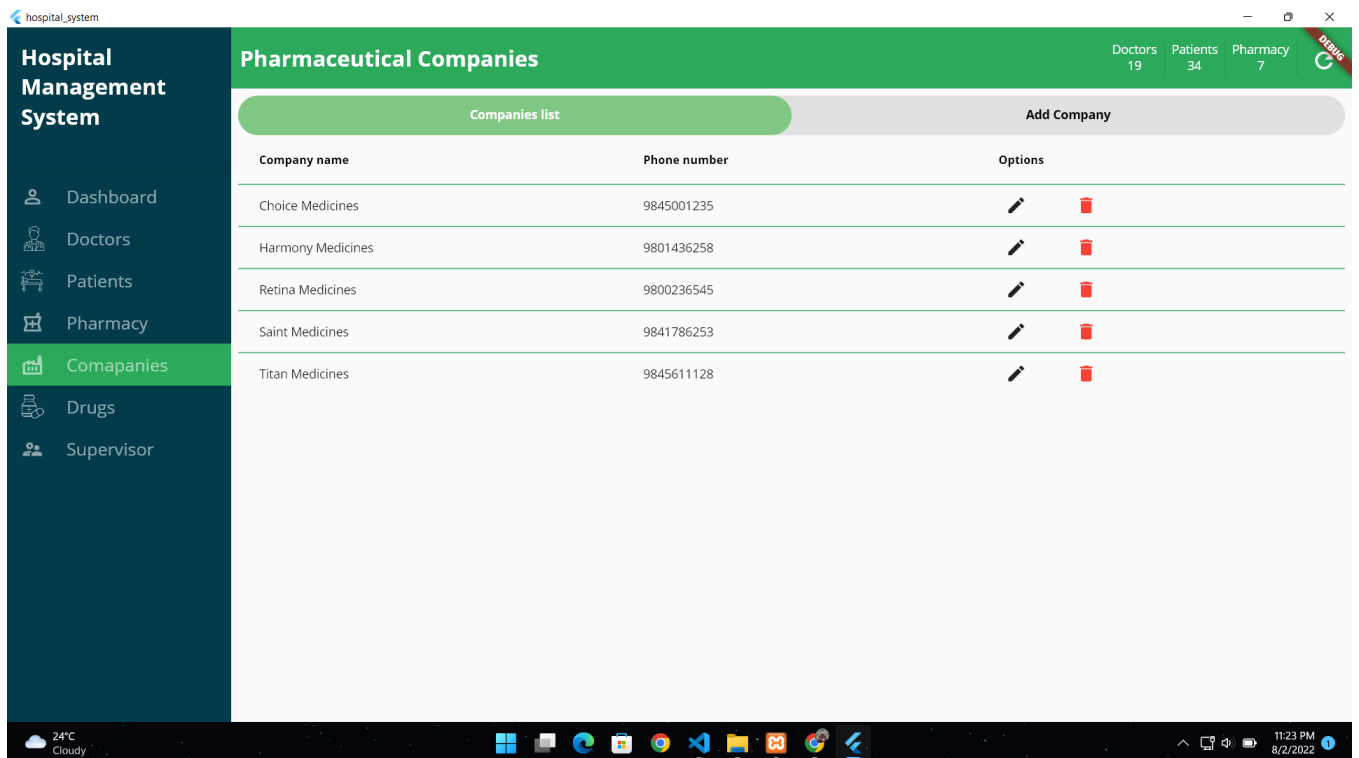
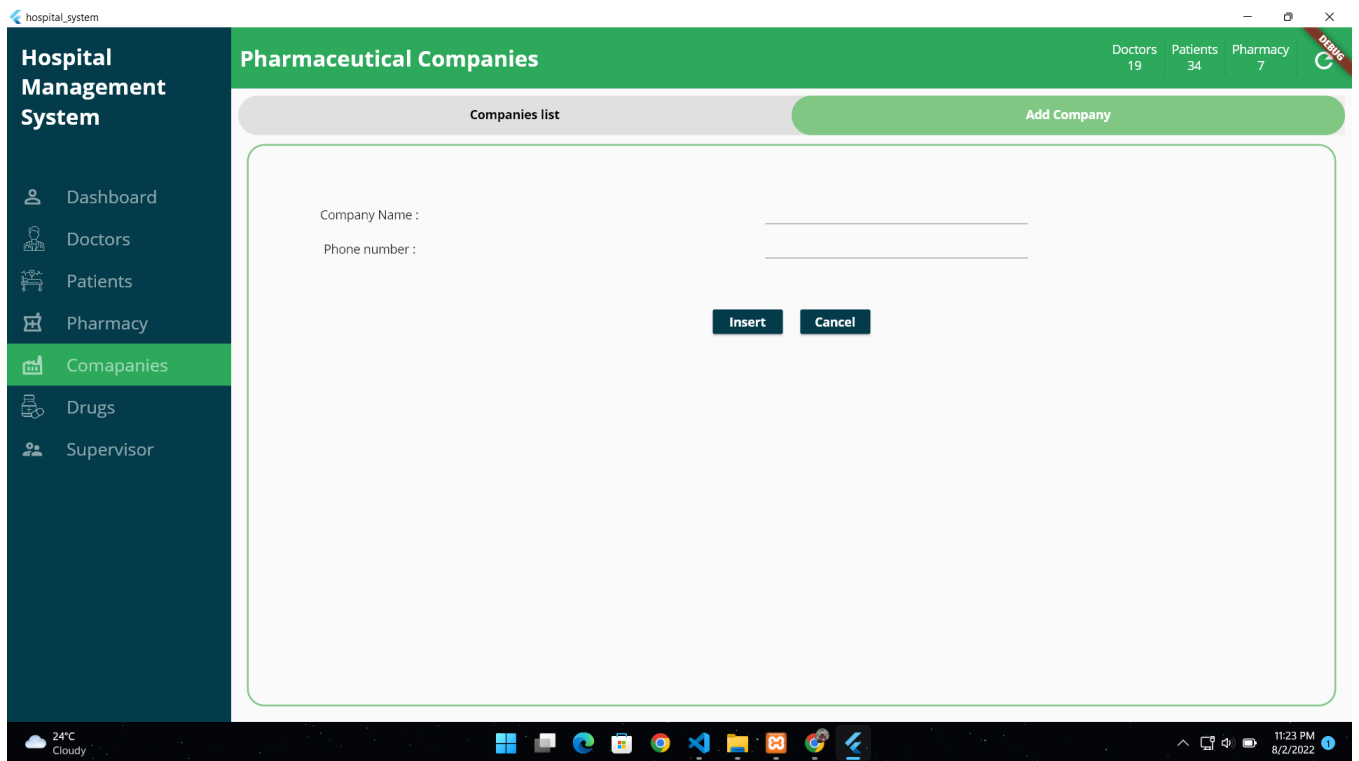
Cancel

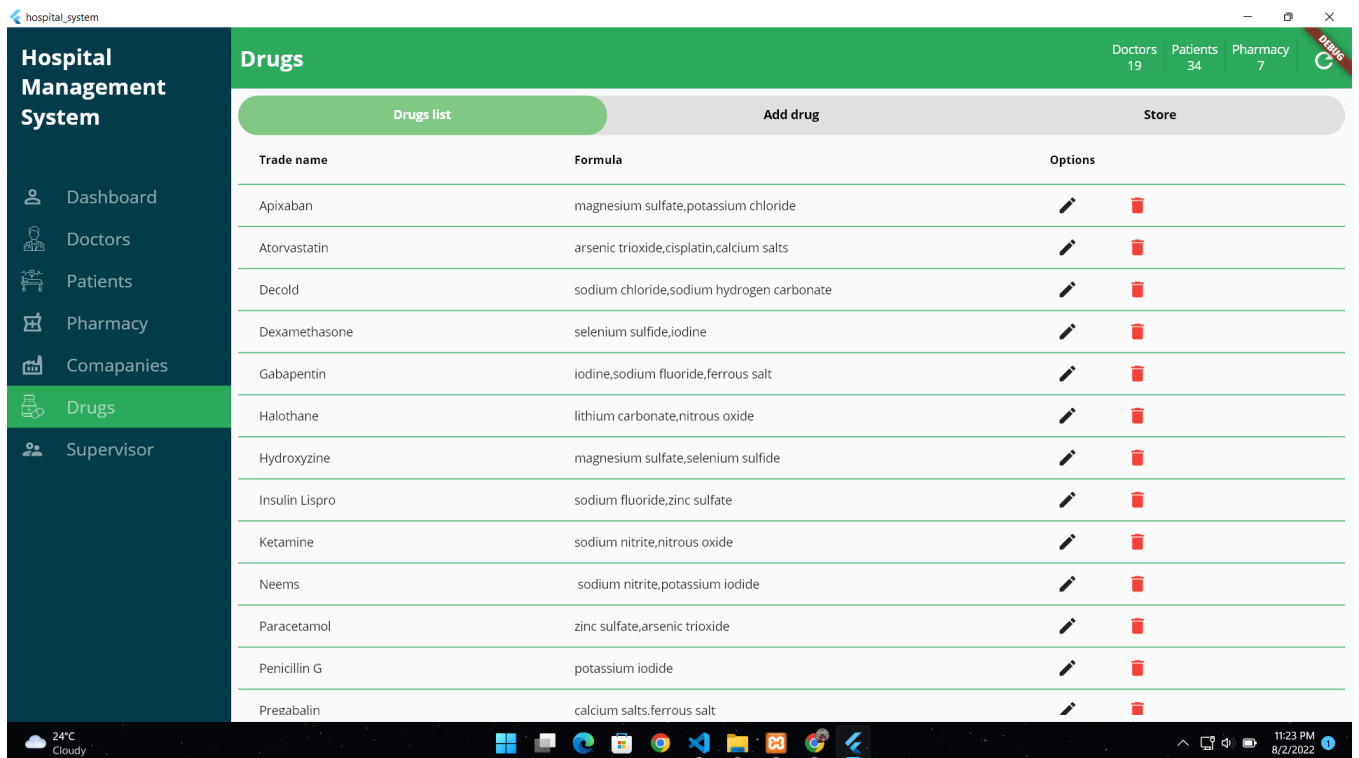
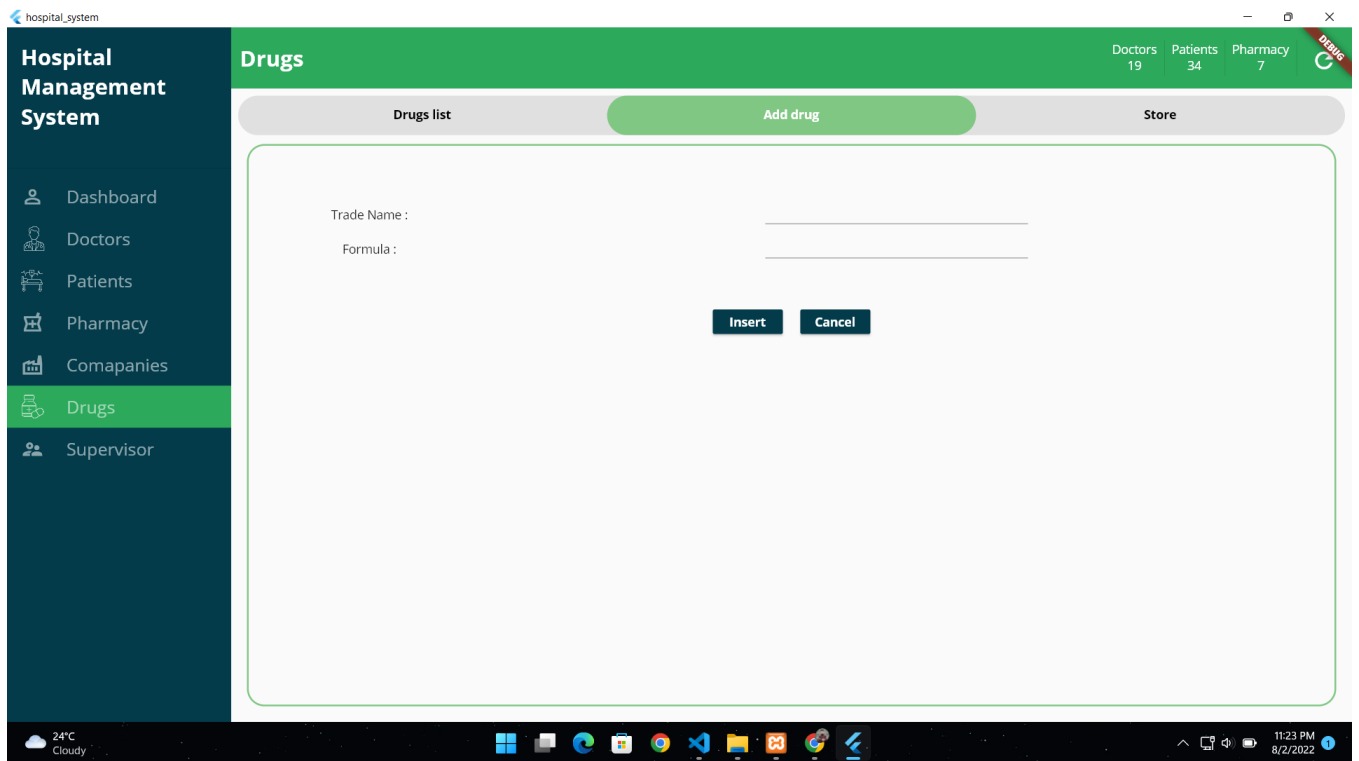
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hospital_system

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Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Supervisors

Doctors 19

Patients 34

Pharmacy 7

Save

Supervisors list

Add supervisor

Supervisor ID	Name	Address	Options
SP001	Kuldeep Pokharel	Namchebazar	
SP002	Nikita Shah	Surkhet	
SP003	Rakshya Neupane	Kathmandu	
SP004	Sunil Shrestha	Parsa	
SP005	Roshan Sharma	Sindhuli	
SP006	Dinesh Khadka	Sunsari	

hospital_system

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Windows Taskbar

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Hospital Management System

Dashboard

Doctors

Patients

Pharmacy

Comapanies

Drugs

Supervisor

Supervisors

Doctors 19

Patients 34

Pharmacy 7

Save

Supervisors list

Add supervisor

Supervisor ID :

SP007

Name :

Address :

Insert

Cancel

18

8. CONCLUSION:

Since we are entering details of the patients electronically in the "Hospital Management System", data will be secured. Using this application we can retrieve patient's history with a single click. Thus processing information will be faster. It guarantees accurate maintenance of Patient details. It easily reduces the book keeping task and thus reduces the human effort and increases accuracy speed