

# B.SC. ENGG. REPORT

## A Report on Patient Management System

by

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Submitted to

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Bachelor of Science in Computer Science & Engineering)



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## **Abstract**

Working with big data faces different issues as like processing time or power. We have tried to solve these problems with our project. This project Patient Management system includes registration of patients, storing their details into the system, and also computerized billing . The software has the facility to give a unique id for every patient and stores the clinical details of every patient and hospital tests done automatically. It includes a search facility to know the current status of each patient. User can search details of a patient using the id. The Patient Management System can be entered using a username. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast.

## Declaration

We hereby declare that the work presented in the project report entitled Patient management system submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) is our own work. The matter embodied in this project report has not been submitted elsewhere by anybody for the award of any degree.

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## Certificate

This is to certify that by Iftekhar Ahamed Siddiquee(ID-19202103239), Md. Naeem (ID-19202103472) , Tanvir Ahmed(ID-19202103042),Shahabuddin(ID-19202103464) , Md Saidur Rahman Hasib(ID:19202103043) were belong to the department of Computer Science and Engineering, have completed their project work titled Patient management system satisfactorily in partial fulfillment for the requirement of Bachelor of Science in Computer Science and Engineering of Bangladesh University of Business and Technology(BUBT) in the year 2021.

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## **Dedication**

Our Loving Parents and Teachers who's Support give us Strength and determination to accomplish our Goal...!!

## Acknowledgment

We would like to pay our gratitude to the Almighty Allah who created us with all the abilities to understand analysis and develop the process with patience. We are thankful to our project teacher Sumi Khatun, Lecturer, Department of Computer Science and Engineering, Bangladesh University of Business and Technology for his professional guidance and motivation during the work of this project which is a major part of it. Without his valuable support and guidance, this project could not reach this level of development from our point of view. We would like to thank all the Faculty members, Department of CSE, Bangladesh University of Business and Technology for their valuable time spend in requirements analysis and evaluation of the project work. We would like to express our sincere and warm gratitude to all those who have encouraged us directly, provided mental encouragement and criticized our work in several phases during the development of this project and for preparing this project indirectly.

## Approval

The project work entitled Patient Management System is submitted by Iftekhar Ahamed Siddiquee(ID-19202103239), Md. Naeem (ID-19202103472) , Tanvir Ahmed(ID-19202103042),Shahabuddin(ID-19202103464) , Md Saidur Rahman Hasib(ID:19202103043) under the Department of Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) is accepted in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Patient management system is a computer system that helps manage the information related to health care and aids in the job completion of health care providers effectively. The patient record is the principal repository for information concerning a patient's health care. It affects, in some way, virtually everyone associated with providing, receiving, or reimbursing health care services. Despite the many technological advances in health care over the past few decades, the typical patient record of today is remarkably similar to the patient record of 50 years ago. Patient record improvement could make major contributions to improving the health care system of this nation. A 1991 General Accounting Office (GAO) report on automated medical records identified three major ways in which improved patient records could benefit health care (GAO).

### 1.2 Existing Model

PMS was introduced to solve the complications coming from managing all the paper works of every patient associated with the various departments of hospitalization with confidentiality. PMS provides the ability to manage all the paperwork in one place, reducing the work of staff in arranging and analyzing the paperwork of the patients. PMS does many works like:

- Maintain the medical records of the patient
- Maintain the contact details of the patient
- Keep track of the appointment dates
- Save the insurance information for later reference
- Tracking the bill payments.

### 1.3 Problem Statement

- Maintain the medical records of the patient

- **Maintain the contact details of the patient**
- **Keep track of the appointment dates**
- **Save the insurance information for later reference**
- **Tracking the bill payments.**

## 1.4 The advantages of PMS

The advantages of PMS can be pinpointed to the following:

- Time-saving Technology
- Improved Efficiency by avoiding human errors
- Reduces scope for Error
- Data security and correct data retrieval made possible
- Cost effective and easily manageable
- Easy access to patient data with correct patient history
- Improved patient care made possible
- Easy monitoring of supplies in inventory
- Reduces the work of documentation
- Better Audit controls and policy compliance.

## 1.5 Objectives of the Patient Management System

We have so far clarified on the importance of PMS, it is your responsibility to pick out the right kind of PMS for your needs and purposes. Here we give more information on the benefits of various PMS and the impact it creates on hospital systems.

- **Easy Patient data retrieval:**

PMS makes it possible to access all the data related to a patient via a system by the means of a few simple clicks. Information like patient history, current illness, doctors involved, tests reports taken, billing information and many more can be made visible to the user.

- **Increased Data security:**

The patient data can be kept a hundred percent safe by using PMS in your hospital. It can be made accessible by only a limited amount of authorized personnel. With PMS, all the data is stored on a server or cloud and kept safe by just securing the login information safe.

- **Improve Visibility and Transparency:**

Patient Management System (PMS) improves the visibility and transparency in the complete management process and in all records.

- **Streamline Accurate Reporting:**

It helps in streamlining the accurate reporting with the help of updated and accurate records.

- **Improved Quality Control:**

Patient Management System improves the quality control on the services of the hospital.

- **Improved Management Visibility:**

It also improves the management visibility of hospital, all information, and data regarding the patient, doctor and medicine could be seen by any department easily.

- **Ease to Access System Facilities:**

Patient Management System makes it easy to get access to the management system facilities for the authorized users and keep it safe from unauthorized users.

- **Cost Effective:**

PMS not only saves time in the hospital but also is cost-effective in decreasing the number of people working on the system of manual entry of data and paperwork. The implementation of His will decrease the human intervention into the system thereby avoiding human-caused errors.

## 1.6 Organization of This project Report

The rest of the book is organized in the following way. In Chapter 1, we will show the background and related project. After that,

- **In Chapter 2**, describes Existing System, existing or supporting literature and review of existing system. In existing system, we will discuss about the Outlier.
- fChapter 3, We will discuss system requirements and The calculated result is shown at the end.
- **In Chapter 4**, explains about the Experimental Results of our project and analysis of the result and also discuss about the applications of our project.
- **In Chapter 5**, concludes the Report of Our Project. In this chapter we will discuss about limitations and future works. In limitation part we will discuss about the limitations of our system. In future works we will discuss about the modules which we will develop in future.

## 1.7 Conclusions

Every hospital has different needs, analyze what is best for your requirement and install the apt PMS system.

## **CHAPTER 2**

### **EXISTING SYSTEM**

#### **2.1 Introduction**

Patient management systems (PMS) are computer-based applications designed to manage the patient's data, health records, and care process in healthcare facilities. This literature review aims to explore the existing literature on PMS and highlight the benefits, challenges, and future direction of PMS in healthcare.

#### **2.2 Existing System**

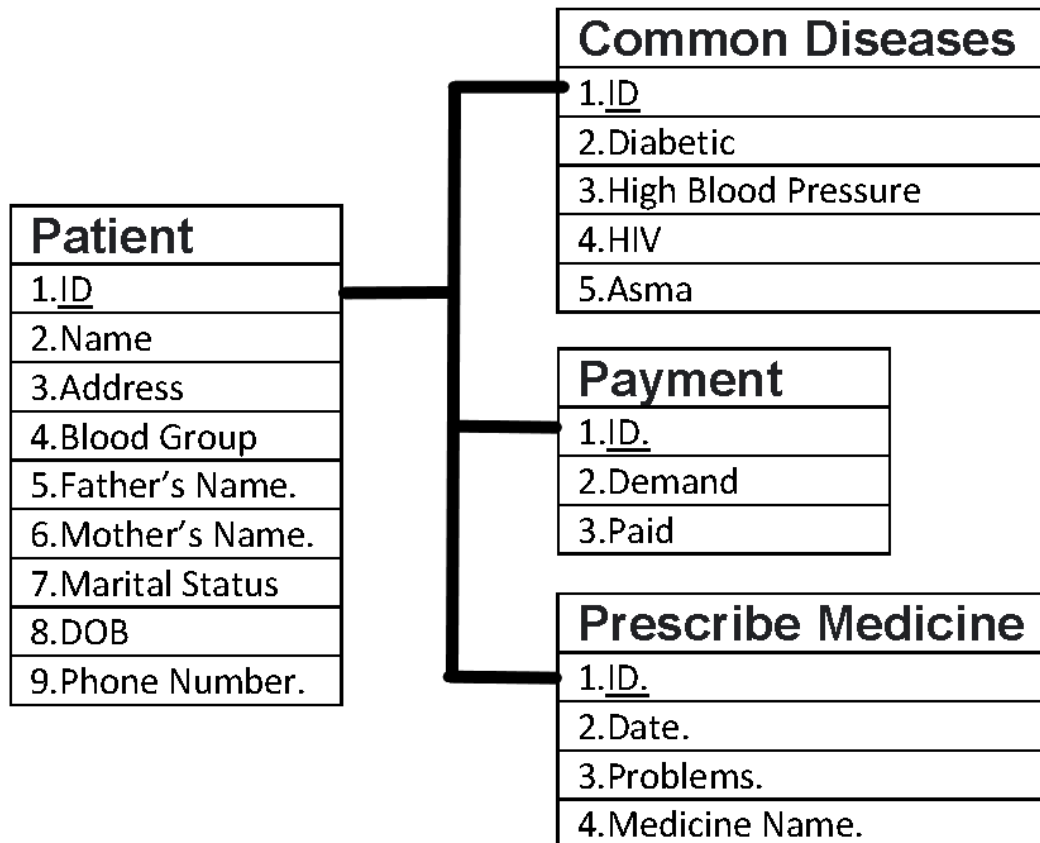
PMS provides several benefits to healthcare providers and patients, including improved patient care quality, better patient engagement, efficient patient data management, and reduced medical errors. According to a study by Ahmad and colleagues (2018), the implementation of PMS in a primary care setting resulted in significant improvements in the quality of patient care, including improved medication management and reduced waiting time. Additionally, PMS can help healthcare providers to manage patient data efficiently, allowing them to track patient progress and history easily.

#### **2.3 Diagrams:**

A diagram is a symbolic representation of information using visualization techniques. Diagrams have been used since prehistoric times on walls of caves, but became more prevalent during the Enlightenment. Sometimes, the technique uses a three-dimensional visualization which is then projected onto a two-dimensional surface. The word graph is sometimes used as a synonym for diagram.

## 2.4 Schema Diagram

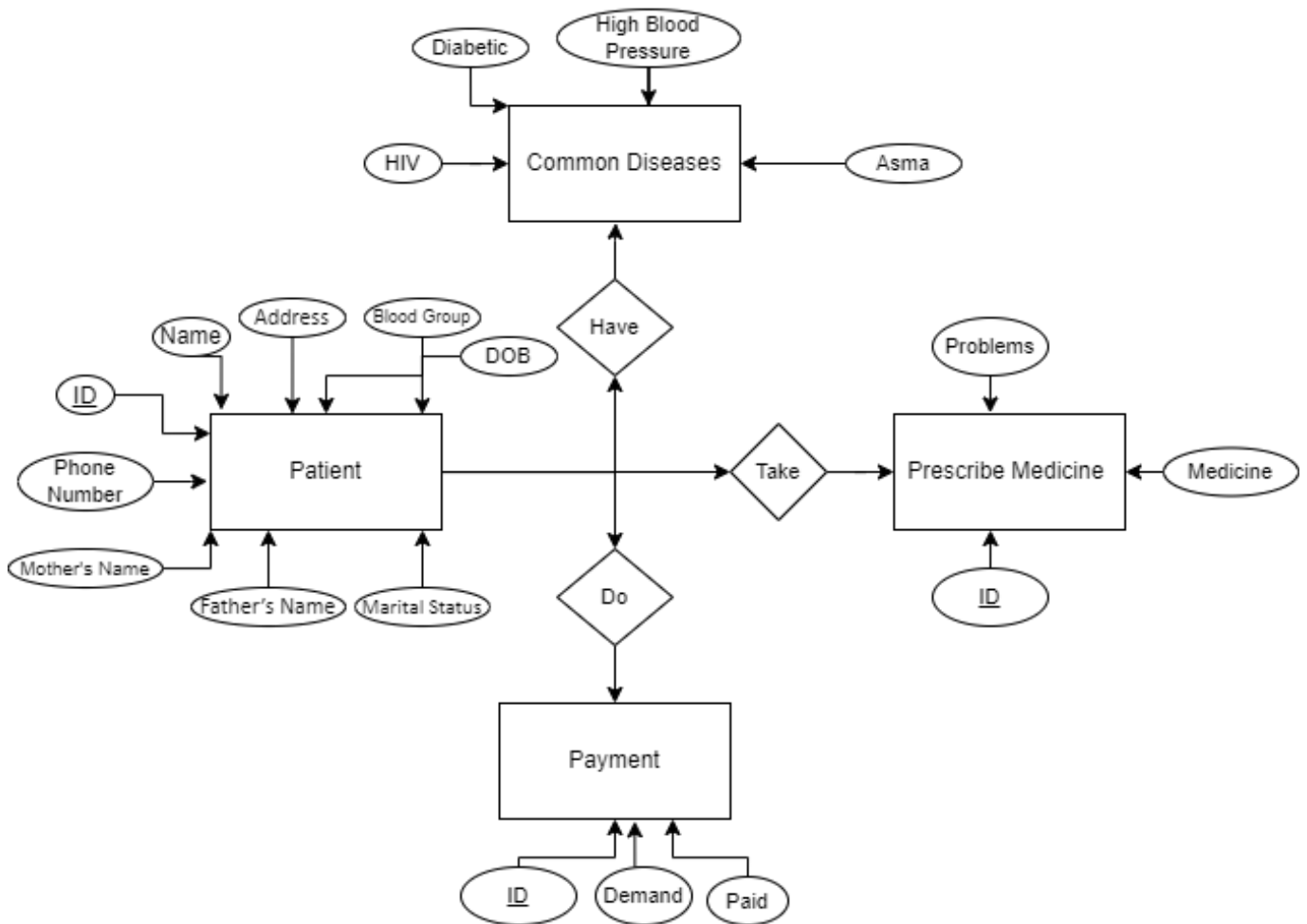
### PATIENT MANAGEMENT SYSTEM





## 2.5 ER Diagram

### PATIENT MANAGEMENT SYSTEM



Databases are a collection of organized information that can easily be accessed, managed and updated. Database systems are very important to your business because they communicate information related to your sales transactions, product inventory, customer profiles and marketing activities. A table is a collection of related data held in a table format within a database. It consists of columns and rows.

In relational databases, and flat file databases, a table is a set of data elements (values) using a model of vertical columns (identifiable by name) and horizontal rows, the cell being the unit where a row and column intersect. A table has a specified number of columns, but can have any number of rows. Each row is

identified by one or more values appearing in a particular column subset. A specific choice of columns which uniquely identify rows is called the primary key.

”Table” is another term for ”relation”; although there is the difference in that a table is usually a multi set (bag) of rows where a relation is a set and does not allow duplicates. Besides the actual data rows, tables generally have associated with them some metadata, such as constraints on the table or on the values within particular columns.

## 2.6 Tables:

### 2.6.1 Patient Table

Attribute	Data Type	Constraints
ID	bigint(20)	AUTO INCREMENT
NAME	varchar(50)	NOT NULL
FATHER’S NAME	varchar(50)	NOT NULL
MOTHER’S NAME	varchar(50)	NOT NULL
ADDRESS	varchar(50)	NOT NULL
MARITAL STATUS	varchar(10)	NOT NULL
DOB	date	NOT NULL
BLOOD GROUP	varchar(2)	NOT NULL
PHONE NUMBER	varchar(11)	NOT NULL
SEX	varchar(10)	NOT NULL

### 2.6.2 Payment

Attribute	Data Type	Constraints
P ID	bigint(20)	AUTO INCREMENT
DEMAND	int(11)	NOT NULL
PAID	int(11)	NOT NULL

### 2.6.3 Common Diseases

Attribute	Data Type	Constraints
PID	bigint(20)	AUTO INCREMENT
DIABETICS	varchar(3)	NOT NULL
HIGH PRESSURE	varchar(3)	NOT NULL
HIV	varchar(3)	NOT NULL
ASMA	varchar(3)	NOT NULL

### 2.6.4 Previous Medicine

Attribute	Data Type	Constraints
P ID	bigint(20)	AUTO INCREMENT
DATE	date	NOT NULL
HIGH PRESSURE	varchar(3)	NOT NULL
MEDI NAMES	text	NOT NULL
PROBLEMS	text	NOT NULL

### 2.6.5 My Sql Query

1. `sql = "INSERT INTO patient('ID','NAME','FATHER'SNAME',  
'MOTHER'SNAME','BLOODGROUP','ADDRESS','MARITALSTATUS',  
'DOB','PHONENUMBER','SEX')VALUES(NULL,'".name."',  
"".fname."',"".mname."',"".bgroup."',"".addr."',"".ms."',"".DOB."',"".phn."',"".gndr."")"`
2. `sql_payment = "INSERT INTO payment('P_ID','DEMAND','PAID')  
VALUES(last_id,1000,0)";`
3. `sql_lastid = "SELECT max(ID) FROM patient";`
4. `sql_common_diseases = "INSERT INTO common_diseases('P_ID','DIAB  
ETICS','HIGH_PRESSURE','HIV','ASMA')VALUES  
('".ID."',"".dia."',  
"".hbp."',"".hiv."',"".asma."')";`
5. `sql_show_all = "select * from patient";`
6. `sql = "select * from pre_medicine where P_ID = ".id . " ;"`
7. `sql = "select * from pre_medicine where P_ID = ".id . " ;";`

## 2.7 Conclusion

In conclusion, PMS is an essential tool for healthcare providers to manage patient data, health records, and care process efficiently. Although PMS provides

---

several benefits, several challenges need to be addressed to ensure successful implementation. The future of PMS is promising, with increasing adoption of electronic health records and advancements in technology. PMS can help healthcare providers to shift towards value-based care and patient-centric models, providing better patient care quality and improved patient outcomes.

## **CHAPTER 3**

### **PROPOSED MODEL**

#### **3.1 Introduction**

Patient Management System brings together all the information and processes of a hospital, in a single platform. It presents you with a unified 360-degree view for managing patients, appointments, billing information, and much more. The system automatically generates a highly-efficient process and makes it quick. Thereby, allowing hospitals to provide quality service in addition to professional medical care.

#### **3.2 Product functions**

The product includes many functionalities of the organization.

These functionalities are:

- New patient registration.
- Patient all database management.
- Profile Editing.
- Previous medicine list.
- Payment management.
- Security management.

#### **3.3 Benefits of Patient Management System**

PMS provides several benefits to healthcare providers and patients, including improved patient care quality, better patient engagement, efficient patient data management, and reduced medical errors. According to a study by Ahmad and colleagues (2018), the implementation of PMS in a primary care setting

resulted in significant improvements in the quality of patient care, including improved medication management and reduced waiting time. Additionally, PMS can help healthcare providers to manage patient data efficiently, allowing them to track patient progress and history easily.

### **3.4 Challenges of Patient Management System**

Despite the benefits of PMS, several challenges need to be addressed to ensure the successful implementation of PMS in healthcare settings. These challenges include data security and privacy concerns, technical issues, and resistance to change. A study by Mohan and colleagues (2019) highlighted that PMS implementation faced challenges due to technical issues such as system downtime, connectivity problems, and software updates.

### **3.5 Future Direction of Patient Management System**

The future of PMS is promising, with advancements in technology and increasing adoption of electronic health records. PMS can help healthcare providers to shift towards value-based care and patient-centric models, allowing them to provide better patient care quality and improved patient outcomes. Additionally, PMS can help healthcare facilities to reduce administrative burden and costs associated with manual patient data management.

### **3.6 User characteristics**

Only doctor should be able to enter patient info or modify any kind of information in the system. No patient can use this software. Doctor can registration a patient, change patient info, give medicine, track previous all medicine etc.

### **3.7 Conclusion**

This software is manage all the recording and automating the task of the conducting patient information. It makes the faster working and good services with efficient user interaction.

# CHAPTER 4

## EXPERIMENTAL RESULT

Welcome to a Professional Health Care

010-050-0160

6:00 AM - 10:00 PM (Mon-Fri)


info@company.com

Health Center

Home Show All

Registration a patient

Patient Profile



### Registration a patient

Name	Address
<input type="text" value="Full Name"/>	<input type="text" value="Your address"/>
Father's name	Mother's name
<input type="text" value="Full Name"/>	<input type="text" value="Full Name"/>
Blood Group	DOB
<input type="text" value="Blood group"/>	<input type="text" value="mm/dd/yyyy"/>
Marital Status	Sex
<input type="text" value="Married"/>	<input type="text" value="Men"/>
Phone Number	
<input type="text" value="Phone"/>	
<input type="button" value="Submit patient"/>	

#### Contact Info

Fusce at libero iaculis, venenatis augue quis, pharetra lorem. Curabitur ut dolor eu elit consequat ultricies.

010-070-0170

info@company.com

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#### Opening Hours

Monday - Friday 06:00 AM - 10:00 PM

Saturday 09:00 AM - 08:00 PM

Sunday Closed

Facebook Twitter Instagram

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Figure 4.1: Home Page : This page is the home page of our website. On this page a patient can complete his registration with all his problems and all the information he needs.

Welcome to a Professional Health Care

010-060-0160

6:00 AM - 10:00 PM (Mon-Fri)

Info@company.com

health Center

HomeAbout UsDoctorsNewsContact

Registration a patient



## Common Diseases

Diabetes

Yes

High Blood Pressure

Yes

HIV

Yes

ASMA

Yes

Submit patient

### Contact Info

Fusce at libero iaculis, venenatis augue quis, pharetra lorem. Curabitur ut dolor eu elit consequat ultricies.

010-070-0170

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
Monday - Friday 06:00 AM - 10:00 PM  
Saturday 09:00 AM - 08:00 PM  
Sunday Closed

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Figure 4.2: Common Disease : On this page, a patient can choose his problems. If there is a problem, then yes and if there is no problem, he can choose no. Refer the page of our website to help the doctor to get an idea about the patient by providing the information about the patient's previous disease and what medicine he is taking for it.




[Home](#)
[Show All](#)
[Registration a patient](#)

### Profile Settings

**ID**

**Name**

**Blood Group**

**Mobile Number**

**Address**

**Father's Name**

**Mother's Name**

**Sex**

**Marital Status**

**Date Of Birth**

**Problems**

**Payment**

Demand: 1000

Paid: 600

Due: 400

**Medicine**

**Common Diseases**

Diabetics : Yes


High Pressure: No


HIV : No

Asma : Yes


**Contact Info**


Fusce at libero laculis, venenatis augue quis, pharetra lorem. Curabitur ut dolor eu elit consequat ultricies.

 010-070-0170

 info@company.com

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**Opening Hours**

Monday - Friday 06:00 AM - 10:00 PM

Saturday 09:00 AM - 08:00 PM

Sunday Closed

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Figure 4.3: Patient Profile: On this page we can see profile setting. Here the information of the president is given. And the problems of the president can be given. And the list of medicine can be given. And it shows whether you have paid or not. All data of patient management system is kept here. patient, payment and pre-medicine etc. are given here.

Welcome to a Professional Health Care

010-060-0160 6:00 AM - 10:00 PM (Mon-Fri) info@company.com

Health Center

Home Show All Registration a patient

Date	MEDICINE	PROBLEMS
2021-11-24	1.Napa	1.Jor
2021-11-24	Abacavir Acyclovir Allopurinol Amifostine Napa Ace Puls Reboplatin	Blue-green Algae Cancer Colon Cancer Liver Chancroid Cancer Ovarian

### Contact Info

Fusce at libero iaculis, venenatis augue quis, pharetra lorem. Curabitur ut dolor eu elit consequat ultricies.

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Monday - Friday 06:00 AM - 10:00 PM

Saturday 09:00 AM - 08:00 PM

Sunday Closed

f t i

Figure 4.4: Previous Medicine :All medicine history is show here

Health - Medical Website Template - Google Chrome

localhost/PMS/show\_all.php

Welcome to a Professional Health Care

010-060-0160 6:00 AM - 10:00 PM (Mon-Fri) info@company.com

Health Center

Home Show All Registration a patient

ID	NAME	FATHER'S NAME	MOTHER'S NAME	BLOOD GROUP	SEX	ADDRESS	MARITAL STATUS	DOB	PHONE NUMBER
1	Iftekhar Ahamed Siddiquee	Abu Bakar Siddique	Kholeda Begum Siddique	O+	Men	Alexander,Ramgati	Un-Married	2001-05-21	01612158329
2	Brent	David	Kalia	O+	Men	Ap #197-8643 Tincidunt Rd.	Married	2007-10-25	0312172813
3	Simon	Noble	Ursa	O+	Men	224-297 Aenean St.	Married	2010-02-09	0340247650
4	Elliott	Arthur	Gemma	O+	Men	3916 Gravida Road	Un-Married	2009-09-11	0458911923
5	Clayton	Macaulay	Idona	O+	Men	Ap #671-1440 Augue Avenue	Married	2011-10-05	0307677928
6	Stephen	Len	Deirdre	O+	Men	Ap #181-373 Turpis St.	Un-Married	2013-01-01	0639384836
7	Reece	Akeem	Juliet	AB	Men	5755 Arcu St.	Un-Married	1980-07-08	0992371176
8	Reuben	Allistair	Daryl	AB	Men	409-5240 Gravida Ave	Un-Married	2008-03-01	0222713185
9	Daniel	Kieran	Shelley	O+	Men	8097 Aliquet Street	Married	2011-11-06	0416776917
10	Marvin	Baxter	Dora	O+	Men	Ap #692-8914 Justo St.	Un-Married	1989-09-27	0736837268
11	Scott	Wallace	Aurora	AB	Men	P.O. Box 541, 8762 Fringilla, Rd.	Married	2016-11-29	0314362112
12	Rina	Hunter	Nadine	O+	Female	6871 Sit Road	Un-Married	2002-07-25	16982832797
13	Hyacinth	Sylvester	Marcia	O+	Female	Ap #163-2403 Tincidunt. Ave	Un-Married	2010-10-19	15866894891
14	Tatum	Daphne	Alexis	O+	Female	666-6028 Suspendisse Rd.	Married	1991-07-14	15775872809
15	Bertha	Burke	Hedda	O+	Female	Ap #273-570 Tortor, Rd.	Un-Married	1989-01-23	17706423842
16	Anastasia	Jayme	Lara	B+	Female	P.O. Box 932, 4249 Justo Road	Un-Married	1970-10-03	13235904607
17	Mary	Ilana	Ella	A+	Female	826-6321 Adipiscing. St.	Married	1973-10-24	11454851473
18	Carly	Lacy	Gay	O+	Female	P.O. Box 481, 1215 Mollis. Rd.	Un-Married	1969-04-03	14887132580

Figure 4.5: Show All : show all table All doctors and all patient information is available here on this page.

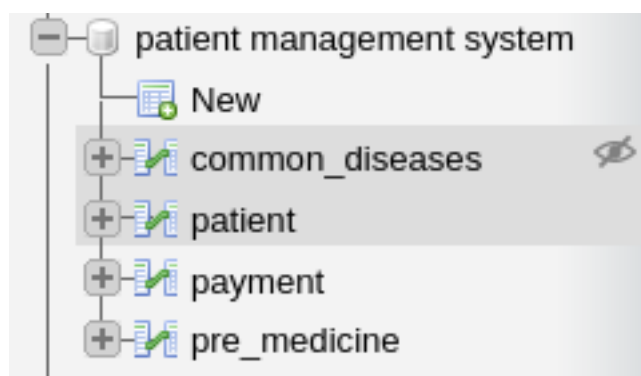


Figure 4.6: All Table Name

ID	NAME	FATHER'S NAME	MOTHER'S NAME	BLOOD GROUP	ADDRESS	MARITAL STATUS	DOB	PHONE NUMBER	SEX
10	Md. Redoan	abba	ma	o+	madaripur	Un-Married	2002-12-12	123445768	Men

Figure 4.7: Patient Table

P_ID	DIABETICS	HIGH_PRESSURE	HIV	ASMA
10	No	No	No	No

P_ID	DEMAND	PAID
10	1000	100

Figure 4.8: Payment Table

P_ID	DATE	MEDI_NAMES	PROBLEMS
10	2021-11-24	Paracetamol	Pa betha
10	2021-11-24		

Figure 4.9: Previous Medicine Table

## **CHAPTER 5**

### **USER MANUAL**

#### **5.1 Introduction**

System Analysis is the term used to describe the process of collecting and analyzing facts in respect of an existing operation of a situation so that an effective computerized system may be designed and implemented if proved feasible. System Analysis can be viewed as the most recent and perhaps the most comprehensive techniques for solving computer problems. System Analysis also embraces system design, which is an activity concerned with the design of a computerized application based on facts disclosed during the analysis stage. System analysis basically is an approach towards viewing process, activities and complex problems.

#### **5.2 Programming Language**

MySQL was created by a Swedish company, MySQL AB, founded by Swedes David Axmark, Allan Larsson and Finland Swede Michael "Monty" Widenius. Original development of MySQL by Widenius and Axmark began in 1994.[22] The first version of MySQL appeared on 23 May 1995. It was initially created for personal usage from mSQL based on the low-level language ISAM, which the creators considered too slow and inflexible. They created a new SQL interface, while keeping the same API as mSQL. By keeping the API consistent with the mSQL system, many developers were able to use MySQL instead of the (proprietary licensed) mSQL antecedent.

HTML was created by Sir Tim Berners-Lee in late 1991 but was not released officially, published in 1995 as HTML 2.0. HTML 4.01 was published in late 1999 and was a major version of HTML. HTML 1.0 was released in 1993 with the intention of sharing information that can be readable and accessible via web browsers.

##### **5.2.1 PHP Advantages**

A popular choice in today's web world is using PHP. PHP is a general-purpose scripting language that is especially suited to server-side web development

where PHP generally runs on a web server. Its clarity in design, well organized modules and better upkeep of various technologies, make it the most popular language in the online industry today. Its popularity and credibility can be gauged by the fact that reputed organizations like Harvard University and popular social Networking site Face book, both are based on PHP. This is possible because PHP websites can be easily maintained, improved and updated from time to time.

### 5.2.2 JavaScript Advantages

JavaScript is an object-oriented scripting language used to enable programmatic access to objects within both the client application and other applications. It is primarily used in the form of client-side JavaScript, implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic websites. JavaScript is a dialect of the ECMA Script standard and is characterized as a dynamic, weakly typed, prototype-based language with first-class functions. JavaScript was influenced by many languages and was designed to look like Java, but to be easier for non-programmers to work with. JavaScript was originally developed by Brendan Eich of Netscape under the name Mocha, which was later renamed to Live Script, and finally to JavaScript.

### 5.2.3 Apache Advantages

The name 'Apache' was chosen from respect for the Native American Indian tribe of Apache, well-known for their superior skills in warfare strategy and their inexhaustible endurance. It also makes a cute pun on "a patchy web server" a server made from a series of patches but this was not its origin. The group of developers who released this new software soon started to call themselves the "Apache Group".

### 5.2.4 Microsoft SQL server Advantages

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet). There are at least a dozen different editions of Microsoft SQL Server aimed at different audiences and for workloads

ranging from small single-machine applications to large Internet-facing applications with many concurrent users. Its primary query languages are T-SQL and ANSI-SQL.

### 5.2.5 HTML Advantages

The Hypertext Markup Language, or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document

### 5.2.6 CSS Advantages

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML.[1] CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.[2]

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.[3] This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate CSS file, which reduces complexity and repetition in the structural content; and enable the CSS file to be cached to improve the page load speed between the pages that share the file and its formatting.

### 5.2.7 Bootstrap Advantages

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. Quickly design and customize responsive mobile-first sites with Bootstrap, the world's most popular front-end open source toolkit, featuring Sass variables and mixing, responsive grid system, extensive prebuilt components, and powerful JavaScript plugins.

## 5.3 Hardware Requirements

Minimum requirements:

- **Device**  
Laptop Or Desktop Computer.
- **CPU**  
Intel® Core™ i3 Processors or Equivalent 1 GHz or Faster.
- **GPU**  
Not necessary
- **Hard Disk Drive**  
Minimum 200GB.(Bigger Hard disk Store Big data)
- **Solid-State Drive**  
Not necessary.(SSD makes system faster)
- **Random Access Memory (RAM)**  
6 GB or Higher 64-bit.

## 5.4 Software Requirements

- **Operating System (OS)**  
**Windows 10** : Windows 10 is a series of operating systems developed by Microsoft and released as part of its Windows NT family of operating systems. It is the successor to Windows 8.1, released nearly two years earlier, and was released to manufacturing on July 15, 2015, and broadly released for the general public on July 29, 2015.
- **Integrated development environment Software (IDE)**  
**Visual Studio Code**: Visual Studio is a free, open-source cross-platform IDE that supports multiple compilers including php, html etc. Using a plugin architecture, its capabilities and features are defined by the provided plugins.

## 5.5 Conclusion

Up to the time of system proposal, we have concerned them with the local design of the system. Although we have decided that all software should be

purchased free. So our project isn't so much expensive but it's play a importance role in our education system.



## **CHAPTER 6**

### **CONCLUSIONS AND FURTHER WORK**

Taking into account all the mentioned details, we can make the conclusion that the patient management system is the inevitable part of the life-cycle of the modern medical institution. It automates numerous daily operations and enables smooth interactions of the users. Developing the hospital system software is a great opportunity to create the distinct, efficient and fast delivering health-care model. Implementation of hospital management system project helps to store all the kinds of records, provide coordination and user communication, implement policies, improve day-to-day operations, arrange the supply chain, manage financial and human resources, and market hospital services. This beneficial decision covers the needs of the patients, staff and hospital authorities and simplifies their interactions. It has become the usual approach to manage the hospital. Many clinics have already experienced its advantages and continue developing new hospital management system project modules