

CLINIC DATABASE MANAGEMENT SYSTEM

Project report submitted

As the requirement for the course of

'Database Management and Information System'

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CERTIFICATE

It is certified that the work contained in the project report titled “Clinic Database Management System” by “Vinayak Mohite (170004040)” and “Ankit Yadav (170001007)” has been carried out under my/our supervision.

Signature of Supervisor(s)

Computer Science and Engineering

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Semester III Academic Year (2018-19)

DECLARATION

We declare that this written submission represent our ideas in our own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Our heartfelt gratitude goes to google.com which gave answers to every possible question.

INTRODUCTION

PROBLEM STATEMENT

The medical record system is a database management system that uses database technology to construct, maintain and manipulate various kinds of data about a person's medical history and care across time. The DBMS can track and update all the information of registered patients in the medical Centre during a particular time span.

Medical records are created when a patient receive treatment from a health professional. Records may include the patients:

- ✓ personal information
- ✓ medical history
- ✓ details about lifestyle and family medical history
- ✓ laboratory test results
- ✓ medications prescribed
- ✓ reports that indicate the results of operations and other medical procedures and;
- ✓ disabilities, allergies

The medical record serves a variety of purposes and is essential to the proper functioning of the medical practice—especially in today's complicated health care environment. The medical record is a key instrument used in planning, evaluating, and coordinating patient care in both the inpatient and the outpatient settings. The content of the medical record is essential for patient care, accreditation (if applicable to the practitioner), and reimbursement purposes.

The medical record administrator may be a clinician, billing manager, coder, or anyone assigned the responsibility in the medical office. The medical record administrator is responsible for filing patient information in the medical record. He or she is also responsible for knowing medical insurance contract requirements, legal requirements pertaining to privacy and confidentiality of the patient.

First, patient visits the OPD (outpatient department) where his/her data is recorded and OPD card is issued to him/her for specific consultant.

Then, prescribed tests are to be taken. (X-ray, CT scan, USG scan)

1. Medication suggested (minor health problem)
2. Referred to Doctor (major health problem)

Specify OPD time.

Patients are to be seen on first come first serve basis. However, out of turn consultation may be provided in case of emergency or to senior citizens.

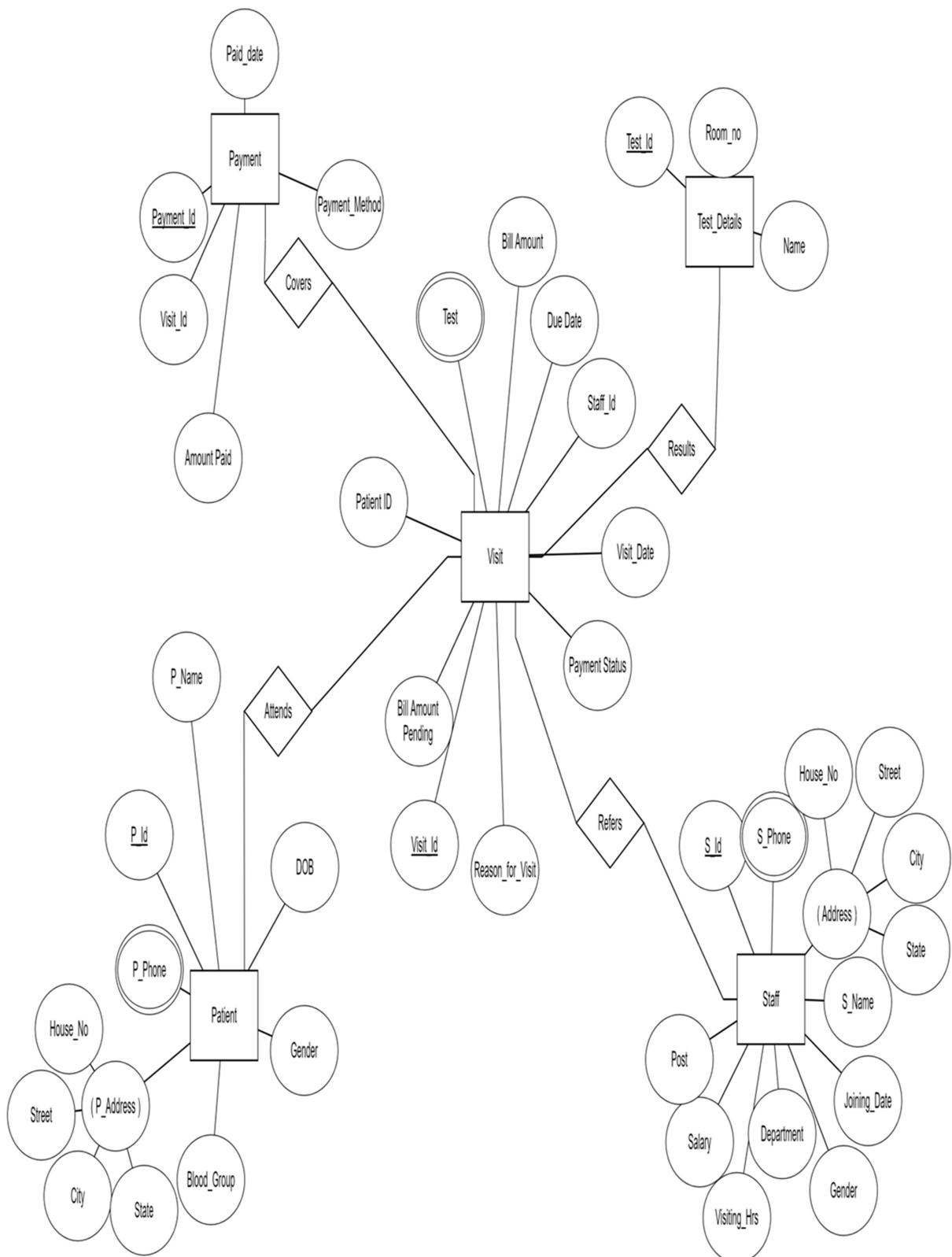
BUSINESS RULE

The business rule for a medical record database:

- ✓ A patient medical record is registered on the first visit to the doctor.
- ✓ A patient can make many appointments with one or more doctors.
- ✓ A doctor can accept appointments with many patients.
- ✓ However, each appointment is made with only one doctor, and each appointment references a single patient
- ✓ If an appointment yields a visit with a doctor, the visit yields a diagnosis and, when appropriate treatment.
- ✓ Each visit creates a bill. Each patient visit is billed by one doctor, and each doctor can bill many patients.
- ✓ Each bill must be paid. However, a bill may be paid in many installments.

CONCEPTUAL SCHEMA

ER DIAGRAM



Entity	Attributes
Patient	<u>P_Id</u> , P_Name, DOB, Gender, Blood_Group, P_Phone, P_Address (House_No, Street, City, State)
Staff	<u>S_Id</u> , S_Name, S_Phone, Joining_date, Gender, Department, Visiting_Hrs, Salary, Post, Address (House_No, Street, City, State)
Visit	<u>Visit_Id</u> , Staff_Id, Visit_Date, Reason_For_Visit, Bill_amount_pending, Payment_status, Bill_amount, Due_date, Test_id_1, Test_id_2, Test_id_3, Test_Id_4, Patient_Id
Test_Details	<u>Test_Id</u> , Room_No, Name, Test_cost
Payment	<u>Payment_Id</u> , Visit_Id, Paid_Date, Payment_Method, Amount Paid

RELATIONAL MODEL

FUNCTIONAL DEPENDENCIES

Relation	Function Dependencies
Patient	$P_Id \rightarrow P_Name, DOB, Gender, Blood_Group, P_Phone, P_Address (House_No, Street, City, State)$
Staff	$S_Id \rightarrow S_Name, S_Phone, Joining_date, Gender, Department, Visiting_Hrs, Salary, Post, Address (House_No, Street, City, State)$
Visit	$Visit_Id \rightarrow Staff_Id, Visit_Date, Reason_For_Visit, Bill_amount_pending, Payment_status, Bill_amount, Due_date, Test_id_1, Test_id_2, Test_id_3, Test_Id_4, Patient_Id$
Test_Details	$Test_Id \rightarrow Room_No, Name$
Payment	$Payment_Id \rightarrow Visit_Id, Paid_Date, Payment_Method, Amount_Paid$

RELATIONS

Based on the functional dependencies above, we normalized all relations and converted the ER model into a relational model:

- ✓ **Patient** (P_Id, P_Name, DOB, Gender, Blood_Group, P_Phone, P_Address (House_No, Street, City, State))
- ✓ **Staff** (S_Id, S_Name, S_Phone, Joining_date, Gender, Department, Visiting_Hrs, Salary, Post, Address (House_No, Street, City, State))
- ✓ **Visit** (Visit_Id, Staff_Id, Visit_Date, Reason_For_Visit, Bill_amount_pending, Payment_status, Bill_amount, Due_date, Test_id_1, Test_id_2, Test_id_3, Test_Id_4, Patient_Id)
- ✓ **Test_Details** (Test_Id, Room_No, Name)
- ✓ **Payment** (Payment_Id, Visit_Id, Paid_Date, Payment_Method, Amount_Paid)

KEYS DEFINITION

CANDIDATE KEYS DEFINITION

Relations	Candidate Keys (Primary Keys)
Patient	P_Id
Staff	S_Id
Visit	Visit_Id
Test_details	Test_Id
Payment	Payment_Id

DOMAIN KEY NORMAL FROM DEFINITION

Relations	Constraints
Patient	<p>Key: (primary) P_Id</p> <p>Domain:</p> <p>P_id: int(5) primary key auto_increment, P_name: varchar(25) not null, DOB: date, Gender: enum('M','F'), P_phone_1: int check(P_phone_1 % 10000000 <> 0), P_phone_2: int check(P_phone_2 % 10000000 <> 0), Blood_group: enum('B+', 'B-', 'O+', 'O-', 'A+', 'A-', 'AB+', 'AB-'), Add_house_no: varchar(5), Add_street varchar(25), Add_city varchar(25), Add_state varchar(25)</p>
Staff	<p>Key: (primary) S_Id</p> <p>Domain:</p> <p>S_id: int(5) primary key auto_increment, S_name: varchar(25) not null, Joining_date: date, Gender: enum('M', 'F'), S_phone_1: int check(P_phone_1 % 10000000 <> 0), S_phone_2: int check(P_phone_2 % 10000000 <> 0), Department: varchar(25), Salary: int, Post: varchar(25), Visiting_hrs: varchar(15), Add_house_no: varchar(5), Add_street: varchar(25), Add_city: varchar(25), Add_state: varchar(25)</p>

Visit	<p>Key: (primary) Visit_Id</p> <p>Domain:</p> <pre>Visit_id: int(5) primary key auto_increment, S_id: int(5), Visit_date: date, Reason_for_visit: varchar(50), P_id: int(5), test_1: int(5), test_2: int(5), test_3: int(5), test_4: int(5), bill_amount: int, Due_date: date, Payment_status: enum('completed', 'pending') default 'pending', Amount_pending: int</pre>
Test_details	<p>Key: (primary) Test_Id</p> <p>Domain:</p> <pre>Test_id: int(5) primary key auto_increment, Room_no: varchar(5), Name: varchar(25), test_cost: int</pre>
Payment	<p>Key: (primary) Payment_Id</p> <p>Domain:</p> <pre>Payment_id: int(5) primary key auto_increment, Visit_id: int(5), Paid_date: date, Payment_method: varchar(25), amt_paid: int</pre>

POPULATING THE TABLES

1. PATIENT

	Payment_id	Visit_id	Paid_date	Payment_method	amt_paid
▶	22	11	2018-11-16	Cash	700
	23	11	2018-11-16	Cash	700
	24	12	2018-11-16	Cash	600
*	25	14	2018-11-17	Debit Card	600
	NULL	NULL	NULL	NULL	NULL

2. STAFF

S_id	S_name	Joining_date	Gender	S_phone_1	S_phone_2	Department	Salary	Post	Visiting_hrs	Add_house_no	Add_street	Add_city	Add_state
3	Harish	2016-10-04	M	948564754	783522747	Mental Disorder	40000	Psychiatrist	07:00 - 13:30	H-10	Govt Street	Bhopal	Madhya Pradesh
4	Ramesh	2018-10-01	M	973762273	793762576	Surgery	30000	Physician	10:00 - 16:00	J-89	H-Block	Devas	Madhya Pradesh
5	Prema	2015-04-14	F	966472473	894323627	Children's Department	35000	Pediatrician	09:00 - 16:00	B-90	Nagar Manmar Road	Amarnagar	Maharashtra
6	Vijay	2017-09-10	M	954365783	832568743	OPD	10000	Ward Boy	08:00 - 18:00	C-1	Khandwa Colony	Indore	Madhya Pradesh
7	Sarita	2016-09-26	F	923564554	893574548	Homeopathy	40000	Doctor	10:00 - 16:00	K-9	Taj Road	Agra	Uttar Pradesh
*	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

3. VISIT

Visit_id	S_id	Visit_date	Reason_for_visit	P_id	test_1	test_2	test_3	test_4	bill_amount	Due_date	Payment_status	Amount_pending
13	6	2018-11-16	Loose Motion	10	3	4	6	6	600	2019-01-02	completed	0
15	7	2018-11-16	Back pain	12	2	3	4	5	750	2019-01-16	completed	0
16	5	2018-11-16	Neck Pain	12	2	3	4	5	750	2018-12-21	pending	400
17	3	2018-11-21	Headache	14	4	5	6	6	150	2018-12-19	pending	150
*	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

4. TEST_DETAILS

	Test_id	Room_no	Name	test_cost
▶	2	101	X-Ray	100
	3	102	CT-scan	500
	4	201	Influenza A	100
	5	202	Influenza B	50
*	6	Null	Null	0
	HULL	HULL	HULL	HULL

5. PAYMENT

	Payment_id	Visit_id	Paid_date	Payment_method	amt_paid
▶	26	13	2018-11-21	Cash	500
	27	16	2018-11-21	Debit Card	350
	28	15	2018-11-21	Debit Card	750
	29	13	2018-11-21	Cash	100
*	NULL	NULL	NULL	NULL	NULL

QUERIES

1.

SHOWING THE NUMBER OF VISITS MADE BY PARTICULAR PATIENT

```
1 • select P_id, P_name, count(Visit_id) as 'No. of Visits' from Patient
2   join Visit using(P_id)
3   group by P_id;
4
5
6
7
8
```

< Result Grid | Filter Rows: Export: Wrap Cell Content:

P_id	P_name	No. of Visits
10	Gaurav	1
12	Asha	2
14	Rama	1

2.

GETTING ALL THE PAYMENTS BY PARTICULAR PATIENTS

```
1 • select P_id, P_name, Payment_id, amt_paid from Payment
2   join (Visit join Patient using(P_id)) using(Visit_id)
3   order by P_id;
4
5
6
7
8
```

< Result Grid | Filter Rows: Export: Wrap Cell Content:

P_id	P_name	Payment_id	amt_paid
10	Gaurav	26	500
10	Gaurav	29	100
12	Asha	27	350
12	Asha	28	750

3.

GETTING ALL THE DETAILS OF PARTICULAR PATIENT					
1 ● select P_id, P_name, Visit_id, bill_amount, (bill_amount - Amount_pending) as 'Amount Paid', Payment_status from Payment 2 join (Visit join Patient using(P_id)) using(Visit_id) 3 group by Visit_id; 4 5 6 7 8					
<					
Result Grid Filter Rows: <input type="text"/> Export: Wrap Cell Content:					
P_id	P_name	Visit_id	bill_amount	Amount Paid	Payment_status
10	Gaurav	13	600	600	completed
12	Asha	16	750	350	pending
12	Asha	15	750	750	completed

SOFTWARE SPECIFICATIONS

HTML

HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>). HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example . The first tag in a pair is the start-tag, and the second tag is the end tag (they are also called opening tags and closing tags). Though not always necessary, it is best practice to append a slash to tags which are not paired with a closing tag.

The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags but uses the tags to interpret the content of the page. HTML describes the structure of a website semantically along with cues for presentation, making it a mark-up language rather than a programming language.

HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behaviour of HTML web pages.

MYSQL

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 a number of platforms.

The data in MySQL is stored in tables. A table is a collection of related data, and it consists of columns and rows. Databases are useful when storing information categorically.

WHY USE MySQL:

- ✓ Leading open source RDBMS
- ✓ Ease of use - No frills
- ✓ Fast
- ✓ Robust
- ✓ Security
- ✓ Multiple OS support
- ✓ Free
- ✓ Technical support
- ✓ Support large database up to 50 million rows, file size limit up to 8 Million TB

FLASK IN PYTHON

Flask is a micro framework for python which is based on **Werkzeug** and **Jinja 2**.

In simple words, a framework is anything that helps you complete your work faster. For example, if I were to tell you to create a python server that could host a website; you would be able to do it in just under 120 lines of python code using several libraries for tasks such as, mapping a function to a route(URL), writing socket functions for protocols and finally displaying that one webpage. You will have to repeat all of this for every webpage in the website. Not to forget the overhead of actually interpreting and typing all the lines of code. A framework abstracts all the above lower level tasks and helps you focus on the actual application. Clearly, Flask doesn't restrict itself to being a backend service, but instead stages, hosts and handles your complete web application

Why Flask:

There are several python web frameworks out there; there is the infamous Django, bottle, tornado and then there is Flask. What separates Flask from all the others is:

- ✓ It's simple to learn and extensively scalable.
- ✓ Since it isn't scaffolded, you can do whatever you want and however, you want to. No restrictions on the application architecture nor on the Data abstraction layers. This is exactly why not including the batteries makes the application even more utilitarian and functional.
- ✓ A growing community which is providing neat solutions to several problems being faced by developers.

The major advantage of Flask is that you are in control of anything and everything. Knowing this, you can set out to write an application which is limited by the power of python itself. Though it hasn't received its 1.0 update yet, several companies have successfully deployed it to production level and are still using it. Learning Flask, lets you understand the internal mechanics of other frameworks and gives you a good picture of how things work, on the inside.

SCREENSHOTS

ADMIN PANEL

Nursing Home

- Display Data
- Edit Visit Data
- Search
- Insert
- Delete
- Update

INSERT PAGE

Insert Page

- 1. Patient
- 2. Staff
- 3. Visits
- 4. Tests
- 5. Payment
- Home

ADDING A NEW PATIENT DETAILS

Enter the Patient details :

Patient Name	Rama
D.O.B.	22/05/1996
Gender	<input type="radio"/> Male <input checked="" type="radio"/> Female
Blood Group	A+
Phone 1	946539977
Phone 2	887546725
House No.	C-4
Street	MG Road
City	Patna
State	Bihar

submit

Home

ADDING A NEW STAFF DETAILS

The screenshot shows a web page titled "Enter the Staff details :". The URL in the address bar is "localhost:5000/insert/staff". The form contains the following fields:

Staff Name	Sarita
Joining Date	26 / 09 / 2016
Gender	<input type="radio"/> Male <input checked="" type="radio"/> Female
Phone 1	923564554
Phone 2	893574548
Department	Homeopathy
Post	Doctor
Salary	40000
Visiting Hours	10:00 - 4:00
House No.	K-9
Street	Taj Road
City	Agra
State	Uttar Pradesh

Below the form is a "submit" button and a "Home" link.

ADDING VISIT DETAILS

The screenshot shows a web page titled "Enter the Visit details :". The URL in the address bar is "localhost:5000/insert/visit". The form contains the following fields:

Patient ID	12
Reason for Visit	Neck Pain

Below the form is a "submit" button and a "Home" link.

EDITING THE VISIT DETAILS

The screenshot shows a web page titled ".....Enter the Visit details.....". The URL in the address bar is "localhost:5000/visit". The form contains the following fields:

Visit ID	16
Staff ID	5
Test 1	2
Test 2	3
Test 3	4
Test 4	5
Due Date	21 / 12 / 2018

Below the form is a "submit" button.

ADDING A NEW TEST DETAILS

localhost:5000/insert/test

Enter the Test details :

Test Name	X-Ray
Room No.	101
Test Fees	100

[Home](#)

ADDING A NEW PAYMENT DETAILS

localhost:5000/insert/payment

Enter the Payment details :

Visit ID	13
Amount Paid	100
Payment Method	Cash

[Home](#)

DISPLAY PAGE

localhost:5000/display

Display Page

1. Patient
2. Staff
3. Visits
4. Tests
5. Payment
Home

PATIENT DETAILS

localhost:5000/display/patient

Patient Table

ID	Name	DOB	Gender	Phone 1	Phone 2	Blood Group	House_no	Street	City	State
10	Gaurav	1999-08-28	M	974673527	789137556	AB+	G-12	Civil Line	Indore	Madhya Pradesh
11	Ankit	1998-09-28	M	987246278	789365733	B+	109-C	Hall Street	Jaipur	Rajasthan
12	Asha	1983-01-12	F	893367382	963257724	O+	A-2	Dwarika Street	Indore	Madhya Pradesh
13	Ajay	1999-08-02	M	984375638	782553724	O-	L-56	Gandhi Road	Mumbai	Maharashtra
14	Rama	1996-05-22	F	946539977	887546725	A+	C-4	MG Road	Patna	Bihar

[Home](#)

STAFF DETAILS

ID	Name	Joining Date	Gender	Phone 1	Phone 2	Department	Salary	Post	Visiting Hours	House_no	Street	City	State
3	Harish	2016-10-04	M	948564754	783522747	Mental Disorder	40000	Psychiatrist	07:00 - 13:30	H-10	Govt Street	Bhopal	Madhya Pradesh
4	Ramesh	2018-10-01	M	973762273	793762576	Surgery	30000	Physician	10:00 - 16:00	J-89	H-Block	Devas	Madhya Pradesh
5	Prema	2015-04-14	F	966472473	894323627	Children's Department	35000	Pediatrician	09:00 - 16:00	B-90	Nagar Mannar Road	Amarnagar	Maharashtra
6	Vijay	2017-09-10	M	954365783	832568743	OPD	10000	Ward Boy	08:00 - 18:00	C-1	Khandwa Colony	Indore	Madhya Pradesh
7	Sarita	2016-09-26	F	923564554	893574548	Homeopathy	40000	Doctor	10:00 - 16:00	K-9	Taj Road	Agra	Uttar Pradesh

[Home](#)

VISIT DETAILS

Visit ID	Staff ID	Visit Date	Reason for Visit	Patient ID	Test 1	Test 2	Test 3	Test 4	Bill Amount	Due Date	Payment Status	Bill Amount Pending
13	6	2018-11-16	Loose Motion	10	3	4	6	6	600	2019-01-02	completed	0
15	7	2018-11-16	Back pain	12	2	3	4	5	750	2019-01-16	completed	0
16	5	2018-11-16	Neck Pain	12	2	3	4	5	750	2018-12-21	pending	400
17	3	2018-11-21	Headache	14	4	5	6	6	150	2018-12-19	pending	150

[Home](#)

TEST DETAILS

ID	Room No.	Name	Cost
2	101	X-Ray	100
3	102	CT-scan	500
4	201	Influenza A	100
5	202	Influenza B	50
6	Null	Null	0

[Home](#)

PAYMENT DETAILS

A screenshot of a web browser window titled "Payment Table". The URL is "localhost:5000/display/payment". The table has columns: Payment ID, Visit ID, Payment Date, Payment Method, and Amount Paid. The data is as follows:

Payment ID	Visit ID	Payment Date	Payment Method	Amount Paid
26	13	2018-11-21	Cash	500
27	16	2018-11-21	Debit Card	350
28	15	2018-11-21	Debit Card	750
29	13	2018-11-21	Cash	100

Below the table is a "Home" link.

DELETION PAGE

A screenshot of a web browser window titled "Data Deletion Page". The URL is "localhost:5000/delete". A vertical menu on the left lists: 1. Patient, 2. Staff, 3. Visits, 4. Tests, 5. Payment. At the bottom of the menu is a "Home" link.

PATIENT DELETION

A screenshot of a web browser window titled "Enter Patient Data". The URL is "localhost:5000/delete/patient". It contains a "Patient ID" input field, a "submit" button, a "Delete All" link, and a "Home" link.

STAFF DELETION

A screenshot of a web browser window titled "Enter Staff Data". The URL is "localhost:5000/delete/staff". It contains a "Staff ID" input field, a "submit" button, a "Delete All" link, and a "Home" link.

VISIT DELETION

The screenshot shows a web browser window with the URL `localhost:5000/delete/visit`. The title bar says "Enter Visit Data". There is a form with a "Visit ID" input field containing "Enter Visit ID" and a "submit" button. Below the form are two links: "Delete All" and "Home".

TEST DELETION

The screenshot shows a web browser window with the URL `localhost:5000/delete/test`. The title bar says "Enter Test Data". There is a form with a "Test ID" input field containing "Enter Test ID" and a "submit" button. Below the form are two links: "Delete All" and "Home".

PAYMENT DELETION

The screenshot shows a web browser window with the URL `localhost:5000/delete/payment`. The title bar says "Enter Payment Data". There is a form with a "Payment ID" input field containing "Enter Payment ID" and a "submit" button. Below the form are two links: "Delete All" and "Home".

UPDATE PAGE

The screenshot shows a web browser window with the URL `localhost:5000/update`. The title bar says "Data Update Page". There is a form with four horizontal input fields labeled "1. Patient", "2. Staff", "3. Tests", and "Home".

EDITING PATIENT DETAILS

localhost:5000/update/patient

Enter the Patient details :

Patient ID	<input type="text" value="12"/>
Choose one	<input checked="" type="radio"/> Patient Name <input type="radio"/> Phone 1 <input type="radio"/> Phone 2 <input type="radio"/> Blood Group <input type="radio"/> House No. <input type="radio"/> Street <input type="radio"/> City <input type="radio"/> State
Modification	<input type="text" value="Asha"/> <input type="button" value="submit"/>

[Home](#)

EDITING STAFF DETAILS

localhost:5000/update/staff

Enter the Staff details :

Staff ID	<input type="text" value="4"/>
Choose one	<input type="radio"/> Staff Name <input type="radio"/> Phone 1 <input checked="" type="radio"/> Phone 2 <input type="radio"/> Department <input type="radio"/> Post <input type="radio"/> Visiting Hours <input type="radio"/> Salary <input type="radio"/> House No. <input type="radio"/> Street <input type="radio"/> City <input type="radio"/> State
Modification	<input type="text" value="793762576"/> <input type="button" value="submit"/>

[Home](#)

EDITING TEST DETAILS

localhost:5000/update/test

Enter the Test details :

Test ID	<input type="text" value="3"/>
Choose one	<input type="radio"/> Test Name <input type="radio"/> Room No. <input checked="" type="radio"/> Test Cost
Modification	<input type="text" value="500"/> <input type="button" value="submit"/>

[Home](#)

SEARCH PAGE

The screenshot shows a web browser window with the URL `localhost:5000/search`. The title bar says "Search Page". Below it is a vertical navigation menu:

- 1. Patient
- 2. Staff
- 3. Visits
- 4. Payment
- Home

SEARCHING PATIENT DETAILS

The screenshot shows a web browser window with the URL `localhost:5000/search/patient`. The title bar says "Patient Search Page". Below it is a vertical navigation menu:

- 1. By Name
- 2. By City
- 3. By State
- Home

The screenshot shows a web browser window with the URL `localhost:5000/search/patient/name`. The title bar says "Enter Patient Data". Below it is a section titled "By Name". It has a form with a "Patient Name" input field containing "Gaurav" and a "submit" button. There is also a "Home" link at the bottom.

The screenshot shows a web browser window with the URL `localhost:5000/search/patient/name`. The title bar says "Patient Table". Below it is a table with the following data:

ID	Name	DOB	Gender	Phone 1	Phone 2	Blood Group	House_no	Street	City	State
10	Gaurav	1999-08-28	M	974673527	789137556	AB+	G-12	Civil Line	Indore	Madhya Pradesh

The screenshot shows a web browser window with the URL `localhost:5000/search/patient/city`. The title bar says "Enter Patient Data". Below it is a section titled "By City". It has a form with a "City Name" input field containing "Indore" and a "submit" button. There is also a "Home" link at the bottom.

Patient Table

ID	Name	DOB	Gender	Phone 1	Phone 2	Blood Group	House_no	Street	City	State
10	Gaurav	1999-08-28	M	974673527	789137556	AB+	G-12	Civil Line	Indore	Madhya Pradesh
12	Asha	1983-01-12	F	893367382	963257724	O+	A-2	Dwarika Street	Indore	Madhya Pradesh

[Home](#)

Enter Patient Data

By State

State Name

[Home](#)

Patient Table

ID	Name	DOB	Gender	Phone 1	Phone 2	Blood Group	House_no	Street	City	State
13	Ajay	1999-08-02	M	984375638	782553724	O-	L-56	Gandhi Road	Mumbai	Maharashtra

[Home](#)

SEARCHING STAFF DETAILS

Staff Search Page

1. By Name
2. By City
3. By State

[Home](#)

SEARCHING VISIT DETAILS

Visit Search Page

By Visit Date

By Date

[Home](#)

Visit ID	Staff ID	Visit Date	Reason for Visit	Patient ID	Test 1	Test 2	Test 3	Test 4	Bill Amount	Due Date	Payment Status	Bill Amount Pending
13	6	2018-11-16	Loose Motion	10	3	4	6	6	600	2019-01-02	completed	0
15	7	2018-11-16	Back pain	12	2	3	4	5	750	2019-01-16	completed	0
16	5	2018-11-16	Neck Pain	12	2	3	4	5	750	2018-12-21	pending	400

Home

SEARCHING PAYMENT DETAILS

1. By Date
2. By Visit ID

Home

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 the patient's history with a single click. Thus processing information will be faster. It guarantees the accurate maintenance of Patient details. It easily reduces the bookkeeping task and thus reduces the human effort and increases accuracy speed.

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