



Project Report

PATIENT MANAGEMENT SYSTEM

Submitted to

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Introduction

Patient Management systems are an integral part of the e-healthcare process. Our nation is a small, densely populated low middle-income economy. Resources are in dearth against the demands. Like many others in her peer group, healthcare in Bangladesh struggles in a vicious cycle of inefficiency, mismanagement, patient dissatisfaction, and high costs. Reluctantness to embrace digital technologies in the healthcare sector, staff shortages, and not involving the consumers (patients) in the decision-making process lead to this stage. NSU e-PMS is an initiative to address these issues and to design an opportunity for universal access to healthcare from anywhere at any time.

About NSU e-PMS

A Patient Management System is a platform for ensuring universal access to healthcare from anywhere at any time.

Generally, a Patient Management System consists of a patient portal, doctor database. The system enables the patients to book an appointment, call an ambulance, and even rate the satisfaction of the services received. Generating invoices and recording

information about the diagnostics given to the patient can also be done.

Besides, it facilitates administration, documentation, tracking, and reporting of diseases and medicines.

Learn more at the [Repository link](#)

Purpose and Benefits of NSU e-PMS

The main objective of the Patient Management System is to:

1. To build a patient-centered healthcare system by giving them a voice, accessibility of healthcare from anywhere at any time.
2. To keep tabs on common diseases and efficacious treatments.
3. Empower physicians to analyze patients beforehand from their stored medical records.

The project presents a compilation of interactive features for a patient looking to book an appointment, call an ambulance in case of an emergency. It will lessen the bothering and time of going to the hospital to book an appointment. In developing nations like

Bangladesh, few institutions have sought patients' views on satisfaction with services, and there is little effort to involve them in measuring satisfaction or defining health service standards. Our project aims to give them a voice by allowing them to evaluate the services received. Our country has a shortage of hospital staff, yet every doctor uses trained staff to assist them in the patient booking and handling their diagnostic reports. But, they do everything through pen and paper, which results in improper workforce utilization, mismanagement, and longer waiting times for patients. However, here, the bookings can be confirmed immediately by one person. The patients' medical history data will assist the doctor to develop accuracy, become motivated, gain beforehand understanding, and build confidence.

Patient Management System Features

The web page will open with a Login or Sign up page view. New patients have to register to avail the services. When patients register or logs in, they can:

- Choose a doctor and desired time slot if available.
- Book an appointment for diagnostic tests.

- Call an ambulance.
- Access history of their past visits to a doctor.

Hospital administrators or doctors can also log in from the initial page. After logging in, they can:

- See the patient bookings and confirm them.
- See the previously recorded details of the patient.

User Story

Use Case 1

Mr. ABC, a patient needs to book an appointment with the doctor or for a test. He can go to the NSU e-PMS site and fill up the form to book an appointment. The hospital admin will call him to confirm the booking.

Use Case 2

Any patient who needs to book an ambulance can go to the NSU e-PMS site. He can fill-up the form to book an ambulance. The hospital authority will contact him.

Use Case 3

The hospital admin can see the bookings for the day and schedule their tasks accordingly.

Limits

The whole process is online, and a huge portion of the conservative demographic hesitates to adopt new technology. That's why we must use simple and interactive UI. High expenses of modern servers, maintenance costs, providing security for online payment, training the staff can be challenging. Data verification will also be a problem. Bangladesh has started digital NID cards, but accessing the database will not be easy. We may need to follow a lengthy and tedious procedure. Lastly, gaining the trust of the patient may also be challenging.

Example of Various PMS



Front End Plan

1. Login page
2. Main page
3. Register page
4. Admin page
5. Doctor appointment booking page
6. Test booking page
7. Ambulance booking page
8. Booking details page

Back End Development

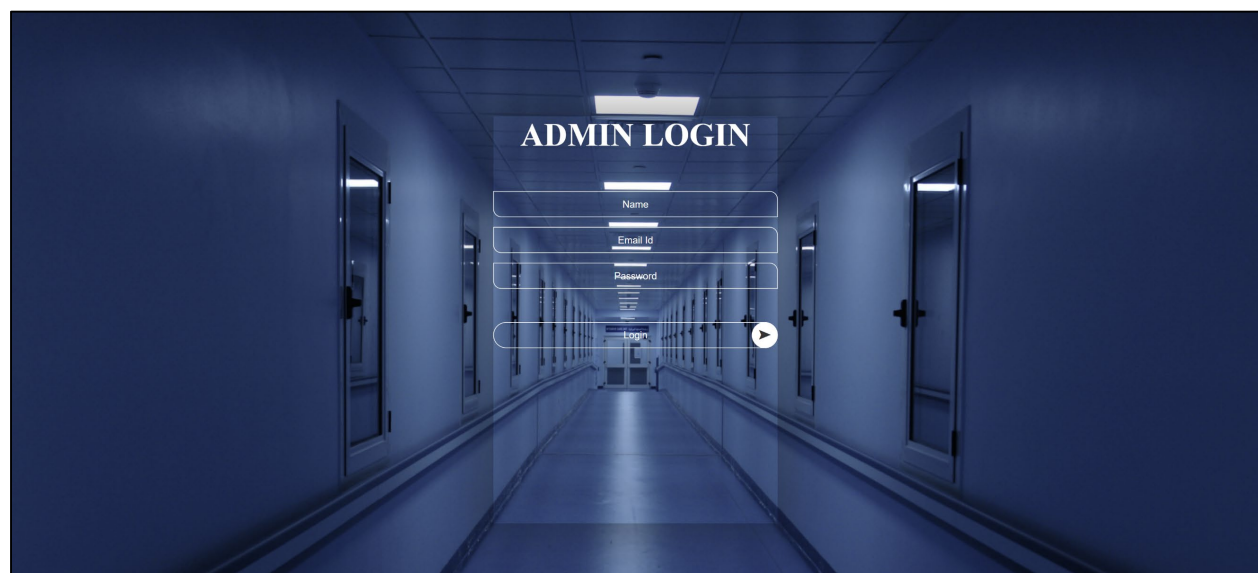
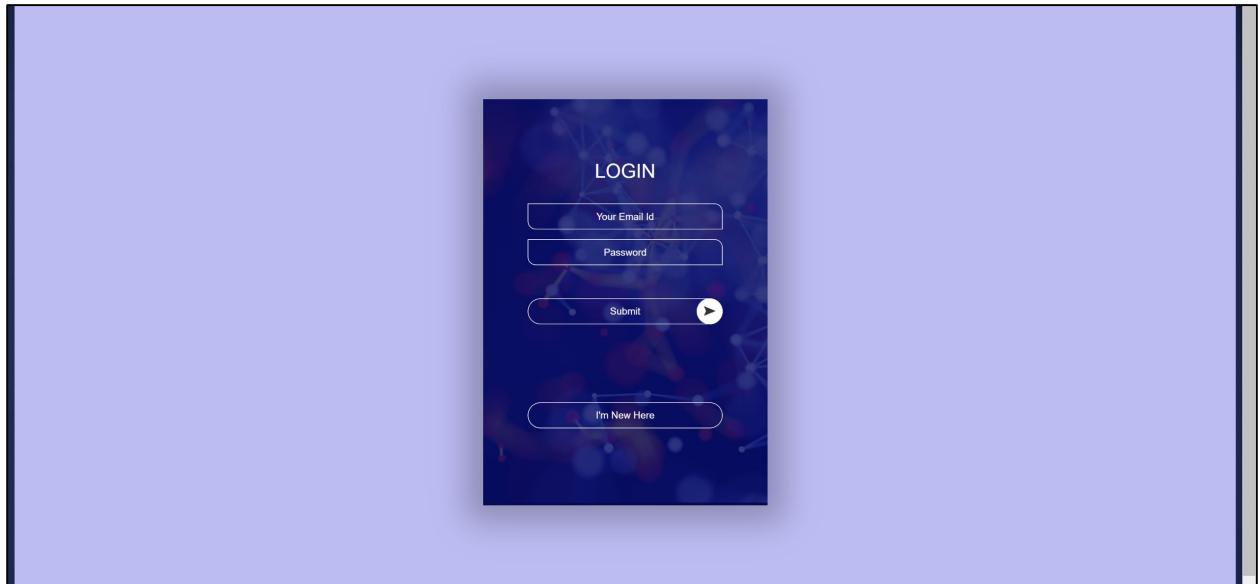
1. Account Creating
 - a. Sign up Form
 - b. Login Form
 - c. Forgot Password
2. Portal Management
 - a. Patient Portal
 - b. Doctor Portal
 - c. Test Database
3. Booking Facility
 - a. Doctor appointment

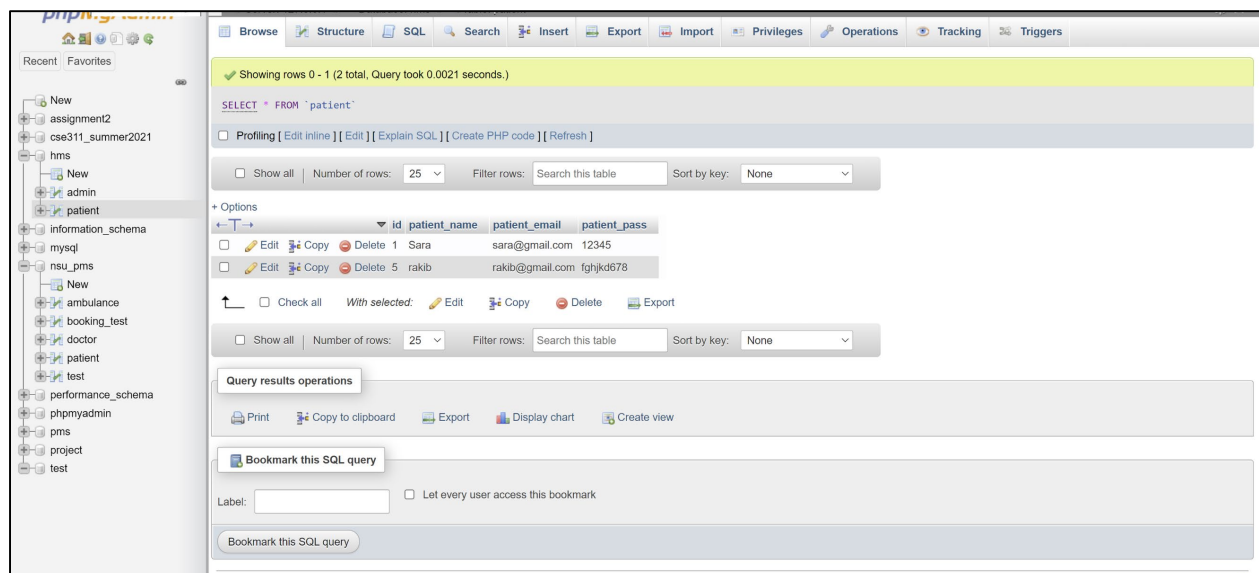
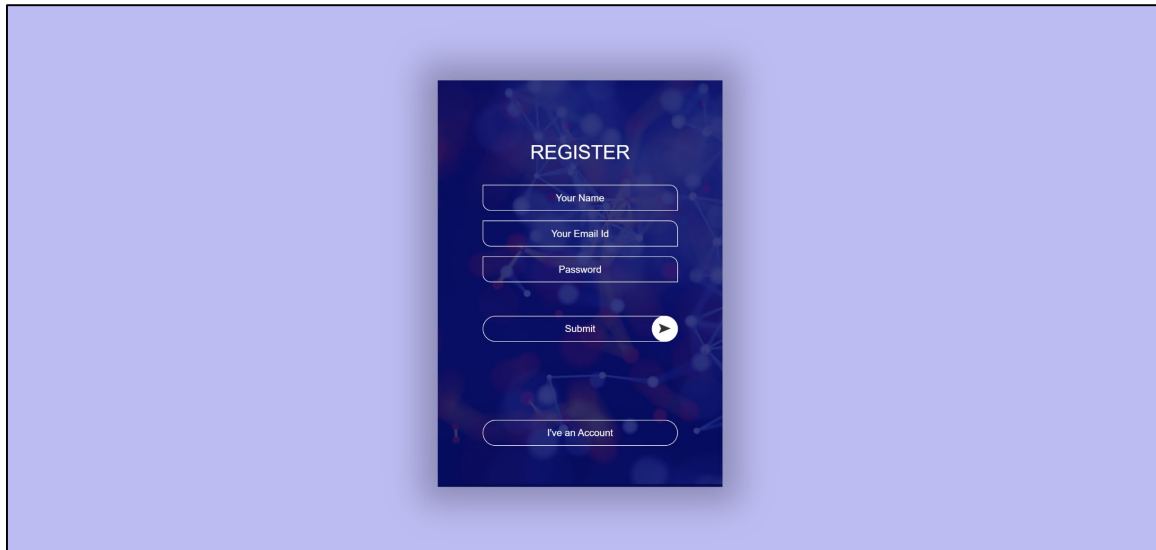
- b. Test booking
- c. Ambulance booking

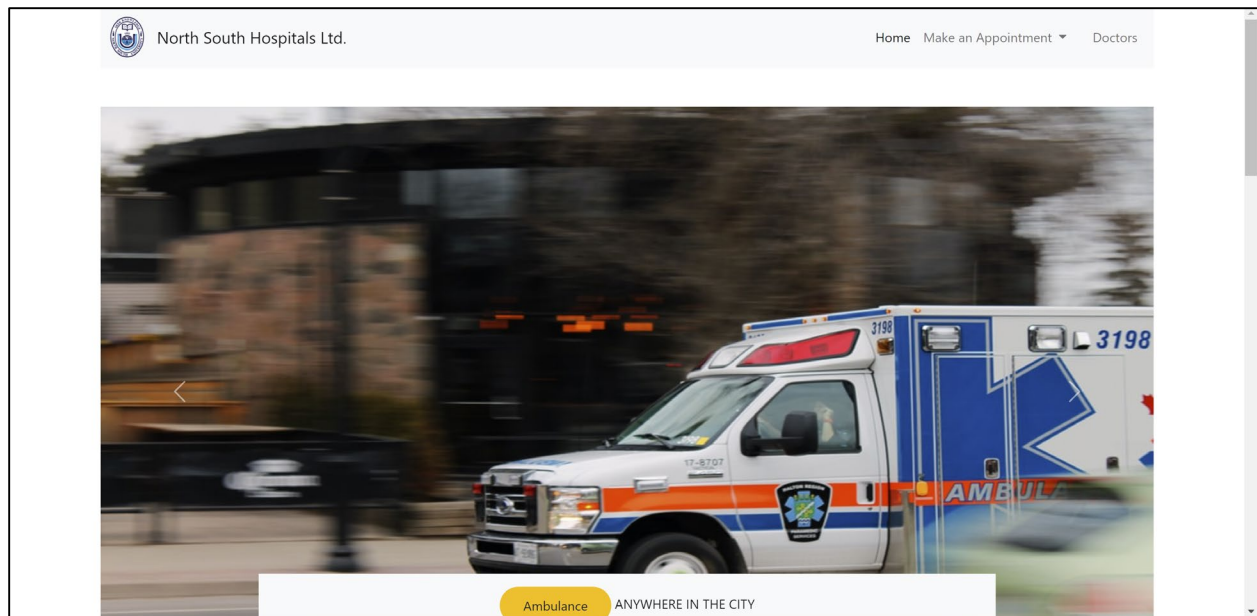
Tools and Technology

HTML, CSS, JavaScript, Bootstrap, MySQL, PHP, Web servers.

Some Screenshots of the Project







North South Hospitals Ltd. Home Make an Appointment Doctors

Doctor Appointment Form

Name of the patient	Age
<input type="text" value="fahim"/>	<input type="text" value="26"/>
DEPARTMENT	DOCTORS
<input type="text" value="Obstetrics & Gynecology"/>	<input type="text" value="Dr. Nargis Fatema"/>
Appointment Date	Select Time
<input type="text" value="2021-09-20"/>	<input type="text" value="04:40 PM"/>
<input checked="" type="checkbox"/> I hereby confirm that the information provided herein is accurate	
<input type="button" value="Submit"/>	

phpMyAdmin

Recent Favorites

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- assignment2
- cse311_summer2021
- hms
 - New
 - admin
 - patient
- information_schema
- mysql
- nsu_pms
 - New
 - ambulance
 - booking_test
 - doctor
 - patient
 - test
- performance_schema
- phpmyadmin
- pms
- project
- test

Showing rows 0 - 4 (5 total, Query took 0.0011 seconds.)

SELECT * FROM `patient`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

		p_id	patient_name	patient_age	department_name	doctor_name	apnt_date	apnt_time	
<input type="checkbox"/>	Edit	Copy	Delete	1	Sara	20	Neonatology	Dr. Aftab Yusuf Raj	2021-09-20 15:40:00
<input type="checkbox"/>	Edit	Copy	Delete	2	sakib	35	Orthopedics	Dr. Md. O.F.G Kibria	2021-09-20 17:45:00
<input type="checkbox"/>	Edit	Copy	Delete	3	rakib	38	Rheumatology and Internal Medicine	Prof. Dr. Md. Siraj Uddin	2021-09-20 15:50:00
<input type="checkbox"/>	Edit	Copy	Delete	4	farzan	26	Dermatology	Dr. Lutfun Nahar Begum	2021-09-20 15:50:00
<input type="checkbox"/>	Edit	Copy	Delete	5	fahim	26	Obstetrics & Gynecology	Dr. Nargis Fatema	2021-09-20 16:40:00

Check all | With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

North South Hospitals Ltd. Home Make an Appointment Doctors

Book a lab-test

TEST Appointment Date

CT Scan 2021-09-20

Select Time

01:30 PM

☒ I hereby confirm that the information provided herein is accurate

Submit

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Booking Successful

Showing rows 0 - 1 (2 total, Query took 0.0006 seconds.)

```
SELECT * FROM `booking_test`
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	booking_id	test_name	date	time	
<input type="checkbox"/>	Edit	Copy	Delete 1	Blood Test	2021-09-19 19:41:00
<input type="checkbox"/>	Edit	Copy	Delete 2	CT Scan	2021-09-20 13:30:00

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

☐ Print ☐ Copy to clipboard ☐ Export ☐ Display chart ☐ Create view

☐ Bookmark this SQL query

Label: ☐ Let every user access this bookmark

North South Hospitals Ltd.
Home
Make an Appointment
Doctors

Call an Ambulance

Select Date
2021-09-20

Select Time
05:11 PM

Street
shahjahan road

Suburb
mohammadpur

Postcode
1207

☒ I hereby confirm that the information provided herein is accurate

Request an Ambulance

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phpmyadmin

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 - New
 - ambulance
 - booking_test
 - doctor
 - patient
 - test

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Showing rows 0 - 3 (4 total, Query took 0.0006 seconds.)

SELECT * FROM `ambulance`

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

		ambulance_id	booking_date	booking_time	street	suburb	postcode
<input type="checkbox"/>	Edit Copy Delete	1	0000-00-00	03:59 pm	msk06	bashundhara	1229
<input type="checkbox"/>	Edit Copy Delete	2	2021-09-19	03:59 pm	msk06	bashundhara	1229
<input type="checkbox"/>	Edit Copy Delete	3	2021-09-19	16:45	05	baddha	1229
<input type="checkbox"/>	Edit Copy Delete	4	2021-09-20	17:11	shahjahan road	mohammadpur	1207

Check all With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

Conclusion

A Patient Management System is a technological tool used to automate the daily chores of a hospital. People who will use these services can book an appointment or call an ambulance. They can get to know all the information of the doctor and service providers. They can also provide feedback on their visit to the healthcare center. The owners can keep a tab of all the bookings. They will be able to know which diseases are on rising. Furthermore, they can learn about the quality of their provided services. The doctors can study the patients' medical history beforehand and build a triage system in a time of emergency. Patient Management Systems are a necessity for the future's healthcare sector.