A PROJECT REPORT ON
Hospital Management System

SUBMITTED TO
St. Mira's College for Girls, Pune
Autonomous (Affiliated to Savitribai Phule Pune University)

UNDER THE GUIDANCE OF
MRS. MONIKA RAJGURU

FOR THE PARTIAL FULFILLMENT OF
BACHELOR OF BUSINESS ADMINISTRATION
(COMPUTER APPLICATION)
(S.Y.B.B.A (CA) 2021-22) SEMESTER - IV

BY:
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YEAR: 2021-22

SADHU VASWANI MISSION'S
St. Mira's College For Girls, Pune
Autonomous (Affiliated to Savitribai Phule Pune University)
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[ARTS, COMMERCE, SCIENCE ,BSc(Computer Science), BBA, BBA(CA)]
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CERTIFICATE

This is to certify that Ms. Angha Sanjay Patel (Roll No : 12059) and Ms. Aswini Ketanaboyana (Roll No : 12065) has successfully completed her/their Project titled "Hospital Management System". The same constitutes a part of S.Y.B.B.A(C.A) curriculum for the academic year 2021-22.

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Project Guide (Mrs. Monika Rajguru)	Course Coordinator (Ms. Rekha Kankariya)	External Examiner

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Student Sign	Student Sign

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1. INTRODUCTION

Our project Hospital Management System includes registration form for patients, stores their details into the system, and additionally processed charge within the pharmacy, and labs. Our software system has the power to grant a novel id for each patient and stores the main points of each patient and therefore the employees mechanically. It includes a look facility to grasp the present standing of every space. User will search handiness of a doctor and therefore the details of a patient victimization the id.

Information :

The Hospital Management System will be entered employing a username and positive identification. it's accessible either by Associate in Nursing administrator or secretarial assistant. solely they will add information into the information. the information will be retrieved simply. The interface is extremely easy. the information square measure well protected for private use and makes the information process in no time.

System analysis will be classified into five elements.

1. System designing and initial investigation
2. Data gathering
3. Analysis tools for Data Storage analysis
4. Feasibleness study
5. Cost/benefit analysis

2. EXISTING SYSTEM

The current manual system has a lot of paper work. To maintain the record of all sales and service manually it's very time-consuming task. With the increase in database, it will become massive task to maintain records. Requires large quantities of file cabinets which are huge and requires quite lots of space in the office. The retrieval of records of previously registered patients will be tedious task. Lack of security for the records, anyone can disarrange the records of the system. All this work is done manually by the receptionist or other operational staff and a lot of papers are needed to be taken care of. Doctors have to remember

various medicine available for diagnosis and sometimes miss better alternatives as they can't remember them at that time.

Advantages :-

1. No extra training required
2. Easy to implement
3. Can be stored anywhere
4. Requires minimum effort

Disadvantages :-

1. Needs lots of paper
2. Problem with maintenance
3. Volume of data becomes problem
4. Data handling is problem
5. Once data gets lost it cannot be reproduced easily

3. PROPOSED SYSTEM

The Hospital Management System is designed for any hospital to replace their existing manual paper-based system. The new system is to control the information of patients as well as doctors. These services are to be provided in an efficient, cost-effective manner with the goal of reducing the time and resources currently required for such task.

Goals of proposed system :-

1. The system should be easy to operate
2. The working will be well planned and organized
3. The level of accuracy will be higher
4. Provide quick and efficient retrieval of Information

Advantages :-

1. Low maintenance cost
2. Volume of data is not an issue
3. Data can be easily converted to information
4. Data cannot be corrupted easily with proper backup
5. It can be expanded as well as data communication is possible

Disadvantages :-

1. High starting cost requires
2. Additional manpower is necessary
3. Data communication system will have an additional cost.

4. SOFTWARE SPECIFICATION

HTML

HTML or Hypertext Markup Language is the standard markup language used to create web pages.

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 <img>.
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 markup 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 behavior of HTML web pages.

MYSQL

FEATURES OF MySQL:

Internals and portability:

 Written in C and C++.
 Tested with a broad range of different compilers.
 Works on many different platforms.
 Tested with Purify (a commercial memory leakage detector) as well as with Val grind, a GPL tool.
 Uses multi-layered server design with independent modules.

Security:

 A privilege and password system that is very flexible and secure, and that enables host-based verification.
 Password security by encryption of all password traffic when you connect to a server.

Scalability and Limits:

 Support for large databases. We use MySQL Server with databases that contain 50 million records. We also know of users who use MySQL Server with 200,000 tables and about 5,000,000,000 rows.
 Support for up to 64 indexes per table (32 before MySQL 4.1.2). The maximum index width is 767 bytes for InnoDB tables, or 1000 for MyISAM; before MySQL 4.1.2, the limit is 500 bytes. An index may use a prefix of a column for CHAR, VARCHAR, BLOB, or TEXT column types.

CSS

It is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe them presentation.

CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility,

provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content. CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified. However, if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied.

PHP

What is PHP?

- PHP is an acronym for "PHP Hypertext Preprocessor"
- PHP is a widely-used, open-source scripting language
- PHP scripts are executed on the server
- PHP costs nothing, it is free to download and use

What can PHP do?

- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in your database
- PHP can restrict users to access some pages on your website
- PHP can encrypt data

Why PHP?

- PHP runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
- PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- PHP supports a wide range of databases

 PHP is free. Download it from the official PHP resource: www.php.net

5. SOFTWARE TESTING

INTRODUCTION TO SYSTEM TESTING:

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components or a finished product It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

TYPES OF TESTING:

Unit testing : It involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

Integration testing : These are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

Functional test : Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.
Functional testing is centered on the following items:
Valid Input : identified classes of valid input must be accepted.
Invalid Input : identified classes of invalid input must be rejected.
Functions : identified functions must be exercised.
Output : identified classes of application outputs must be exercised.
Systems/Procedures : interfacing systems or procedures must be invoked.

System Test : System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based

on process descriptions and flows, emphasizing pre-driven process links and integration points.

White Box Testing : White Box Testing is a testing in which in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is purpose. It is used to test areas that cannot be reached from a black box level.

Black Box Testing : Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software under test is treated, as a black box .you cannot "see" into it. The test provides inputs and responds to outputs without considering how the software works.

Test objectives

- All field entries must work properly.
- Pages must be activated from the identified link.
- The entry screen, messages and responses must not be delayed.

Features to be tested

- Verify that the entries are of the correct format
- No duplicate entries should be allowed
- All links should take the user to the correct page.

Integration Testing : Software integration testing is the incremental integration testing of two or more integrated software components on a single platform to produce failures caused by interface defects. The task of the integration test is to check that components or software applications, e.g. components in a software system or – one step up – software applications at the company level – interact without error.

Acceptance Testing : User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements.

Test Results : All the test cases mentioned above passed successfully. No defects encountered.

6. FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are:

1. Economic Feasibility

This study is carried out to check the economic impact will have on the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is

limited. The expenditures must be justified. Thus, the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products have to be purchased.

2. Technical Feasibility

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes for the implementing this system.

3. Operational Feasibility

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

7. DATA DICTIONARY

 Data dictionary is a collection of the data that are used as a part of the system.

 In a simple language data dictionary is a record of data about data.

APPOINTMENT TABLE			
Fields	Data Type	Size	Constraints
AppointmentId	int	100	Primary Key

DoctorId	varchar	100	Foreign Key
PatientId	varchar	100	Foreign Key
PatientName	varchar	100	-
AppointmentDateAndTime	varchar	100	-
DateOfAppointmentTaken	varchar	100	-
AppointmentTakenById	int	100	-

This table is used to identify at which time and date patient take appointment and which doctor given the appointment.

CASE TABLE			
Fields	Data Type	Size	Constraints
Caseid	int	100	Primary Key
EmployeeId	int	100	Foreign Key
PatientId	int	100	Foreign Key
AppointmentId	int	100	Foreign Key
DateAndTime	varchar	100	-
Payment	varchar	100	-

This table identifies all the detail of patient and also include in which time patient case entered.

COMPLAIN TABLE			
Fields	Data Type	Size	Constraints
ReportId	int	100	Primary Key
ReportName	varchar	100	-
ReportMessage	varchar	100	-

This table identifies a patient complains when the patients are first time come checking.

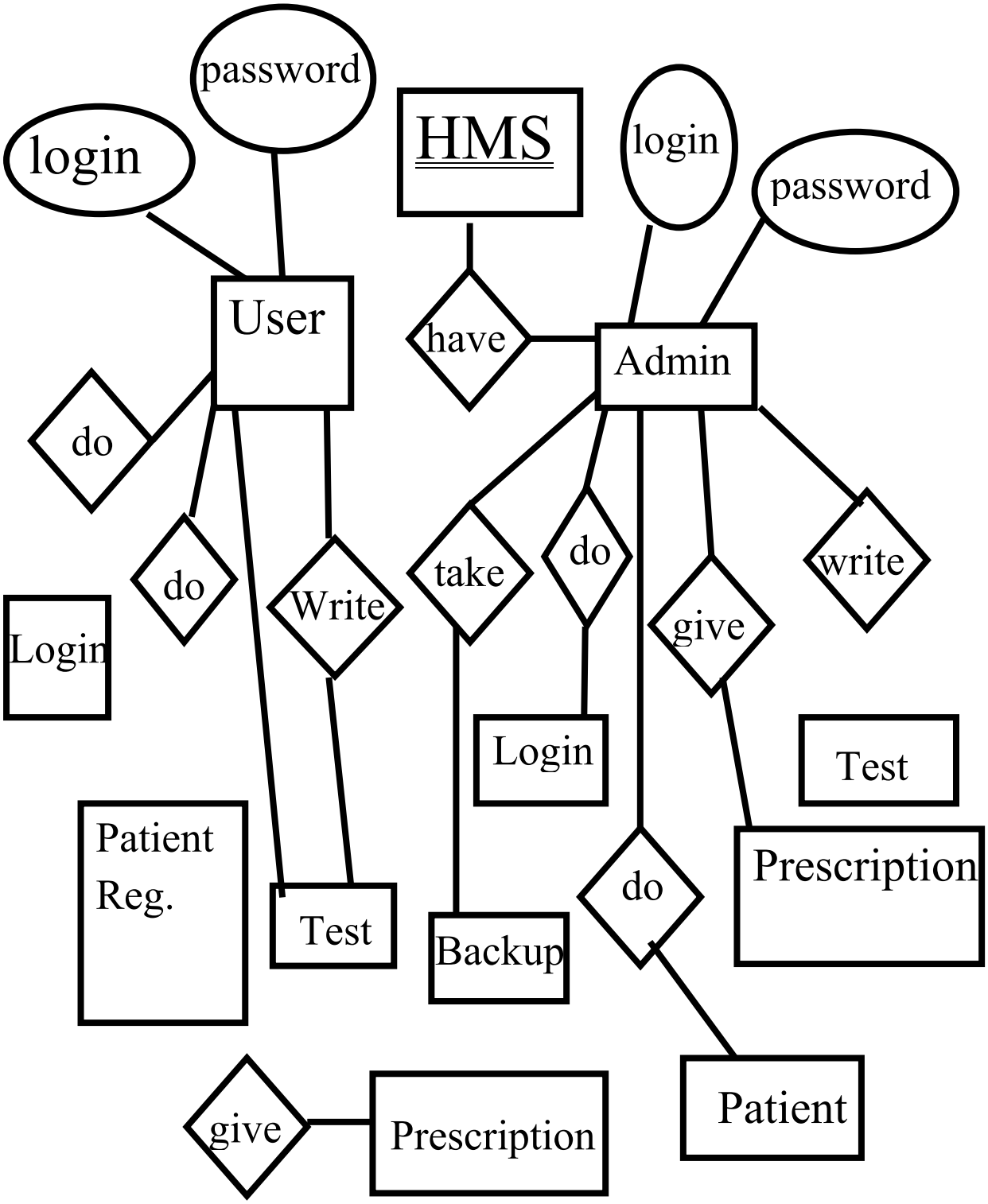
EMPLOYEE TABLE			
Fields	Data Type	Size	Constraints
EmployeeId	int	100	Primary Key
EmployeeFirstName	varchar	100	-
EmployeeLastName	varchar	100	-
Username	varchar	100	-
Email	varchar	100	-
Gender	varchar	100	-
ContactNo	varchar	100	-
Country	varchar	100	-
Password	varchar	100	-
DateRegistered	varchar	100	-

This table identifies employee's information

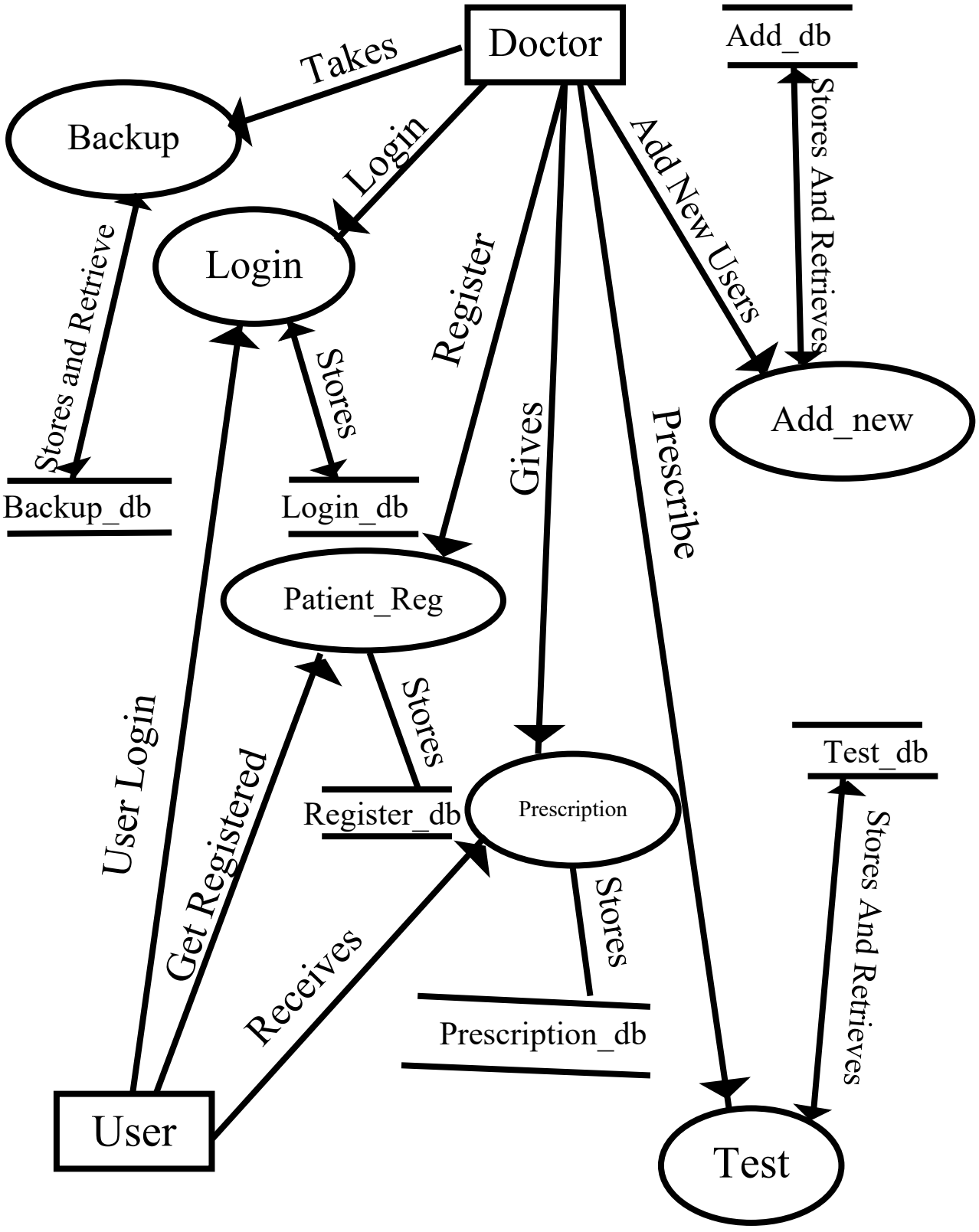
PATIENT TABLE			
Fields	Data Type	Size	Constraints
PatientId	Int	100	Primary Key
PatientFirstName	varchar	100	-
PatientLastName	varchar	100	-
Username	varchar	100	-
Password	varchar	100	-
Contact	varchar	100	-
Email	varchar	100	-
DateRegistered	varchar	100	-

This table identifies full detail of patients

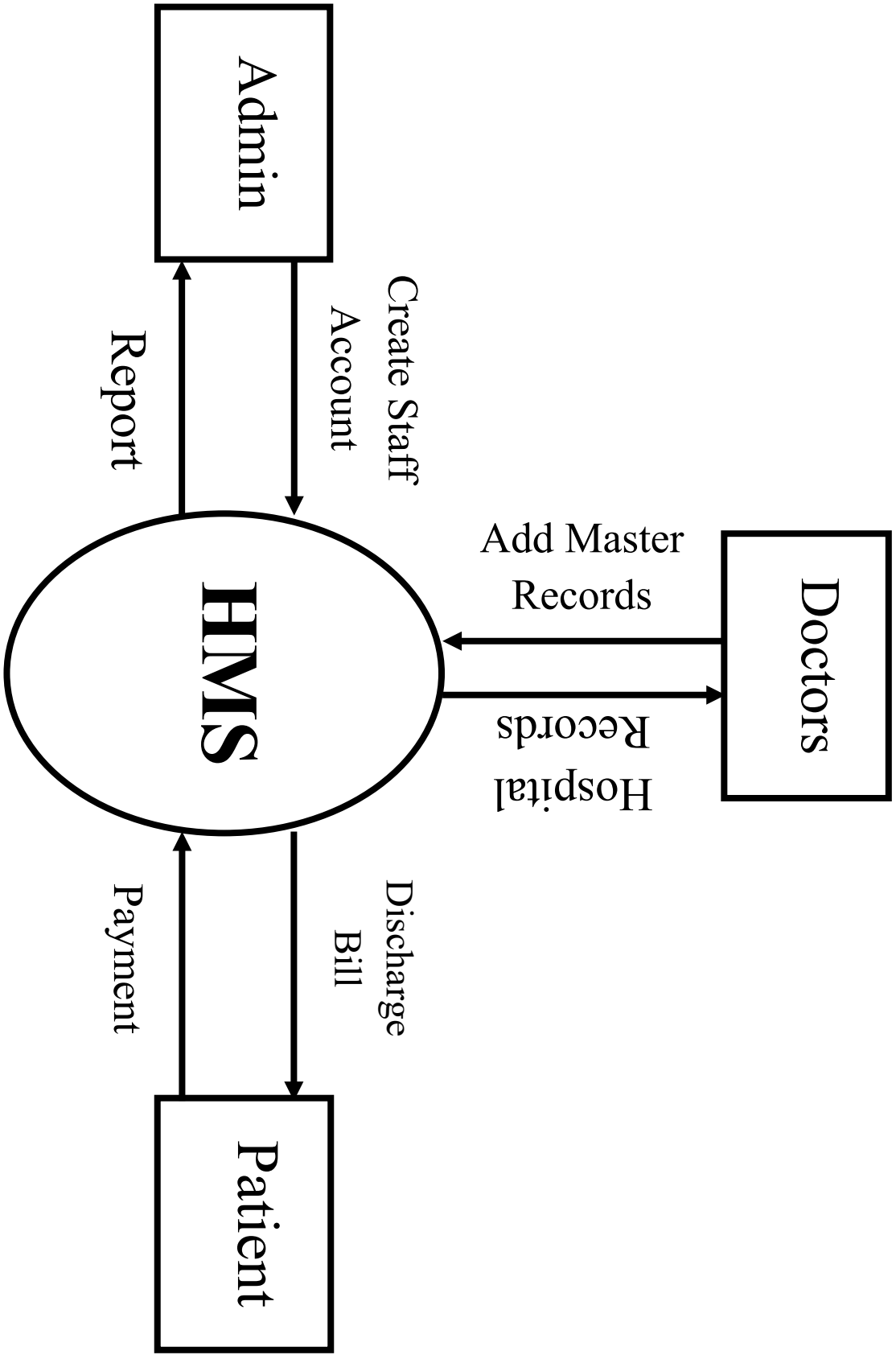
8. ENTITY RELATION DIAGRAM



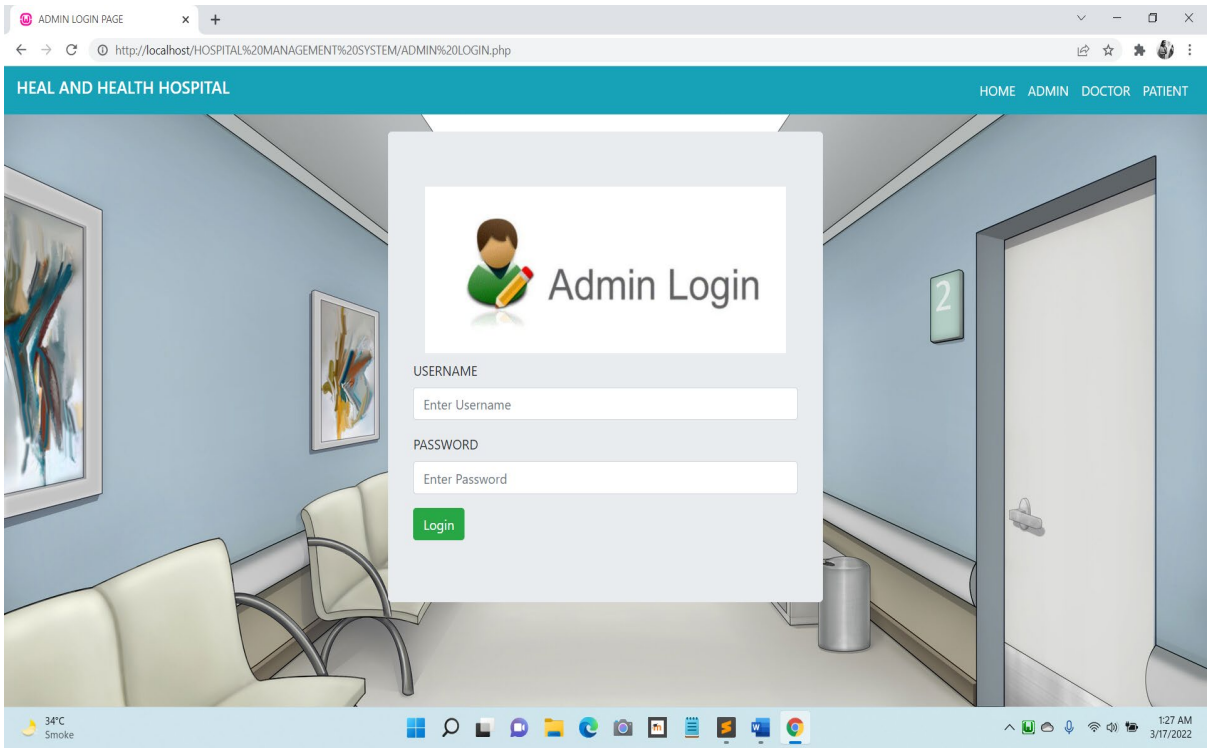
9. DATA FLOW DIAGRAM

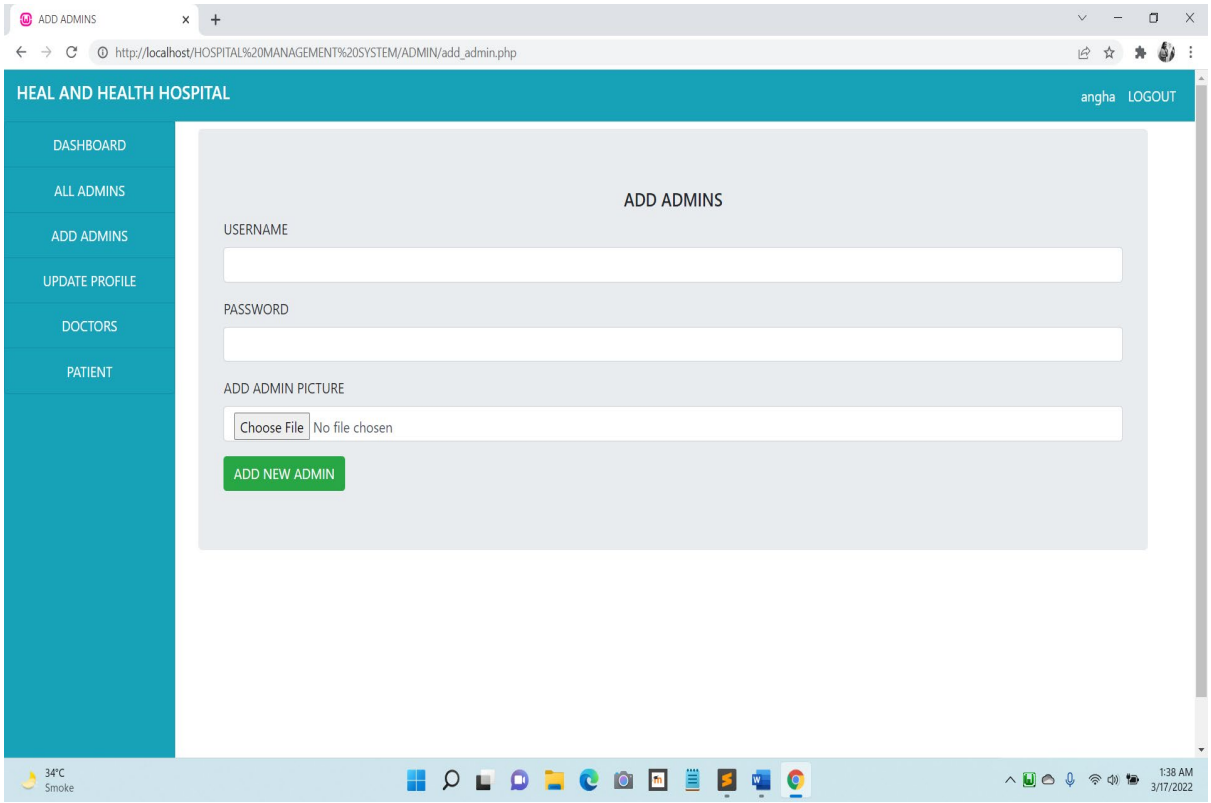


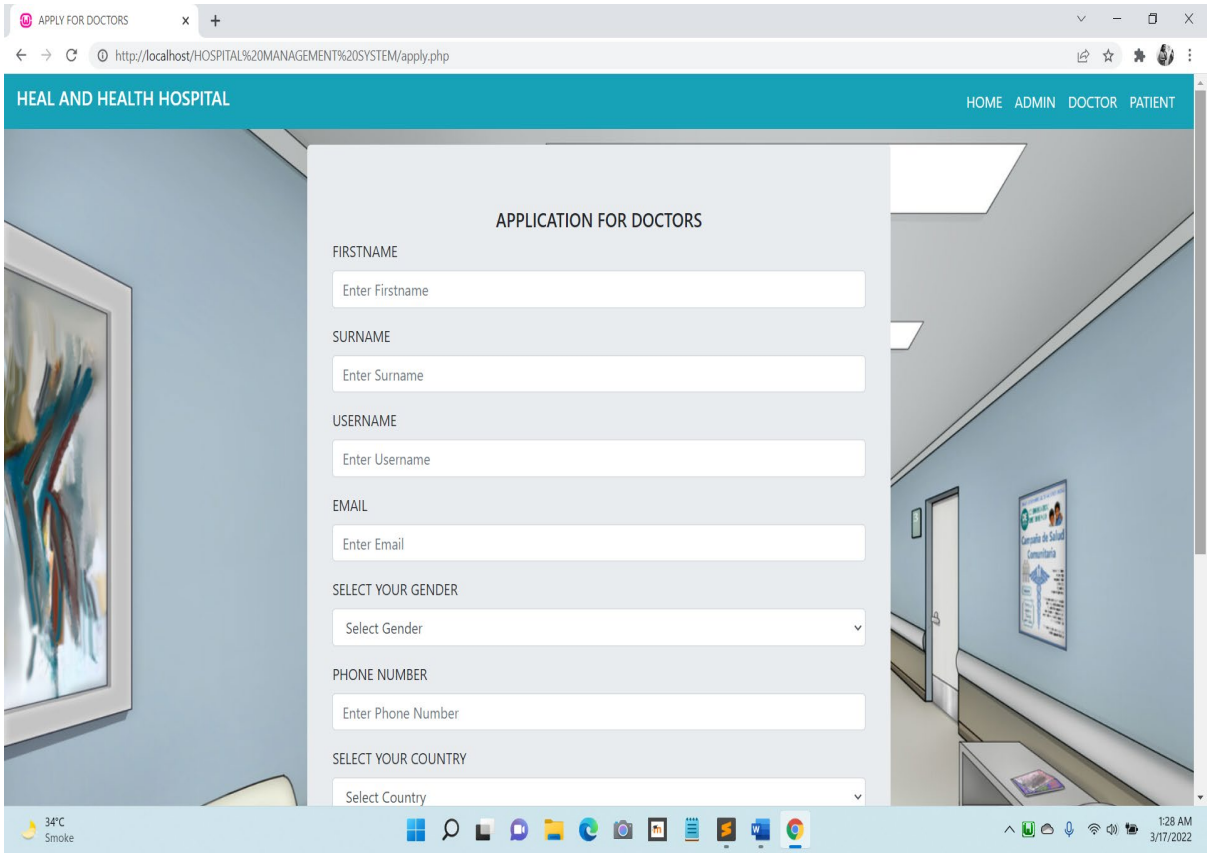
10. CONTEXT LEVEL DIAGRAM

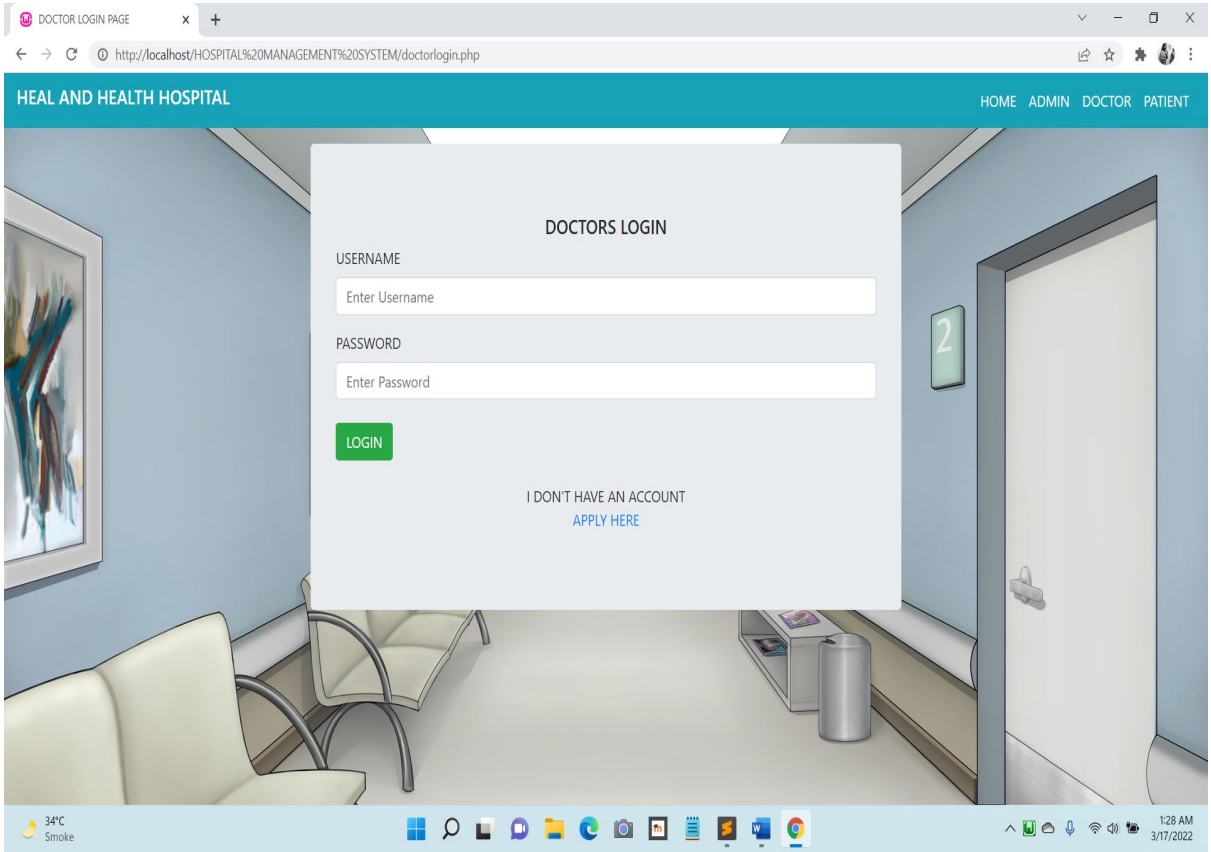


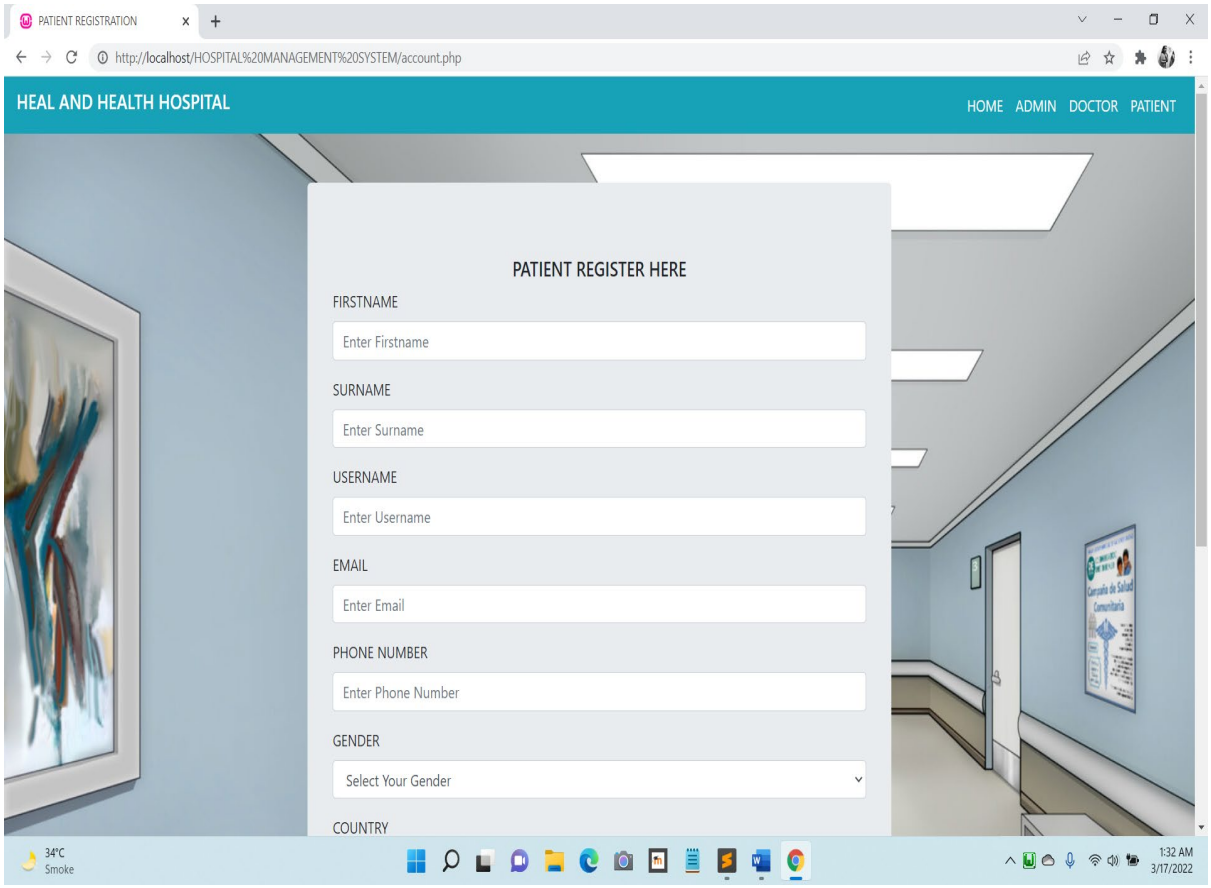
11. INPUT SCREEN

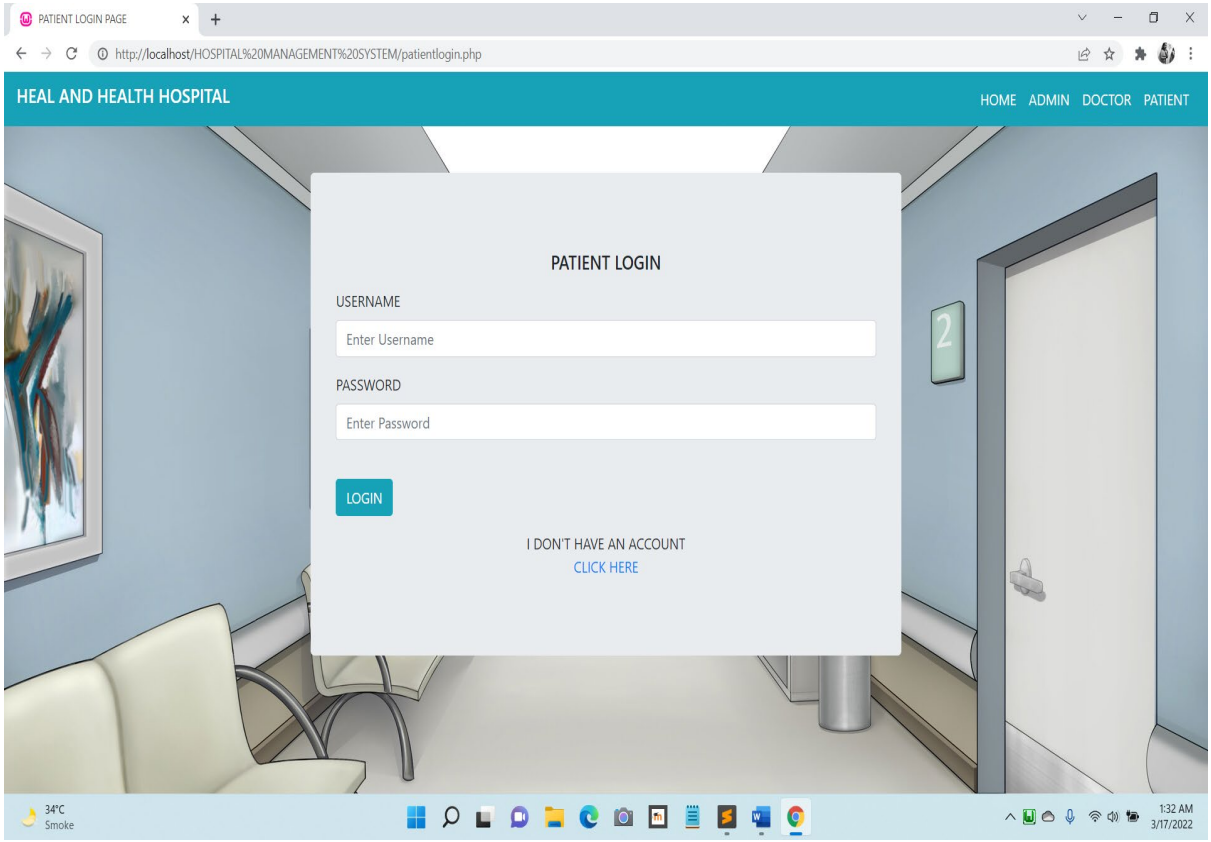




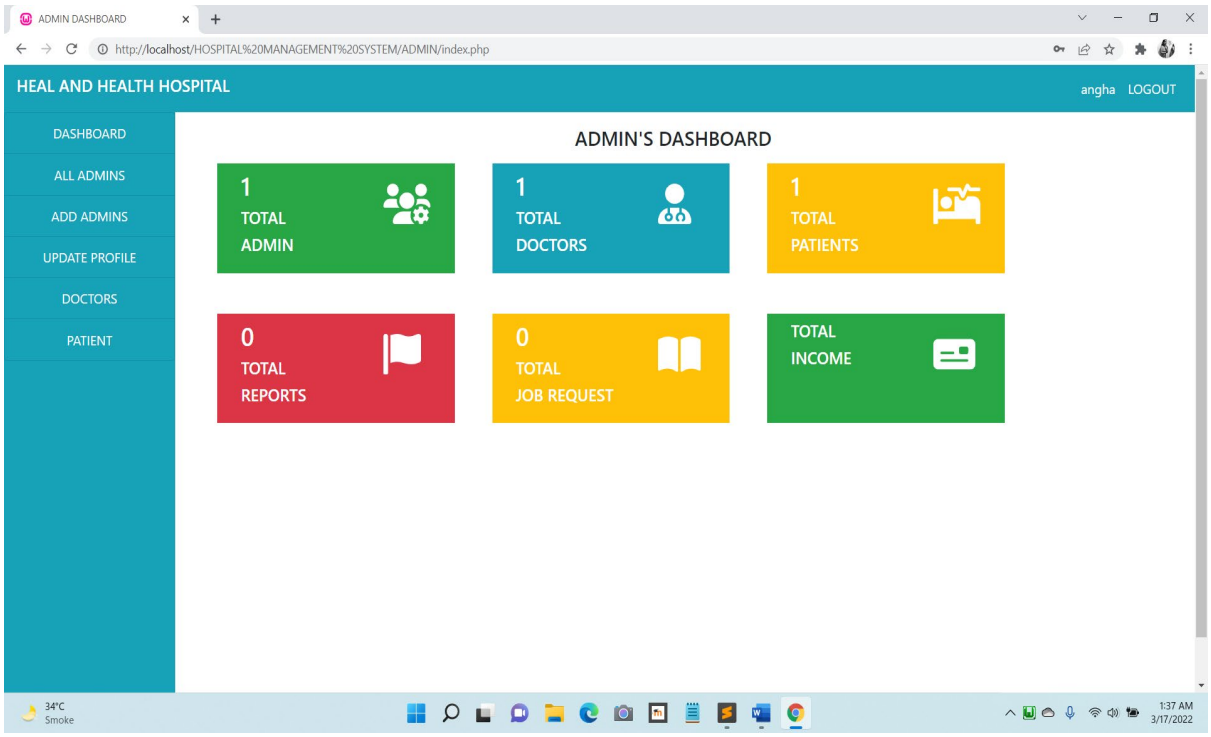

APPLY FOR DOCTORS
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/apply.php
HEAL AND HEALTH HOSPITAL
HOME ADMIN DOCTOR PATIENT
APPLICATION FOR DOCTORS
FIRSTNAME
Enter Firstname
SURNAME
Enter Surname
USERNAME
Enter Username
EMAIL
Enter Email
SELECT YOUR GENDER
Select Gender
PHONE NUMBER
Enter Phone Number
SELECT YOUR COUNTRY
Select Country

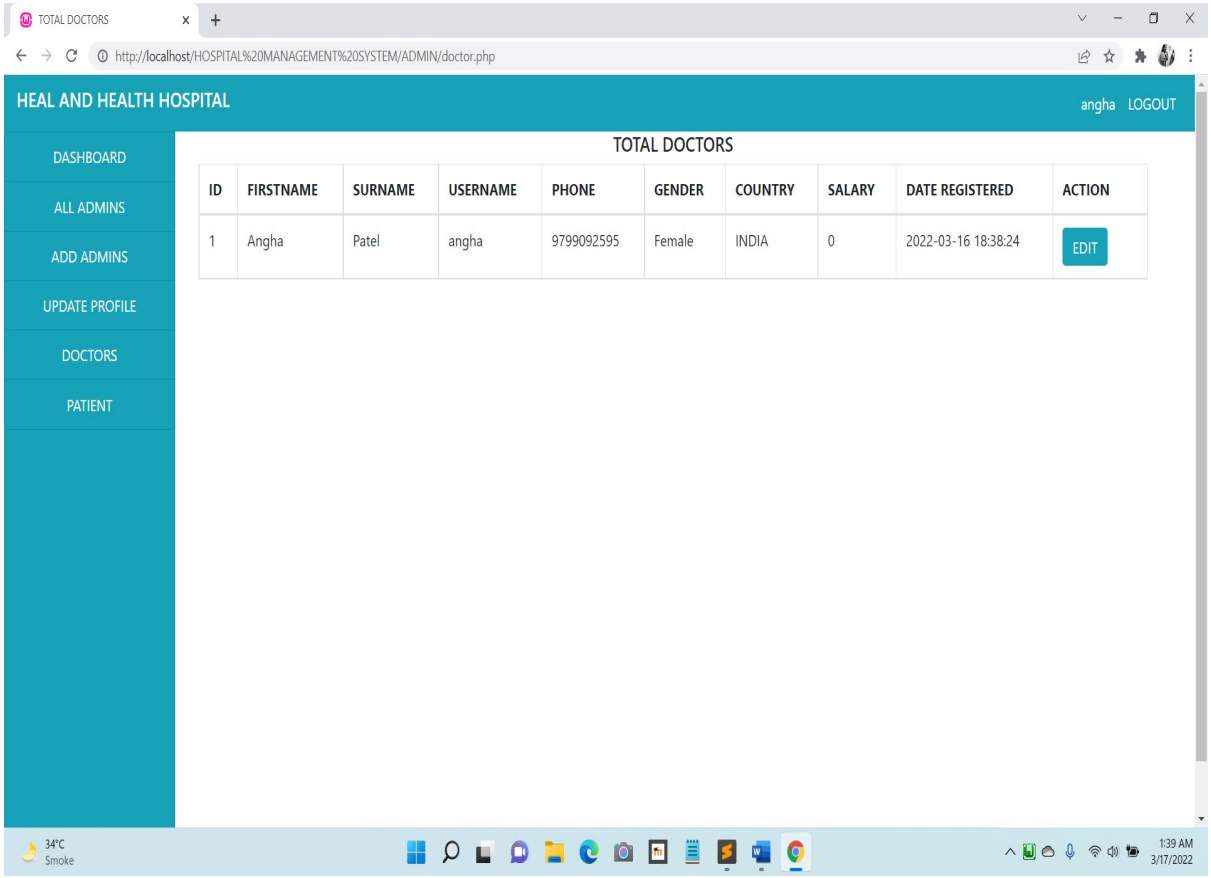

DOCTOR LOGIN PAGE
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/doctorlogin.php
HEAL AND HEALTH HOSPITAL
HOME ADMIN DOCTOR PATIENT
DOCTORS LOGIN
USERNAME
Enter Username
PASSWORD
Enter Password
LOGIN
I DON'T HAVE AN ACCOUNT
APPLY HERE

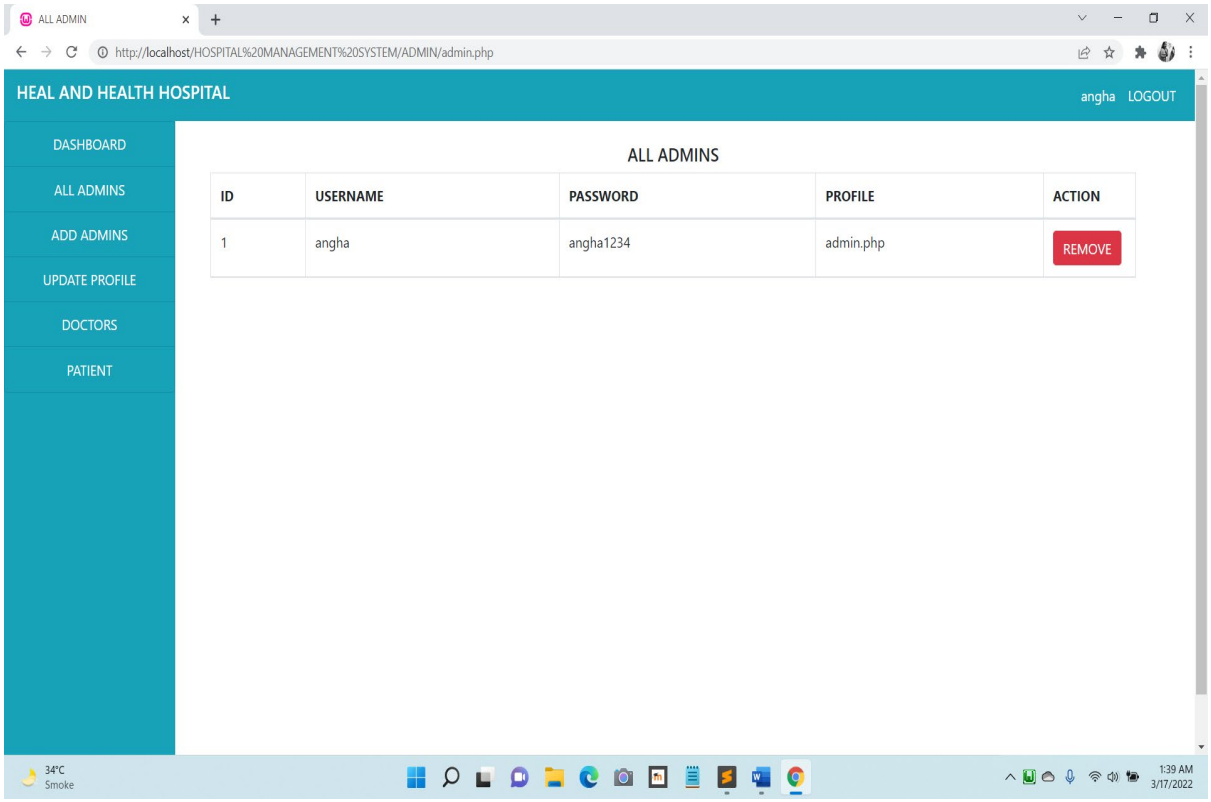

PATIENT REGISTRATION
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/account.php
HEAL AND HEALTH HOSPITAL
HOME ADMIN DOCTOR PATIENT
PATIENT REGISTER HERE
FIRSTNAME
Enter Firstname
SURNAME
Enter Surname
USERNAME
Enter Username
EMAIL
Enter Email
PHONE NUMBER
Enter Phone Number
GENDER
Select Your Gender
COUNTRY
34°C
Smoke
1:32 AM
3/17/2022

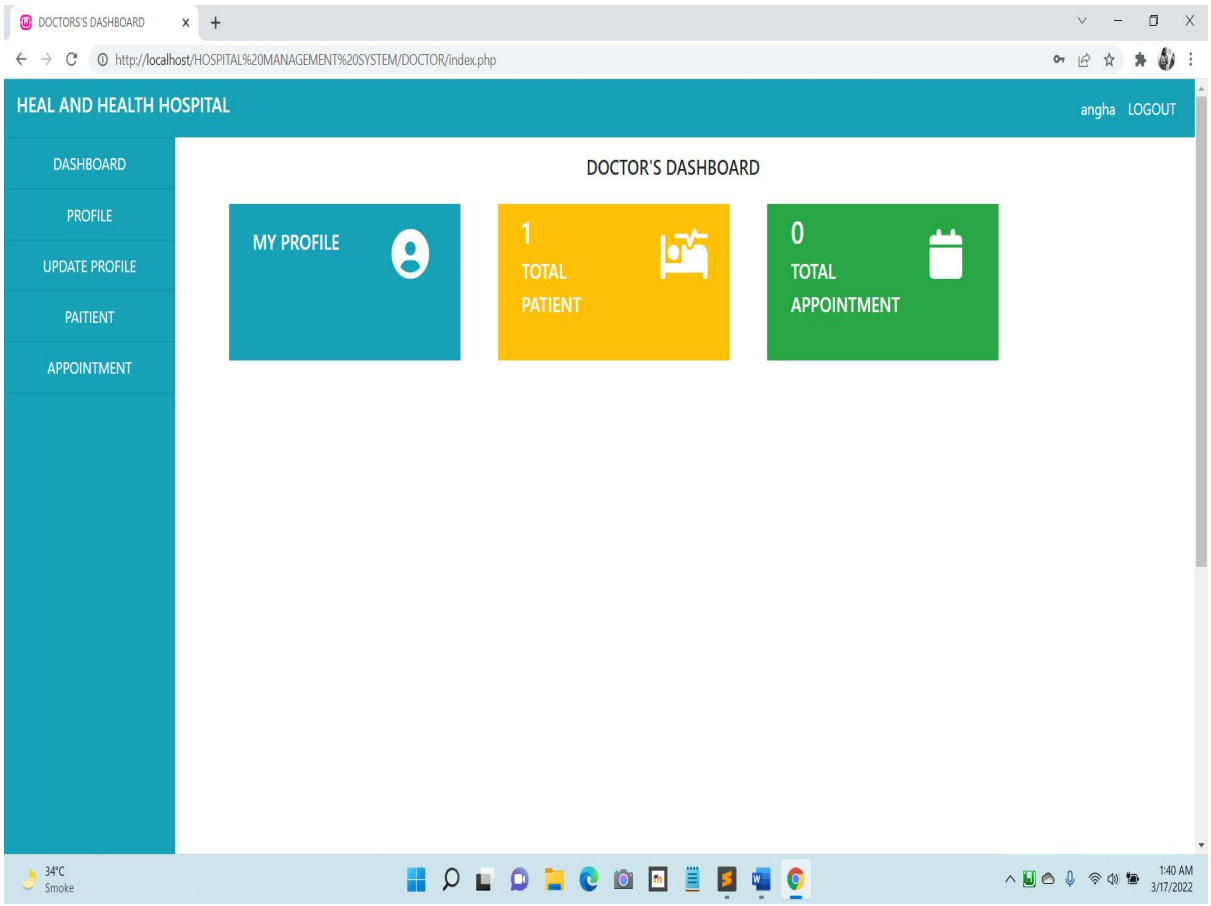

PATIENT LOGIN PAGE
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/patientlogin.php
HEAL AND HEALTH HOSPITAL
HOME ADMIN DOCTOR PATIENT
PATIENT LOGIN
USERNAME
Enter Username
PASSWORD
Enter Password
LOGIN
I DON'T HAVE AN ACCOUNT
CLICK HERE
34°C
Smoke
1:32 AM
3/17/2022

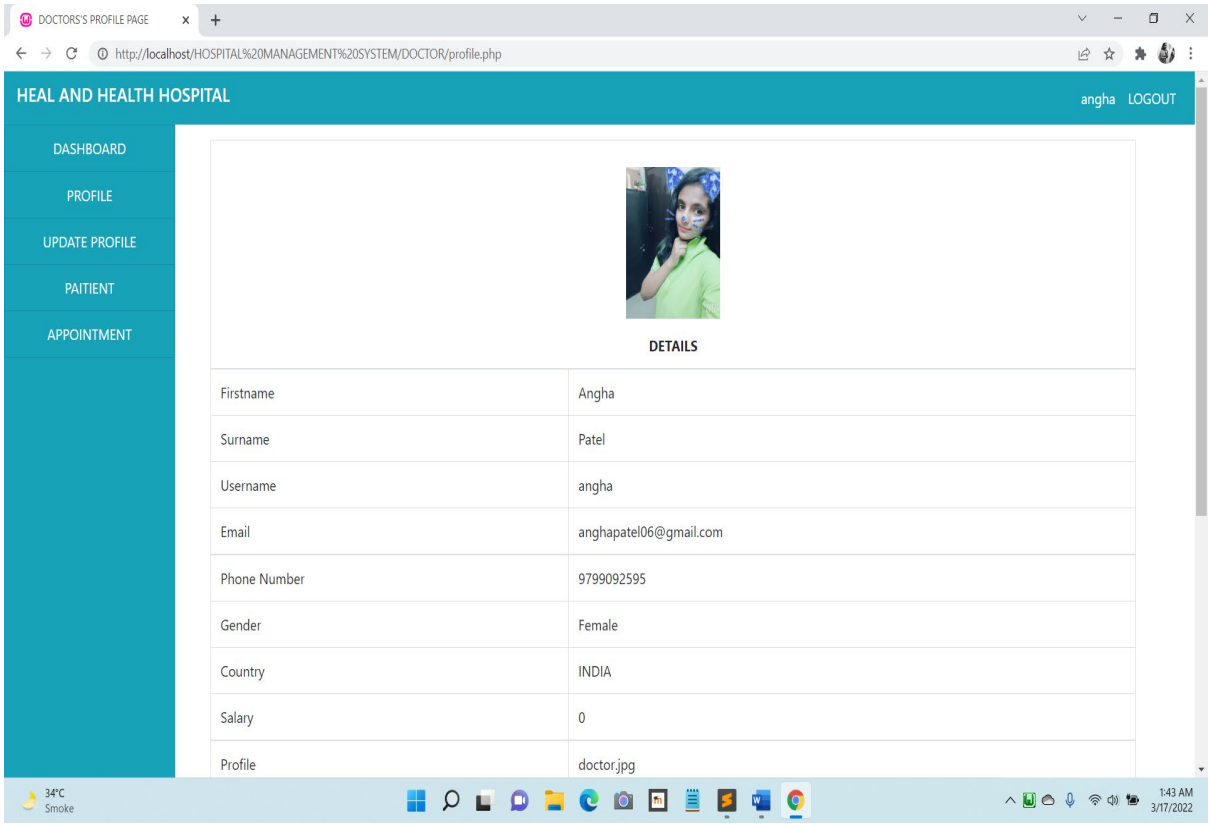
12. OUTPUT SCREEN

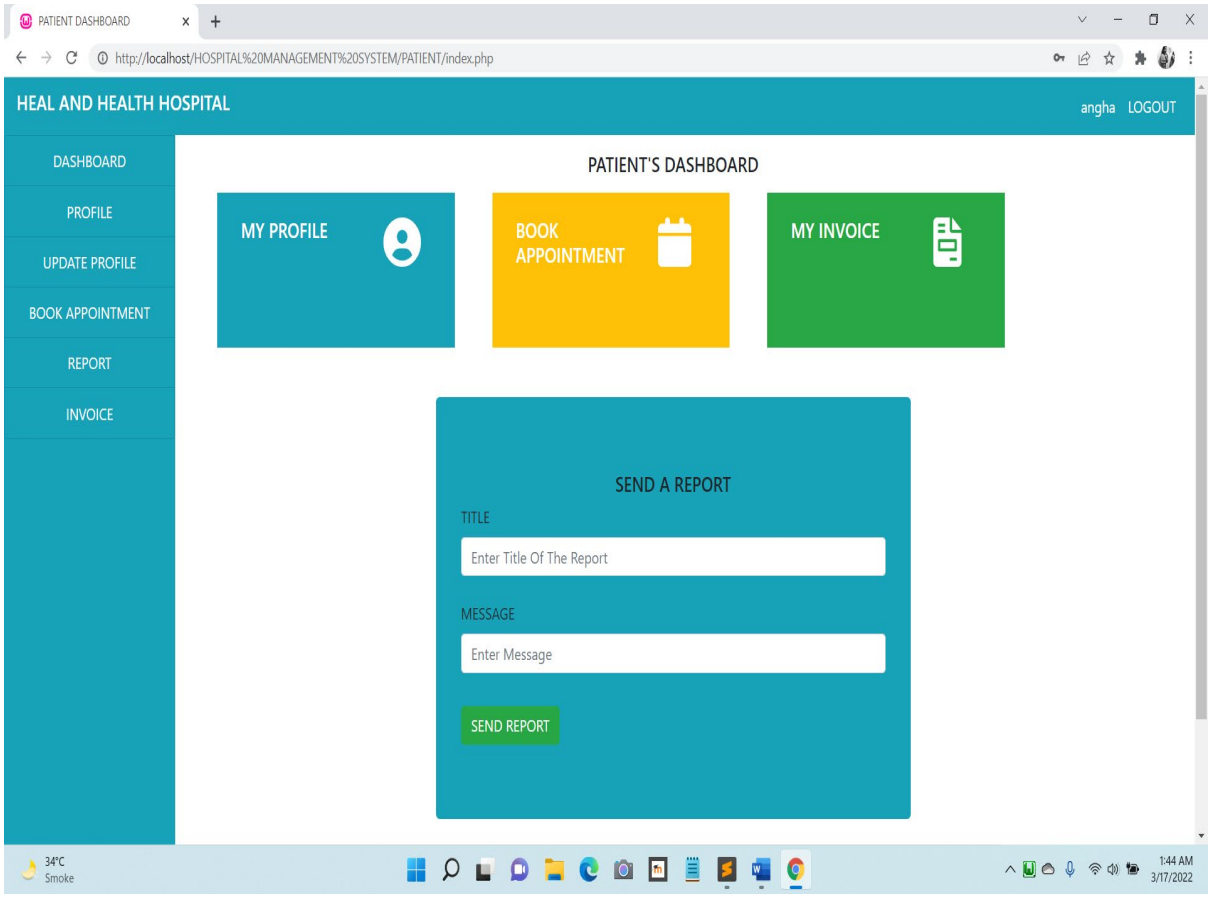


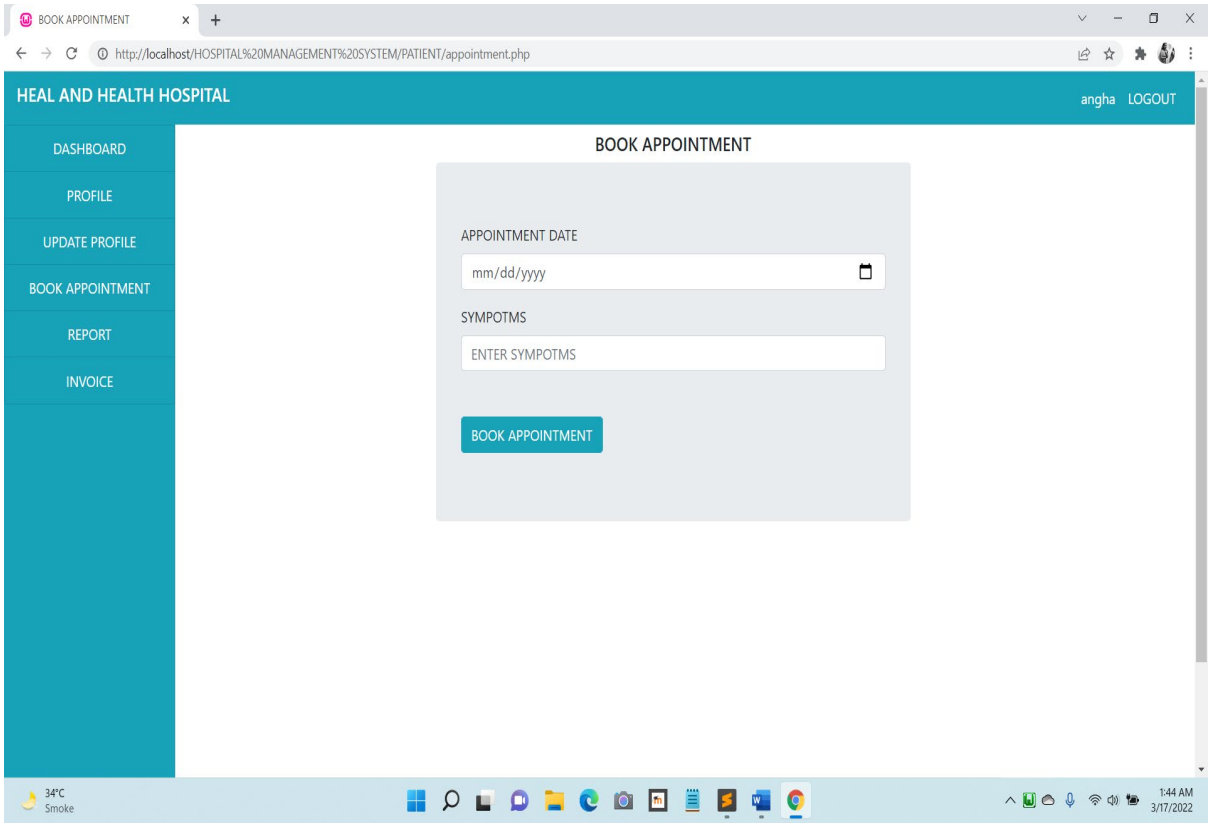


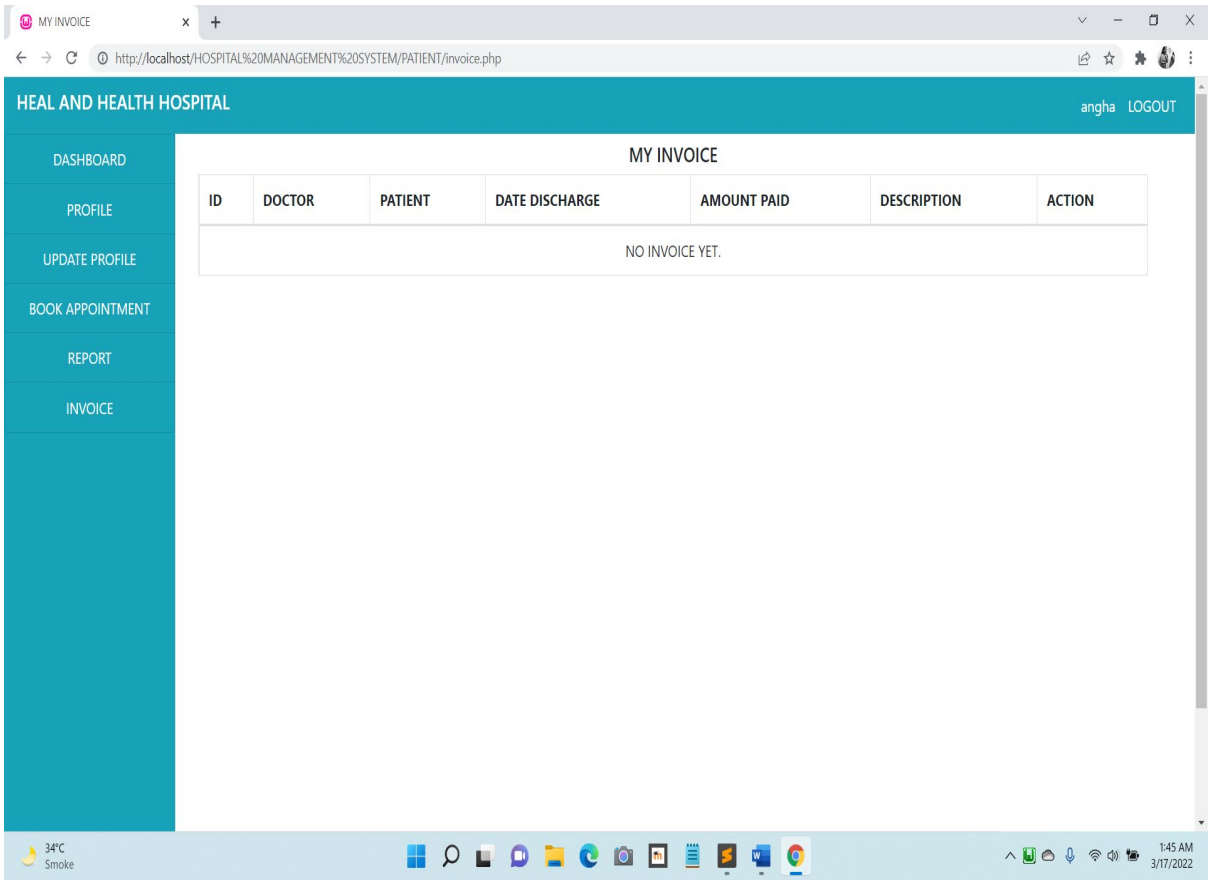

ALL ADMIN
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/ADMIN/admin.php
HEAL AND HEALTH HOSPITAL
angha LOGOUT
DASHBOARD
ALL ADMINS
ADD ADMINS
UPDATE PROFILE
DOCTORS
PATIENT
ALL ADMINS
ID
USERNAME
PASSWORD
PROFILE
ACTION
1
angha
angha1234
admin.php
REMOVE
34°C
Smoke
1:39 AM
3/17/2022


DOCTORS'S DASHBOARD
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/DOCTOR/index.php
HEAL AND HEALTH HOSPITAL
angha LOGOUT
DASHBOARD
PROFILE
UPDATE PROFILE
PAITIENT
APPOINTMENT
DOCTOR'S DASHBOARD
MY PROFILE
1
TOTAL
PATIENT
0
TOTAL
APPOINTMENT
34°C
Smoke
1:40 AM
3/17/2022


DOCTORS'S PROFILE PAGE
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/DOCTOR/profile.php
HEAL AND HEALTH HOSPITAL
angha LOGOUT
DASHBOARD
PROFILE
UPDATE PROFILE
PAITIENT
APPOINTMENT
DETAILS
Firstname Angha
Surname Patel
Username angha
Email anghapatel06@gmail.com
Phone Number 9799092595
Gender Female
Country INDIA
Salary 0
Profile doctor.jpg


PATIENT DASHBOARD
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/PATIENT/index.php
HEAL AND HEALTH HOSPITAL
angha LOGOUT
DASHBOARD
PROFILE
UPDATE PROFILE
BOOK APPOINTMENT
REPORT
INVOICE
PATIENT'S DASHBOARD
MY PROFILE
BOOK APPOINTMENT
MY INVOICE
SEND A REPORT
TITLE
Enter Title Of The Report
MESSAGE
Enter Message
SEND REPORT


BOOK APPOINTMENT
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/PATIENT/appointment.php
HEAL AND HEALTH HOSPITAL
angha LOGOUT
DASHBOARD
PROFILE
UPDATE PROFILE
BOOK APPOINTMENT
REPORT
INVOICE
BOOK APPOINTMENT
APPOINTMENT DATE
mm/dd/yyyy
SYMPOTMS
ENTER SYMPOTMS
BOOK APPOINTMENT
34°C
Smoke
1:44 AM
3/17/2022


MY INVOICE
http://localhost/HOSPITAL%20MANAGEMENT%20SYSTEM/PATIENT/invoice.php
HEAL AND HEALTH HOSPITAL
angha LOGOUT
DASHBOARD
PROFILE
UPDATE PROFILE
BOOK APPOINTMENT
REPORT
INVOICE
MY INVOICE
ID
DOCTOR
PATIENT
DATE DISCHARGE
AMOUNT PAID
DESCRIPTION
ACTION
NO INVOICE YET.
34°C
Smoke
1:45 AM
3/17/2022

13. CONCLUSION

Taking into account all the mentioned details, we can make the conclusion that the hospital management system is the inevitable part of the lifecycle 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 healthcare 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.

Need to improve management in your hospital or plan to innovate healthcare with new software product? The hospital system software is a great solution for any medical institution.