

B.M.S College of Engineering

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DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING



Course – WEB APPLICATION DEVELOPMENT

Course Code – 21IS3PCWAD

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Final report on mini Project work

Medical Consultancy

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CERTIFICATE

Certified that the Project has been successfully presented at **B.M.S College Of Engineering** by **Yogesh Agrawal** and **Soham Balekundri** bearing USNs: **1BM21IS211** and **1BM21IS173**

in partial fulfillment of the requirements for the III Semester degree in **Bachelor of Engineering in Information Science & Engineering** of **Visvesvaraya Technological University, Belgaum** as a part the course **WEB APPLICATION DEVELOPMENT (21IS3PCWAD)** during academic year 2022-2023.

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ABSTRACT

Welcome to our medical consultancy website! Our platform provides personalized and professional medical advice to patients seeking guidance on their health concerns. Our team of experienced and licensed medical practitioners specializes in a range of fields, including cardiology, dermatology, pediatrics, and more.

We understand the importance of timely and accurate medical advice, which is why we offer online consultations that are convenient and accessible from anywhere. Our website ensures the privacy and security of your medical information, and we strictly adhere to ethical and legal standards in our practice.

Our approach is centered around patient-centered care and evidence-based medicine, ensuring that our clients receive the highest level of care and attention. Our website provides easy access to our services, with flexible scheduling and personalized treatment plans. We strive to empower our clients with the knowledge and resources they need to take control of their health and wellbeing.

Our goal is to empower patients to make informed decisions about their health by providing them with reliable and trustworthy medical advice. We believe that healthcare should be accessible to all, and our no consultation fees reflect our commitment to this mission.

CHAPTER 1

1.1 INTRODUCTION

Welcome to our medical consultancy website, where we offer personalized and comprehensive medical advice and support to individuals seeking the best possible care for their health and wellbeing. We understand that navigating the complexities of the healthcare system can be daunting, which is why we have assembled a team of experienced medical professionals who are committed to providing exceptional patient-centered care. Our approach is based on evidence-based medicine and tailored to meet the unique needs of each of our clients.

We offer a range of services including diagnosis, treatment options, and preventative care strategies, all of which are designed to empower our clients to take control of their health. Our website provides easy access to our services, with flexible scheduling and personalized treatment plans.

1.2 PROBLEM DEFINITION

The healthcare system can be complex and overwhelming, and many individuals struggle to navigate it effectively. This can lead to delayed or inadequate care, misdiagnosis, and a lack of personalized treatment options. Additionally, there are many people who have difficulty accessing medical care due to geographical barriers, lack of transportation, or other logistical challenges.

Medical consultancy websites aim to address these problems by providing individuals with personalized, reliable, and easily accessible medical advice and support. However, there are still barriers to the widespread use of these websites, including concerns about the reliability of online medical information, privacy and security concerns, and a lack of awareness or trust in online medical services.

The problem definition, therefore, is to ensure that individuals have access to reliable, high-quality medical advice and support through medical consultancy websites and to overcome the barriers that prevent individuals from utilizing these services effectively.

Furthermore, the cost of using medical consultancy websites can be prohibitive for some individuals, particularly those without adequate health insurance or financial resources. This can limit access to quality healthcare, leading to disparities in health outcomes. Hence this can come handy and in use.

1.3 OBJECTIVES

- 1) Provide reliable and accurate medical information
- 2) Offer personalized medical advice and support to individuals seeking care
- 3) Ensure confidentiality and privacy of patients' personal and medical information
- 4) Facilitate easy access to healthcare services through flexible scheduling and online appointment booking
- 5) Foster trust and transparency by displaying credentials and expertise of medical professionals
- 6) Educate patients on preventative care and lifestyle changes to promote optimal health outcomes
- 7) Maintain open communication with patients and respond promptly to their inquiries and concerns
- 8) Offer cost-effective and equitable healthcare services to all individuals regardless of their financial resources or insurance coverage.

CHAPTER 2

2.1 REQUIREMENTS SPECIFICATIONS AND TOOLS USED

Requirements

1. Doctor signup and login system: A system for doctor's to register and log in to their accounts to access the website's features.
2. Doubt asking system: A system that allows patients to ask questions and doubts which are further answered by the doctors.
3. Responsive design for compatibility PC's.
4. Easily accessibility of various doubts resolved by specialists.

Tools Used

1. HTML, CSS, and JavaScript for frontend development.
2. NODEJS for backend development.
3. NODEJS for user login and sign up.
4. Use of Hash for password security.
5. MongoDB database for customer login information storage.

By implementing these tools and fulfilling the mentioned requirements, our Medical Consultancy website project aims to develop a robust and dependable web application that caters to the needs of its users and helps in the betterment of the society.

3.1 IMPLEMENTATION

The implementation of a medical consultancy website involves several steps, including:

- 1) Design and Development: The first step is to design and develop the website, which includes choosing a suitable platform, creating a user-friendly interface, and ensuring that the website is mobile-friendly.
- 2) Content Creation: Once the website is developed, the next step is to create relevant and informative content that includes detailed information on medical conditions, treatment options, and preventive care strategies. Content should be written in a clear and understandable language.
- 3) Medical Professional Selection: It is important to select qualified and experienced medical professionals to provide medical advice and support. This may involve partnering with healthcare organizations or individual medical practitioners.
- 4) Online Appointment Scheduling: The website should provide a convenient and secure way for patients to schedule appointments and receive reminders via email or text message.
- 5) Confidentiality and Privacy: Patients' personal and medical information should be protected using secure online systems and protocols. The website should be compliant with applicable privacy laws and regulations.
- 6) Marketing and Promotion: The website should be marketed and promoted to reach potential patients. This may involve using search engine optimization (SEO), social media marketing, and other digital marketing strategies.
- 7) Continuous Improvement: The website should be continuously updated with new medical information and best practices. Patient feedback should be regularly collected to improve the quality of services offered.

Overall, the implementation of a medical consultancy website should focus on providing reliable and personalized medical advice and support to patients in a secure and user-friendly environment.

3.2 SOME IMPORTANT CONCEPTS

1) HTML DOM: It stands for "HTML Document Object Model." It is a programming interface for HTML documents, which allows developers to interact with the structure and content of an HTML page using JavaScript or other programming languages.

The HTML DOM represents an HTML document as a tree-like structure of objects, where each HTML element is a node in the tree. The top-level node is the document object, which represents the entire HTML page. Child nodes represent HTML elements such as headings, paragraphs, images, links, and form controls.

Using the HTML DOM, developers can access and modify the content and attributes of HTML elements, add or remove elements, create new elements, and respond to user interactions such as clicks or form submissions. They can also manipulate the style and layout of the page by changing CSS properties and classes.

2) MongoDB: MongoDB is a popular open-source NoSQL database that uses a document-based data model to store and retrieve data. It is designed to be highly scalable, flexible, and fast, making it a popular choice for modern web applications and microservices.

MongoDB stores data in documents, which are JSON-like objects that can contain a variety of data types, including arrays, embedded documents, and binary data. Documents are organized into collections, which are analogous to tables in a relational database.

One of the key features of MongoDB is its ability to scale horizontally across multiple servers, known as sharding. This allows it to handle large volumes of data and traffic by distributing the workload across multiple nodes.

3) Express.js: Express.js is a popular open-source web application framework for Node.js. It provides a range of features and tools for building web applications and APIs, including routing, middleware, templates, and more.

Express.js is designed to be flexible and modular, allowing developers to use only the features they need and easily customize the behavior of the framework. It provides a simple and intuitive interface for defining routes and handling HTTP requests, making it easy to build RESTful APIs and web applications.

One of the key features of Express.js is its middleware system, which allows developers to easily add and customize the behavior of the framework. Middleware functions can be used to perform a variety of tasks, such as logging, authentication, validation, and error handling.

Express.js also provides support for a variety of template engines, allowing developers to easily render HTML and other types of content. It also supports a range of third-party plugins and extensions, making it easy to add additional functionality to an application.

4) JWT: A JWT token (JSON Web Token) is a secure and compact way of transmitting information between parties as a JSON object. It is often used for authentication and authorization in web applications and APIs.

A JWT token consists of three parts: a header, a payload, and a signature. The header contains information about the type of token and the cryptographic algorithm used to sign it. The payload contains the actual data or claims being transmitted, such as the user's ID, role, or other information related to their session. The signature is a cryptographic hash of the header and payload, which is used to verify the authenticity and integrity of the token.

When a user logs in to a web application, a JWT token is typically generated by the server and returned to the client as a response. The client can then include the JWT token in subsequent requests to the server, allowing the server to verify the user's identity and authorize access to protected resources.

4) MULTER: Multer is a popular middleware for handling file uploads in Node.js web applications. It allows developers to easily handle multipart/form-data requests, which are typically used for file uploads in HTML forms.

Multer provides a simple and flexible API for configuring file uploads, including setting file size limits, defining file types, and specifying upload directories. It supports a variety of storage options, including local disk storage, in-memory storage, and cloud storage services such as Amazon S3.

Multer is commonly used in web applications for handling file uploads, such as profile pictures, documents, and other user-generated content. It is also widely used in combination with other Node.js web frameworks, such as Express.js.

CHAPTER 4

4.1 RESULTS

Home Page



HAVE A FREE CONSULTANCY!!!
GET CONSULTANCY BY CERTIFIED
EXPERTS AND HELP SECURE YOUR
FUTURE

Acute diseases

An acute disease appears suddenly and lasts

Chronic diseases

Turn to your doctor to have your chronic disease

Preventive care

Millions of people die from illnesses that could have

Self hygiene

Cleaning your body every day, washing your hands with soap after going to the toilet, brushing your

OUR PLATFORM



Secure platform

High security in terms of patient data and privacy.



Happy Place

Wellness content blogs, meditation breathing exercises, educational videos & podcasts, etc.



Nunaced matching

Counseling therapist is recommended based on your major concerns, preferred time, language, gender & age.



Mood Journal

Track your Health status and medical reports easily.



Discussion-Forum



Verified Experts

Login page



Home

You are one step ahead!!

LOGIN

Enter Email id :

Enter Password :

Reset

login

New here! [Join Us](#)

More about the website

HOW IT WORKS



TYPE YOUR
DOUBT



SPECIALISTS GIVE
NECESSARY RESPONSES



THE RESPONSES WILL
BE DISPLAYED ON
THE RESPONSE SHEET

OUR SERVICES

[Learn more about the services offered by our clinic](#)

Echocardiograms :

Associates is able to view the beating of the heart and many of its structures. Upon review, the cardiologist provides a interpretative report to patient's care.

Dermatology :

Our providers are trained to handle a spectrum of skin conditions, covering the majority of your dermatology concerns.

OUR SERVICES

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Dermatology :

Our providers are trained to handle a spectrum of skin conditions, covering the majority of your dermatology concerns.

Pediatric Services :

If you are expecting a child, follow-up care with Our clinic pediatricians can be arranged prior to or after your hospital/birth discharge. Preschool, sports & routine physical exams.

Laboratory Testing :

Laboratory orders are created within the patient's electronic medical record (EHR) and transmitted to our laboratory. Once the sample is obtained, testing is performed and results.


Women's Healthcare :

Women's health is a field covering the numerous health concerns that women face, from reproductive and sexual health to mammograms. Women are also more likely to develop chronic health issues.

Laboratory Testing :

Laboratory orders are created within the patient's electronic medical record (EHR) and transmitted to our laboratory. Once the sample is obtained, testing is performed and results...**and more**

For doctors



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Queries and their solutions

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Enter your Question??

ADD

What is the best way to get rid of a headache?

1. First step is to wait it out. Even less sleep, dehydration, stress can cause headaches. Wait for an hour or more as long as you can. Most headaches die out on their own. Don't pop pills everytime a headache starts. 2. When the headache is persistent and unbearable or bearable but interfering with you work, you may take an acetaminophen (paracetamol). Its very safe with minimal/no side effects. However, they are better avoided in young children. 3. After you pop a paracetamol, you have suppressed the symptom, but the disease may still be present. If the headache returns after some time, it would be wise to consult a doctor.

What is a great remedy for stomach pain?

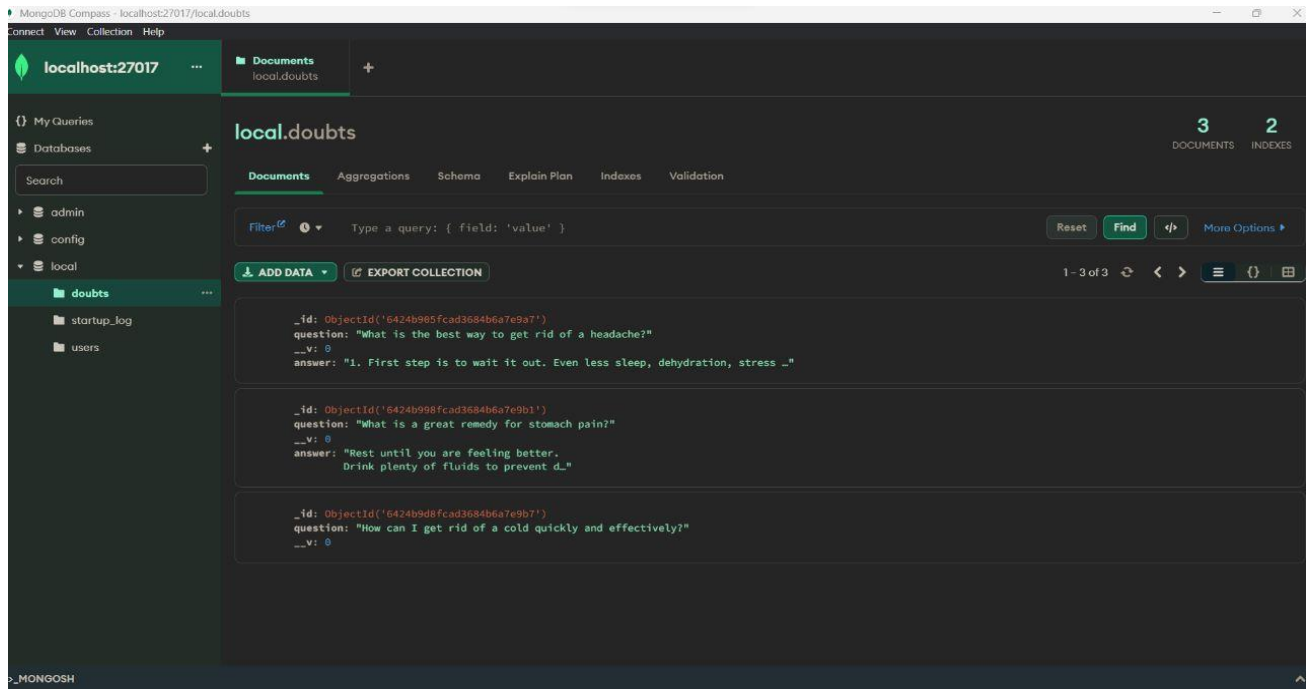
Rest until you are feeling better. Drink plenty of fluids to prevent dehydration. You may find that taking small, frequent sips of a beverage is easier on your stomach than trying to drink a whole glass at once. Do not drink carbonated or caffeinated drinks, such as soda pop, tea, or coffee.

How can I get rid of a cold quickly and effectively?

What is the best treatment for pimples and acne?

What are some easiest ways to get rid of body pain?

Back-end with Mongo-DB Compass



CODE SNIPPETS

Code of some backend routes

```
router.post("/login", (req, res, next) => {
  console.log(req.body)
  user.find({ email: req.body.email })
    .exec()
    .then(data => {
      console.log(data)
      if (data.length < 1) {
        console.log(data)

        return res.status(401).json({
          message: "mail does not exist",
        });
      }
      bcrypt.compare(req.body.password, data[0].password, (err, result) => {
        if (err) {
          return res.status(401).json({
            message: "Auth failed",
            error: err
          });
        }
        if (result) {
          const token = jwt.sign(
            {
              id: data[0]._id,
            },
            process.env.JWT_SECRET,
            { expiresIn: '1h' }
          );
          return res.json({
            token,
            user: data[0]
          });
        }
      });
    });
});
```

```
router.post("/save_doubt", (req, res, next) => {
  const Doubt = new doubt;
  Doubt._id = new mongoose.Types.ObjectId();
  Doubt.question = req.body.question;
  Doubt.save()
    .then(result => {
      console.log(result)
      res.status(200).json({
        message: "Doubt saved"
      });
    })
    .catch(err => {
      console.log(err)
      res.status(500).json({
        error: err
      });
    });
});

router.post("/save_answer",
  (req, res, next) => {
    const token = req.cookies.access_token
```

Code for some front-end functions

```
function add_card() {
  let row = document.getElementsByClassName("row")
  fetch("/projectRoutes/get_doubts").then(response => response.json())
    .then((result) => {
      for (let obj of result.data) {
        let col1 = document.createElement("div")
        col1.setAttribute("class", "col-sm-4")
        let col2 = document.createElement("div")
        col2.setAttribute("class", "card")
        col2.setAttribute("id", "card_decor")

        let col3 = document.createElement("div")
        col3.setAttribute("class", `card-header text-${!obj.answer ? "danger" : "success"}`)
        col3.innerHTML = obj.question
        col1.appendChild(col2)
        col2.appendChild(col3)

        if (!obj.answer) {
          let col4 = document.createElement("textarea")
          col4.setAttribute("class", "card-body text-danger")
          col4.setAttribute("id", obj._id)
          let col5 = document.createElement("a")
          col5.setAttribute("class", "btn btn-danger")
        }
      }
    })
}
```

```
<div class="h-tag">
  <p style="text-align: center;"> You are one step ahead!!</p>
  <h2 style="text-align: center; font-size: 40px;">LOGIN</h2>
</div>
<!-- Login box -->
<div class="login">
  <table cellpadding="2" ; align="center" cellspacing="8" border="0">
    <tr>
      <td>Enter Email id :</td>
      <td><input type="email" placeholder="Enter e-mail here" id="email" class="tb form-control" /></td>
    </tr>
    <tr>
      <td>Enter Password :</td>
      <td><input type="password" placeholder="Enter Password here" id="pwd1" class="tb form-control" /></td>
    </tr>
    <td></td>
    <td>
      <input type="submit" value="Reset" onclick="clearFunc()" class="btn" />
      <input type="submit" value="login" class="btn" onclick="login()" />
    </td>
  </tr>
</table>
```

CONCLUSION

A medical consultancy website can be a valuable resource for individuals seeking reliable and personalized medical advice and support. By providing accurate and up-to-date medical information, easy access to healthcare services, and personalized attention from qualified medical professionals, these websites can help individuals take control of their health and improve their overall wellbeing. However, it is important to ensure that medical consultancy websites are designed and implemented with patients' privacy and confidentiality in mind, and that they are continuously updated with the latest medical information and best practices. With these considerations in mind, medical consultancy websites can play an important role in promoting better healthcare outcomes and empowering individuals

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2. <https://unsplash.com/> for high definition images
3. We have used bootstrap for styling the front-end (<https://getbootstrap.com/>).
4. Official documentation of express.js (<https://expressjs.com>).
5. Notes provided by our Professor Mrs.Rashmi K B.