A Project/Dissertation ETE Review Report

on **MEDICARE**

Submitted in partial fulfillment of the requirement for the award of the degree of

BACHELOR OF TECHNOLOGY



Under The Supervision: MS J.ANGELIN BLESSY

Submitted By GROUP NO-BT3162 GOVIND MISHRA (19SCSE1010492) TARUN MEHROTRA (19SCSE1010479)

SCHOOL OF COMPUTING SCIENCE AND ENGINEERING DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING GALGOTIAS UNIVERSITY, GREATER NOIDA INDIA OCTOBER,2021

TABLE OF CONTENT

Title			Page
			No.
Abstract			I
List of Table			II
List of Figures			III
Chapter 1	Introduction		1
	1.1	Introduction	2
	1.2	Formulation of Problem	3
		1.2.1 Tool and Technology Used	
Chapter 2	Liter	5	
Chapter 3	UML Diagram Data Flow Diagram		

ABSTRACT

Nowadays, the development of the e-health concept is offering various aspects. In this paper, we present a novel website architecture. Designed for an e-health platform based on a wireless sensor network (WSN), this website offers the ergonomic and multi-functions opportunity for an ambient intelligent hospital. It enables the management of patients' records, real-time papatienttate monitoring based on remote sensing of biometric signals as well as indoor geo-localization for either in or outoutpatientnd professionals. Using architecture based on a combined approach, this website presents a part of a big e-health project development.

INTRODUCTION

A health system, also sometimes referred to as hea health care system or as a healthcare system, is the organization of people, institutions, and resources that deliver health care services to meet the health needs of target populations.

There is a wide variety of health systems around the world, with as many histories and organizational structures as there are nations. Implicitly, nations must design and develop health systems by their needs and resources, although common elements in virtually all systems are primary healthcare and public health measures.[1] In some countries, health system planning is distributed among market participants. In others, there is a concerted effort among governments, trade unions, charities, religious organizations, or other co-ordinate bodies to deliver planned health care services targeted to the populations they serve. However, health care planning has been described as often evolutionary rather than revolutionary. As with other social institutional structures, health systems are likely to reflect the history, culture, and economics of the states in which they evolve. peculiarities complicate bedevil and These international comparisons and preclude any universal standard of performance.

Literature Review

We performed a systematic review of the literature in Medicare and Medline to identify all studies that used the Medicare database for research related to musculoskeletal surgeries (Figure 1). We followed the Preferred Reporting Items for Systematic reviews and Meta-analyses guidelines.7 The initial search used the keywords "Medicare database" and related terms for each. We expanded these terms to include corresponding Medical Subject Headings. The search was limited to peer-reviewed manuscripts published in English after 1990. After eliminating duplicates, two reviewers separately screened the title and abstracts of publications followed by a full-text review to arrive at final inclusive articles. We manually checked citations of articles that met our study criteria to identify relevant articles not found through the initial search.

EXISTING SYSTEM

In current healthcare, information is conveyed from one healthcare professional to another through paper notes or personal communication. It is very difficult to analyze the usage percentage of hospital resources, Bed occupation Ratio, Administration, Laboratory information even in a single center. Then we can expect the complexity while integrating multi-specialty Medicare Centers. For example, in the United States, electronic communication between physicians and pharmacists is not typically employed but, rather, the physician writes a prescription on paper and gives it to the patient. The patient carries the prescription to the pharmacy, waits in line to give it to a pharmacist, and waits for the pharmacist to fill the prescription. Room Reservations, Doctor Appointment Schedules, Operation Schedules, and Medicine indentation information is very difficult to maintain and share among the different Medicare Centers. To improve this process, the prescriptions could be communicated electronically from the physician to the pharmacist, and the human-computer interfaces for the physicians, nurses, pharmacists, and other healthcare professionals could be voice-enabled. The current manual system is slow laborious and error-prone to computerize the same for quicker efficient results and customer satisfaction

PROPOSED SYSTEM

We propose to have a central chain of all the medical history of our registered users. This will include test reports, diagnosis reports as well as prescriptions. This works like a digital locker that shall be only be accessed by the patient and patient authorized doctors. The only function available with the doctor would be adding and viewing reports that too with the authority. Modification /Deletion won't be available to either party to decrease the chance of altered reports.

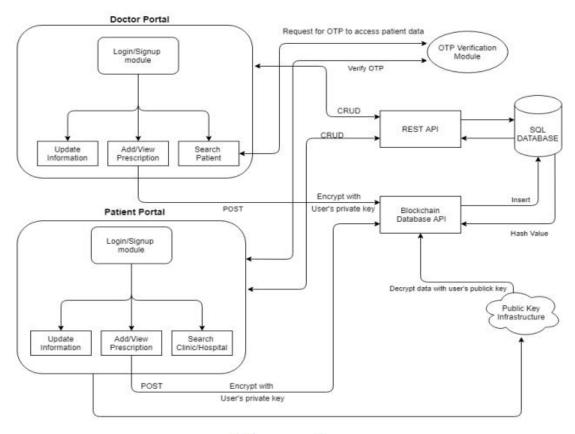


Figure 1
ONLINE APPOINTMENT

OBJECTIVE OF PROPOSED HEALTH CARE MANAGEMENT SYSTEM

user can store information about the Patients that come to the hospital.

- 2) Information about Patients is done by just writing the Patients name, age, and gender.
- 3) Generating bills. This system also helps the user in generating bills.
- 4) Bills are generated by recording the price for each facility provided to the Patient on a separate sheet and at last, they all are summed up.
- 5) This system also stores- information related to the diagnosis given to Patients.
- 6) Diagnosis information of patients is generally recorded on a document, which contains Patient information.
- 7) This system also store-information about the Immunization provided to children/patients.
- 8) Immunization records of children are maintained in preformatted sheets, which are kept in a file.
- 9) Keeping information about various diseases and medicines available to cure them.
- 10) Information about various diseases is not kept as any document. Doctors themselves do this job by remembering various medicines.

SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

• System : Pentium IV 2.4 GHz.

Hard Disk : 1 TB.Floppy Drive : 1.44 Mb.

Monitor : 15 VGA Colour.

Mouse : Logitech. Ram : 512 Mb.

SOFTWARE REQUIREMENTS:

Operating System: Windows

- On the front end side, this project is built using React,
- · which relies on a component-based architecture. Ant Design
- is a react UI library that helps in building these components.
- On the back-end side, this project uses Node.js and Express
- framework for rapid performance. We have used SQL
- · database to store data ie. patient records, hospital data, and
- · medical history. This data is retrieved and transferred
- through the usage of smart contracts. We have additionally
- · used firebase for file uploading and OTP Verification. For
- · authentication we have used JSON Web Token (JWT) and
- BcryptJS.

· A. Backend Technologies

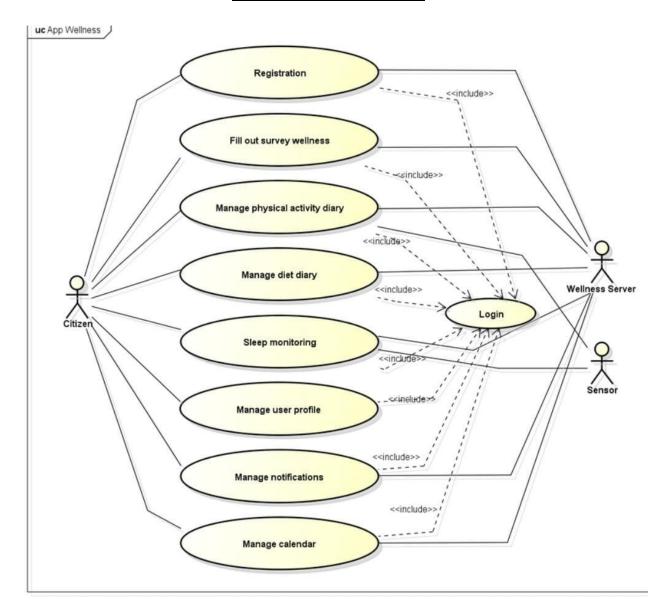
- Node.js It is a platform developed on Chrome's
- JavaScript runtime to build rapid and scalable network

- applications. Node.js uses an event-driven, non-blocking I/O
- · model that makes it efficacious and lightweight, ideal for
- comprehensive data, real-time applications that deploy
- across distributed devices.
- • Express is Express is a lightweight and adaptable
- · Node.js web application framework that gives a solid set of
- · features for web applications. Express gives a meager layer
- of fundamental web application features, without clouding
- Node.js features.

· B. Frontend Technologies

- •• HTML/CSS Hypertext Markup Language
- (HTML) and Cascading Style Sheets (CSS) are the core
- technologies used for building frontend web applications.
- HTML acts as the structure of the web page while the CSS
- is the styling and the visual layout.
- Java-script is a high-level programming
- · language that runs on the client-side. Its implementation as a
- client-side script allows user to interact with the web pages
- and make it dynamic. It acts as a brain to the front-end web
- applications.
- • React React.js is a front end java-script library
- · made by Facebook. It is used for building fast and dynamic
- · user interfaces. It uses components were elements of the
- · user interface is broken into small chunks of code and can
- · be reused.
- · end.

6. <u>UML DIAGRAM</u>



HEALTH MANAGEMENT

FUTURE SCOPE

For the future, we plan to incorporate a couple of features.

Firstly we plan to implement the payment module in our application so the patient can give the payment for consultation directly on the platform after booking his/her slot. This way we want to make the process completely hassle-free Secondly, we plan to make navigation easier and faster by incorporating a chatbot to assist the user as we are targeting a wide age group of users. The chatbot can guide the user on how to add his/her prescription, book a spot and guide the user regarding what type of doctor he/she should consult based on the symptoms and his/her record history.

CONCLUSION

In this paper, we have primarily discussed the full stack web architecture for the implementation of Secured storage of medical records which will be useful in the healthcare system. By this approach we are not only securing the patient medical records but also making the records easily accessible, helping doctors understand the patient more closely in detail by analyzing his/her records, patients can skip going through piles of paperwork before seeking treatment and hospitals won't have to maintain their patient records. This could revolutionize hospital management by providing digital access and paperless documentation. In case a patient is unconscious and won't be able to give access to records, secondary access could be provided by listed emergency contacts.

<u>REFERENCE</u>

1. Ra, Ho-Kyeong & Yoon, Hee & Son, Sang & Stankovic, John & Ko,

Jeonggil. (2018). "HealthNode: Software Framework for Efficiently De-signing and Developing Cloud-Based Healthcare Applications."

Mobile Information Systems. 2018. 1-12. 10.1155/2018/6071580.

- 2. Thakur, S., Singh, A. K., Ghrera, S. P., & Elhoseny, M. (2018). "Multilayer security of medical data through watermarking and chaotic encryption for telehealth applications." Multimedia Tools and Applications. doi:10.1007/s11042-018-6263-3
- 3. Samonte, M.J.C., Mullen, R.C.D., Endaya, S.C.M.B., and Huang,
- P.C.T., (2018), August. "Development of Online Hospital Document

Management with SMS Notification System". In Proceedings of the 2nd International Conference on E-Society, E-Education, and E-

Technology (pp. 150-154)

4. A. Mukherji and N. Ganguli (2020), "Efficient and Scalable Electronic Health Record Management using Permissioned Blockchain Technology," 4th International Conference on Electronics, Materials Engineering & Nano-Technology (Genentech), Kolkata, India, pp. 1-6, doi:10.1109/IEMENTech51367.2020.9270106.

CODING

```
<html>
  <title> MEDICARE </title>
   <link href="css/style.css" type="text/css" rel="stylesheet">
  <div class="top">
      Contact Us +91 96366 20000 / 01 | ukh@medicare.com
   <div class="logo">
                <font
<a href="index.html">HOME</a>
                     <a href="about.html">ABOUT US</a>
                     <a href="service.html">SERVICE</a>
                     <a href="doctor.html">DOCTORS</a>
                     <a href="contact.html">CONTACT US</a>
               <div class="middle">
      <div style="background-image:url('img/a.jpg');">
```

```
Health Care Services <br>
           <font size="5px"> We Care About Your Health </font>
   <div class="bottom">
           <font color="#000"> We are medical center </font> <br>
                   <font color="#000" size="5px"> We Have Medicare Plan Options for You! </font> <bre><bre>
Phasellus pretium orci sit amet mi ullamcorper egestas. Sed non mattis metus. Integer vel lorem tincidunt,
pharetra eros nec, posuere odio. Nullam eget bibendum sem, venenatis lacinia justo. Duis aliquet lobortis
neque, eget volutpat nulla iaculis a. <br><br>
In hac habitasse platea dictumst. Praesent condimentum justo justo, at ultricies diam accumsan vitae.
Donec ac elementum diam. Ut quam orci, posuere quis lacus sed, vehicula rhoncus massa. Nunc volutpat nibh
nulla, tincidunt egestas tellus faucibus nec. <br><br>>
Nulla venenatis auctor quam, ac porta lectus dictum in
Aliquam sodales nisi sit amet lorem
Suspendisse vulputate tellus in justo convallis imperdiet
Morbi id lorem consequat, sodales mi non
Nulla venenatis auctor quam, ac porta lectus dictum in
   <section class="sec6head">
       <h1>HEALTH CARE</h1>
   <section class="sec-6">
```

```
<div class="box">
          <img src="download (1).jpg" alt="">
           <div class="content">
           <h2>Project-1</h2>
           Lorem ipsum dolor sit amet consectetur adipisicing elit. Sapiente molestias sunt
dignissimos ipsa, voluptate perspiciatis culpa tempore labore fugiat! Enim?
           <button class="btn4">Lauch Case Study</button>
       <div class="box">
       <img src="images.jpg" alt="">
       <div class="content">
           <h2>Project-2</h2>
           Lorem ipsum dolor sit amet consectetur adipisicing elit. Sapiente molestias sunt
dignissimos ipsa, voluptate perspiciatis culpa tempore labore fugiat! Enim?
           <button class="btn4">Lauch Case Study</button>
       <div class="box">
       <img src="images (1).jpg" alt="">
       <div class="content">
           <h2>Project-3</h2>
           Lorem ipsum dolor sit amet consectetur adipisicing elit. Sapiente molestias sunt
dignissimos ipsa, voluptate perspiciatis culpa tempore labore fugiat! Enim?
           <button class="btn4">Lauch Case Study</button>
       <div class="box">
       <img src="download.jpg" alt="">
           <h2>Project-4</h2>
           Lorem ipsum dolor sit amet consectetur adipisicing elit. Sapiente molestias sunt
dignissimos ipsa, voluptate perspiciatis culpa tempore labore fugiat! Enim?
           <button class="btn4">Lauch Case Study</button>
   <div class="bottom_up">
               <h1>Make an Appointment</h1>
```

```
                    <input type="text" placeholder="First Name">
                    <input type="text" placeholder="Last Name">

                    <input type="text" placeholder="Email Id">
                    <input type="text" placeholder="Mobile No">

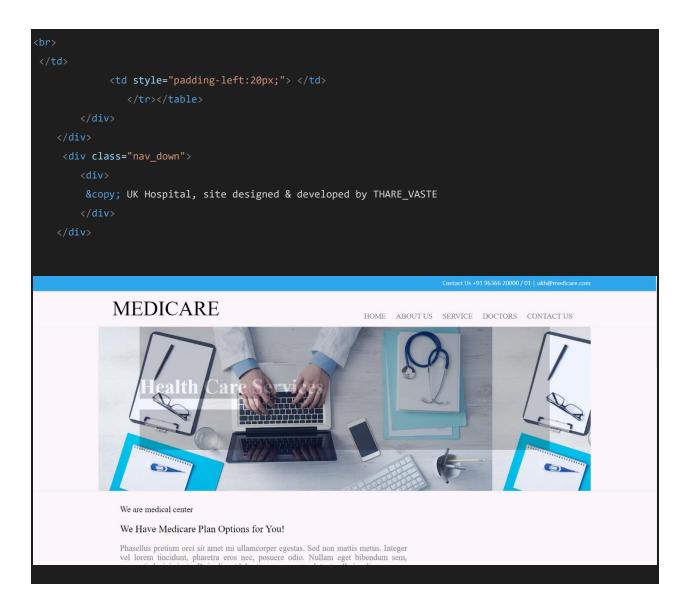
                    <select> <option> -- Sex -- </option> <option> Male </option> <option>
Female </option> </select>
                    <input type="text" placeholder="appointment date">

                <textarea placeholder="Message"> </textarea>

                <button> SUBMIT </button>
```

```
<div class="nav_down">
      © MEDICARE, site designed & developed by THARE_VASTE
SERVICE.HTML
   <title> UK Hospital </title>
<link href="css/style.css" type="text/css" rel="stylesheet">
   <div class="top">
      Contact Us +91 96366 20000 / 01 | ukh@medicare.com
  <div class="logo">
                <font
<a href="index.html">HOME</a>
                     <a href="about.html">ABOUT US</a>
                     <a href="service.html">SERVICE</a>
                     <a href="doctor.html">DOCTORS</a>
                     <a href="contact.html">CONTACT US</a>
   <div class="bottom">
               <font color="#000"> OUR OUTSTANDING SERVICES</font> <br>
```

```
<font color="#000" size="6px"> What We Offer! </font> <br>
           li> DENTAL IMPLANTS
           WHITENING
           VACCINATIONS
           LABORATORY
           MEDICAL DRESSAGE
           EMERGENCY CONTRACEPTION
            <img src="img/01.jpg" width="400px">
<div class="bottom">
     <font color="#000">----- </font> <br> <br>
           <font color="#000" size="6px"> Our Department </font> <br>
           DENTAL Care
           OTOLOGY
           CARDIAC
           HEPATOLOGY
           ORTHOPEDICS
           GASTROENTEROLOGY
           OUTPATIENT
           MENTAL HEALTH
```



CSS

```
#{
    margin:auto;
    padding:auto;
    font-family: serif;
    background-color:rgb(252, 246, 250);
}
.top{
    width:100%;
    background-color:#2FA5EB !important;
    border-bottom:2px solid #f0f0f0;
}
.top div{
```

```
width:1200px;
   color:#fff;
   background-color:#2FA5EB !important;
   font-family:calibri;
   padding:10px;
   text-align:right;
.logo{
   width:100%;
   background-color:;
   border-bottom:2px solid #f0f0f0;
.logo div{
   width:1200px;
   background-color:;
   font-family:calibri;
   padding:10px;
   text-align:left;
.logo div table a{
   padding:10px;
   text-decoration:none;
   color:gray;
.logo div table a:hover{
   color:#428bca;
   border-bottom:2px solid gray;
.middle{
   width:100%;
   border-bottom:2px solid #f0f0f0;
.middle div{
   width:1200px;
   height:400px;
   font-family:calibri;
.middle div p{
   width:1000px;
   font-weight:bold;
   height:300px;
   color:#fff;
   opacity:0.2;
```

```
font-size:50px;
   background-color:#000;
.bottom{
   width:100%;
   background-color:;
   border-bottom:2px solid #f0f0f0;
.bottom div{
   width:1200px;
   color:#fff;
   background-color:;
   font-family:calibri;
   text-align:right;
.bottom div table{
   padding-top:30px;
   width:1100px;
   text-align:justify;
   color:gray;
   font-size:20px;
.bottom_up{
   width:100%;
   background-color:;
   border-bottom:2px solid #f0f0f0;
.bottom_up div{
   padding-top:20px;
   width:1200px;
   text-align:center;
   background-color:;
   font-family:forte;
   font-size:30px;
   padding-bottom:20px;
.bottom_up div table{
   padding-top:30px;
   border-radius: 3px;
   font-size:30px;
   width:1100px;
   text-align:center;
```

```
font-family:calibri;
   padding-right: 295px;
input[type="text"]{
   padding:12px;
   width:250px;
   border-width: 3px;
select{
   padding:12px;
   width:250px;
   border-width: 3px;
textarea{
   padding:50px;
   width:550px;
   border-width: 3px;
button{
   width:252px;
   padding:10px;
   color:#fff;
   font-size:20px;
   background-color:#2FA5EB !important;
.nav_down{
   width:100%;
   background-color:#2FA5EB !important;
   border-bottom:2px solid #f0f0f0;
.nav_down div{
   width:1200px;
   background-color:#000;
   font-family:calibri;
   padding:10px;
   text-align:center;
```

```
.sec-6{
   width: 100%;
   height: 600px;
   position: relative;
   top: 58px;
   display: flex;
   justify-content: center;
   align-items: center;
.sec6head{
   text-align: center;
   font-size: 35px;
   font-weight: bolder;
   position: relative;
   top: 58px;
   height:250px;
   width: 20%;
   margin: 10px;
   border-radius: 10px;
   padding: 8px;
   transition: all 0.6s ease-in-out;
.sec-6 .content{
   visibility: hidden;
  transition-delay: 0.6s;
  visibility: visible;
  background-color: rgb(210, 192, 240);
.sec-6 .box:hover{
   height: 480px;
   background-color: rgb(210, 192, 240);
   border: 2px solid black;
```

```
.sec-6 .box img{
   width:100%;
   height: 250px;
   border-radius: 10px;
   cursor: pointer;
   text-align: center;
   line-height: 40px;
   transition: all 0.1s ease-in-out;
   background-color: rgb(210, 192, 240);
.sec-6 .box .content p{
   text-align: center;
   font-size: large;
   font-family: cursive;
   background-color: rgb(210, 192, 240);
.sec-6 .box .content button{
   position:relative;
   top: 6px;
   left: 21px;
   padding: 8px;
   border: 2px solid black;
   font-weight: bolder;
   font-family: cursive;
   background-color: rgb(235, 231, 23);
   transition: all 0.8s ease-in-out;
   cursor: pointer;
.sec-6 .box .content button:hover{
   padding: 12px 12px;
   background-color: chartreuse;
   border-radius: 10px;
.bottom_up h1{
```

```
z-index: 40;
  position: relative;
  right: 20px;
CONTACT HTML
  <title> UK Hospital </title>
  <link href="css/style.css" type="text/css" rel="stylesheet">
  <div class="top">
      Contact Us +91 96366 20000 / 01 | ukh@medicare.com
  <div class="logo">
               <font
<font size="4px">
                    <a href="index.html">HOME</a>
                    <a href="about.html">ABOUT US</a>
                    <a href="service.html">SERVICE</a>
                    <a href="doctor.html">DOCTORS</a>
                    <a href="contact.html">CONTACT US</a>
   <div class="bottom">
```

```
<font color="#000">----- </font> <br> <br>
             <font color="#000" size="6px"> CONTACT US </font> <br>
             MEDICARE & Research Center
             Mob : +91 0123456789
             Email : ukh@medicare.com

<div class="nav_down">
   © UK Hospital, site designed & developed by THARE_VASTE
```

OUTPUT





Make an Appointment

First Name	Last Name
Email Id	Mobile No
Sex	appointment date
	,

© MEDICARE, site designed & developed by THARE_VASTE

Contact Us +91 96366 20000 / 01 | ukh@medicare.cor

MEDICARE

HOME ABOUTUS SERVICE DOCTORS CONTACTUS

Welcome to MEDICARE

Best Medical & Health care Needs to Our Patients

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut volutpat rutrum eros amet sollicitudin interdum. Suspendisse pulvinar, velit nec pharetra interdum, ante tellus ornare mi, et mollis tellus neque vitae elit. Mauris adipiscing mauris fringilla turpis interdum sed pulvinar nisi malesuada. Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Donec sed odio dui. Nulla vitae elit libero, a pharetra augue. Nullam id dolor id nibh ultricies vehicula ut id elit. $\,$



Address

MEDICARE & Research Center

180, Shri Rampuri, Niwaru Road, Kaal Road Benad, Bharatpur Raj 302020