

RV COLLEGE OF ENGINEERING ®
BENGALURU-560059
(Autonomous Institution Affiliated to VTU, Belagavi)



HERBAL HELP

Report

Database Design Laboratory Project

(18CS53)

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in partial fulfillment for the award of degree of
Bachelor of Engineering
in
INFORMATION SCIENCE AND ENGINEERING
2023-24

RV COLLEGE OF ENGINEERING®, BENGALURU - 560059
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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING



CERTIFICATE

Certified that the Mini Project work entitled **Herbal Help** has been carried out as a part of Database Design Laboratory(18CS53) in partial fulfillment for the award of degree of **Bachelor of Engineering in Information Science and Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2023-2024** by **Sanjana Patwari (1RV21IS047), Sanjay D Kulal (1RV21IS048)**, who are bonafide students of **RV College of Engineering®**, Bengaluru. It is certified that all the corrections/suggestions indicated for the internal assessment have been incorporated in the report deposited in the departmental library. The report has been approved as it satisfies the academic requirements in respect of work prescribed by the institution for the said degree.

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DECLARATION

We **Sanjana Patwari** , **Sanjay D Kulal** are students of Fifth Semester B.E Department of Information Science and Engineering, **RV College of Engineering** ®, bearing **USN: 1RV21IS047,1RV21IS048** , hereby declare that the project titled **Herbal Help** has been carried out as a part of Database Design (18CS53) by us and submitted in partial fulfillment of the program requirements for the award of degree in Bachelor of Engineering in Information Science and Engineering of the **Visvesvaraya Technological University, Belagavi** during the year **2023-2024**.

Further we declare that the content of the report has not been submitted previously by anybody for the award of any degree or diploma to any other University.

Place: Bengaluru	Name	Signature with
Date	Sanjana Patwari	
Date:	Sanjay D Kulal	

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CHAPTER 1 INTRODUCTION

The Herbal Health Management System is a dynamic platform merging traditional wisdom with modern insights. Offering a user-friendly interface, it empowers individuals to explore safe home remedies, connecting diseases to symptoms and detailed remedies. The innovative addition of a herb image search enhances the visual experience, bridging traditional and contemporary healthcare. Emphasizing user education and predictive analysis, the system envisions a community-driven approach to holistic health, acknowledging the importance of consulting professionals for serious health concerns.

1.1 Terminology

Herb Image Search:

The functionality within HHMS that allows users to search for images of specific herbs by entering queries in the search bar.

Herb Information Retrieval:

The process by which HHMS retrieves detailed information about the uses, properties, and other relevant details of herbs based on user queries.

Web Database:

A centralized repository or database on the internet that stores a collection of herb images and related information, accessible by HHMS to provide accurate and up-to-date results.

Search Bar:

The interactive component of HHMS where users input queries or keywords to initiate searches for herb images and information.

Visual Exploration:

The user experience of exploring herbs through images, enhancing the understanding of their appearances and potential uses.

Dynamic User Base:

Refers to the diverse and evolving group of users who engage with HHMS, reflecting varying preferences and needs in the realm of holistic healthcare.

Predictive Analysis (if applicable):

The utilization of data science techniques within HHMS to anticipate user preferences, trends, and demands, enhancing the platform's responsiveness.

Transparent Communication:

The practice of openly conveying information about privacy features, data security measures, and the overall functionality of HHMS to ensure user understanding.

1.2 Purpose

The purpose of the Herbal Health Management System is to create a comprehensive and user-centric platform that seamlessly integrates traditional herbal knowledge with modern insights. This system aims to:

Empower Users: Provide users with a user-friendly interface to explore safe home remedies, connecting diseases to symptoms and detailed remedies.

Enhance Learning: Foster a community-driven approach by emphasizing user education through structured modules, courses, and predictive analysis.

Facilitate Herb Exploration: Introduce an innovative herb image search feature to enhance the visual experience and link diseases, symptoms, and remedies with detailed information and images.

Ensure Privacy and Security: Implement robust security measures to safeguard sensitive user data, adhering to privacy regulations and standards.

Promote Holistic Health Practices: Encourage the exploration of herbal remedies and holistic health practices while recognizing the importance of consulting professionals for serious health concerns.

Create a Dynamic Database: Store and manage information about herbs, user profiles, educational content, and community contributions, ensuring accuracy and accessibility.

Provide Predictive Insights: Utilize predictive analysis to offer personalized recommendations and insights based on user preferences and interactions.

Offer a Positive User Experience: Design a user-friendly interface with clear instructions, responsive layouts, and interactive features to promote efficiency and positive user engagement.

1.3 Motivation

Visual Empowerment:

Recognizing the power of visual information, HHMS aims to empower users by providing them with a visually rich exploration of herbs. The motivation stems from the understanding that seeing the physical attributes of herbs enhances comprehension and fosters a stronger connection with natural remedies.

Enriching User Experience:

HHMS is motivated to elevate the overall user experience by introducing an interactive search bar dedicated to herb images. This feature adds a layer of interactivity, catering to diverse learning styles and

preferences, thereby making the platform more engaging and user-friendly.

Diverse Learning Styles:

The motivation is grounded in acknowledging the diverse learning styles of users. While some may prefer textual information, others find value in visual content. HHMS aims to accommodate both preferences, ensuring a well-rounded learning experience for individuals exploring natural healthcare solutions.

Inclusive Knowledge Sharing:

HHMS is driven by the goal of creating an inclusive knowledge-sharing platform. The herb image search feature expands the accessibility of information, making herbal knowledge more inclusive and bridging gaps between traditional wisdom and modern insights.

User-Centric Design:

With a focus on user-centric design, HHMS aims to align its features with user expectations and emerging trends. The motivation is to stay responsive to user needs and preferences, providing a platform that evolves in tandem with advancements in holistic healthcare practices.

Harmonious Integration of Traditional Wisdom:

HHMS remains committed to the harmonious integration of traditional wisdom with modern insights. The introduction of the herb image search feature is motivated by a desire to enrich the visual aspect of traditional herbal knowledge, creating a seamless fusion with contemporary healthcare practices.

1.4 Problem Statement

Conventional healthcare systems encounter difficulties in meeting evolving patient needs, particularly in addressing the growing preference for natural remedies, personalized and holistic healthcare, and the integration of traditional wisdom with modern insights. Existing platforms often prioritize allopathic medication, creating a gap for those seeking alternative treatments. Healthcare systems also grapple with challenges related to information accessibility, patient empowerment, and clinic operations. The absence of a unified platform linking diseases, symptoms, and remedies impedes informed decision-making. Additionally, privacy and security concerns complicate the digital healthcare landscape, posing risks such as reliance on unverified remedies and privacy breaches. In response, the Herbal Health Management System (HHMS) emerges as a solution, bridging the gap between traditional and modern healthcare. HHMS provides an integrated, user-friendly platform for natural remedies, facilitates patient-doctor connections, optimizes clinic medicine supply, and ensures patient information security, aiming to enhance overall healthcare efficiency and societal well-being.

1.5 Objective

Enable Herb Image Exploration:

Implement a robust herb image search functionality that allows users to visually explore and identify specific herbs, fostering a deeper understanding of their physical characteristics.

Provide Detailed Herb Information:

Expand the existing database to include detailed information about each herb, encompassing their uses, properties, and potential benefits, ensuring users have access to comprehensive herbal knowledge.

Enhance User Interaction:

Introduce an interactive search bar dedicated to herb images, creating a seamless and engaging user experience that caters to diverse learning styles and preferences.

Facilitate Informed Decision-Making:

Empower users to make more informed healthcare decisions by offering visual insights into the world of herbs. The goal is to bridge the gap between textual and visual information, allowing users to better comprehend natural remedies.

Support Diverse Learning Styles:

Cater to users with diverse learning styles by providing both textual and visual information. Recognize the importance of visual elements in enhancing the learning experience and ensuring inclusivity.

Optimize Predictive Analysis:

If applicable, leverage predictive analysis techniques to enhance the herb image search feature continuously. Adapt to evolving user preferences and improve the platform's responsiveness over time.

Maintain Privacy and Security Standards:

Uphold and strengthen robust privacy and security measures to ensure the confidentiality of user data. Implement transparent communication about these features to instill trust among users.

Align with User-Centric Design:

Continuously align features with user expectations and emerging trends in holistic healthcare. Ensure that the platform remains responsive to user needs, providing an evolving and adaptive user-centric design.

1.6 Scope and Relevance

Scope:**Herb Image Database Integration:**

Incorporate a diverse and comprehensive herb image database, encompassing a wide variety of herbs used in natural remedies, ensuring the platform's visual content is expansive and inclusive.

User-Initiated Searches:

Allow users to initiate searches by entering queries related to herbs, symptoms, or specific health concerns, providing a user-friendly and intuitive search experience within the enhanced HHMS.

Multimedia Information Retrieval:

Extend the scope to retrieve multimedia information about herbs, including images and relevant details about their uses, properties, and potential benefits, enhancing the depth of information available to users.

Predictive Analysis Optimization :

Optimize the predictive analysis component, if applicable, to ensure the herb image search feature dynamically adapts to evolving user preferences and delivers accurate and relevant results over time.

Continued Ayurvedic Pharmacy Integration:

Maintain the integration with Ayurvedic pharmacies, allowing users to seamlessly access information on herbal products, availability, pricing, and ordering options directly through the platform.

Relevance:

Visual Empowerment in Healthcare Decisions:

The herb image search and information feature are highly relevant in empowering users to make more informed healthcare decisions. Visual exploration of herbs enhances user understanding, allowing for a more comprehensive evaluation of natural remedies.

Inclusive Learning Experience:

The introduction of herb images caters to diverse learning styles, making HHMS more inclusive. Users who prefer visual learning can now engage with the platform in a way that aligns with their preferences.

Bridge Between Traditional and Modern Healthcare:

HHMS continues to serve as a relevant bridge between traditional herbal wisdom and modern healthcare practices. The platform's evolution aligns with the growing interest in natural remedies while acknowledging the importance of blending traditional and contemporary insights.

User Engagement and Interaction:

The enhanced search feature promotes user engagement and interaction by introducing an interactive search bar. This relevance is crucial in maintaining a positive and user-friendly experience within the platform.

CHAPTER 2 REQUIREMENT SPECIFICATION

2.1 Specific Requirements

2.1.1 Functional Requirements

- User Registration
- Doctor Registration
- Herb information
- Disease-Symptom-Remedy Mapping
- Remedy-ingredient-recipe mapping
- Remedy details

2.1.2 Non-Functional Requirements

- Reliability
- Security
- Usability
- Scalability
- Compatibility
- Maintainability

2.2.2 Hardware Requirements

Server: A robust and reliable server system to host and manage the web application, ensuring continuous availability and responsiveness.

Storage: Adequate storage capacity to store the application files, database records, and any additional data generated or processed by the system.

RAM (Random Access Memory): Sufficient RAM to support the simultaneous execution of processes, ensuring optimal performance and responsiveness of the web application.

2.2.3 Software Requirements

MariaDB: A relational database management system used to store and manage data for the web application.

HTML: Hypertext Markup Language, the standard markup language for creating and structuring the content of web pages.

CSS: Cascading Style Sheets, used for styling and formatting the visual presentation of HTML

documents.

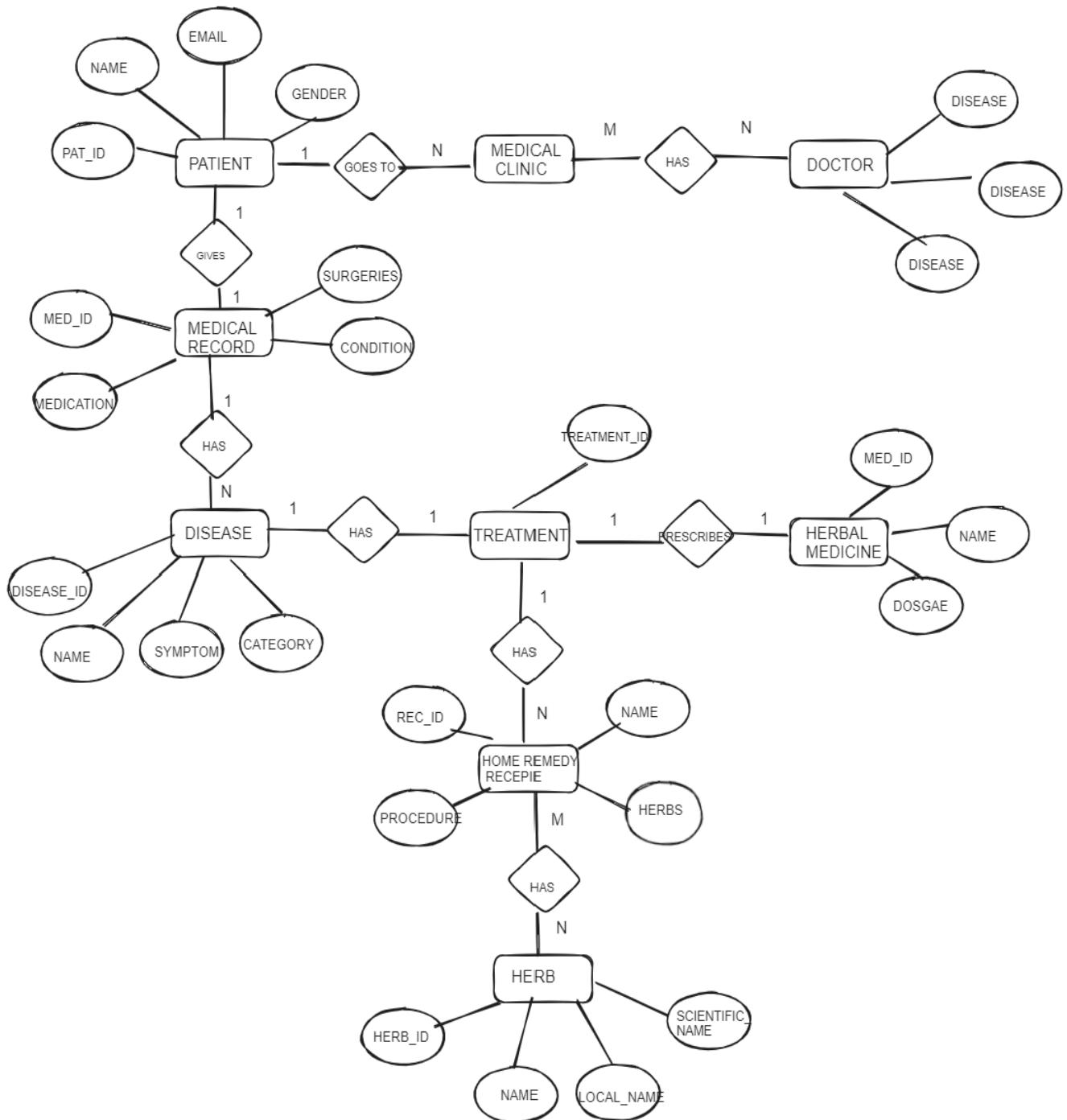
JavaScript (JS):A scripting language for creating dynamic content and enhancing interactivity within web pages.

Node.js:A server-side JavaScript runtime environment, facilitating the execution of server-side scripts for handling server tasks.

PHP:Hypertext Preprocessor, a server-side scripting language for processing data and generating dynamic content on the server side.

CHAPTER 3 DESIGN

3.1 E-R Diagram



3.1.1 Schema Representation

Disease

<u>disease_id</u>	category	symptom	disease_name

Doctor

<u>doctor_id</u>	doctor_name	qualification

Herb

<u>herb_id</u>	ingredient	local_name	scientific_name

Herbal_medicine

<u>medicine_id</u>	medicine_name	dosage

Home_remedy_recipe

<u>recipe_id</u>	recipe_name	ingredient	procedure

Medical_record

<u>patient_id</u>	<u>record_id</u>	medication	condition	surgery	date_time
-------------------	------------------	------------	-----------	---------	-----------

Patient

<u>patient_id</u>	name	gender	address
-------------------	------	--------	---------

3.2 Normalization

3.2.1 Schema after Normalization

1NF:

Disease

<u>disease_id</u>	category	symptom	disease_name
-------------------	----------	---------	--------------

Doctor

<u>doctor_id</u>	doctor_name	qualification
------------------	-------------	---------------

Herb

<u>herb_id</u>	ingredient	local_name	scientific_name
----------------	------------	------------	-----------------

Herbal_medicine

<u>medicine_id</u>	medicine_name	dosage

Home_remedy_recipe

<u>recipe_id</u>	recipe_name	ingredient	procedure

Medical_record

<u>patient_id</u>	<u>record_id</u>	medication	condition	surgery	date_time

Patient

<u>patient_id</u>	name	gender	address

2NF:

Disease

<u>disease_id</u>	category	symptom	disease_name

Doctor

<u>doctor_id</u>	doctor_name	qualification

Herb

<u>herb_id</u>	ingredient	local_name	scientific_name

Herbal_medicine

<u>medicine_id</u>	medicine_name	dosage

Home_remedy_recipe

<u>recipe_id</u>	recipe_name	ingredient	procedure

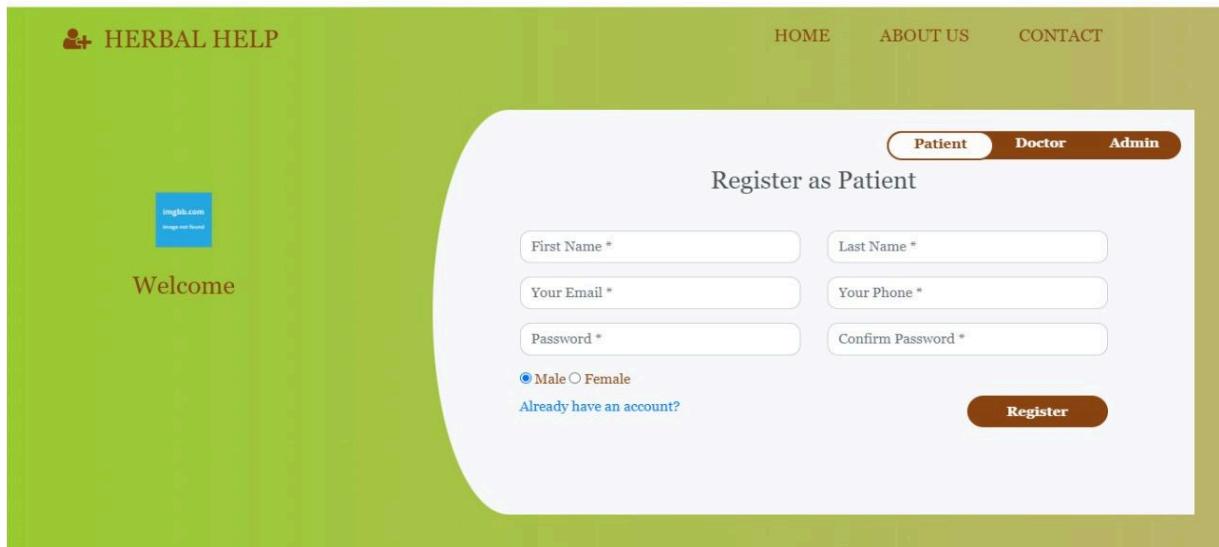
Medical_record

<u>patient_id</u>	<u>record_id</u>
-------------------	------------------

Medical_record_split

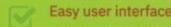
<u>record_id</u>	medication	condition	surgery	date_time
------------------	------------	-----------	---------	-----------

3.3 Front End Design



HERBAL HOSPITAL

Providing best quality herbal care for your needs



Easy user interface

Simply sign in and get your herbal prescription



Choose your favourite herbal recipes

From a range of different herbal recipes that are ayurvedic



Find further details about herbs

Find all necessary herb details you need


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Herbal Help
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- [Appointment History](#)
- [Prescriptions](#)
- [Add Medical Record](#)
- [View Remedy Recipes](#)
- [View Herb Details](#)

[Click here to search herb images](#)

Recipe ID	Recipe Name	Ingredient	Procedure	Video Link
44	Honey Garlic Paste	Honey	Grind garlic and mix honey to make a paste. Apply it to throat.	https://helloworld.com
51	Turmeric Milk	Turmeric	Mix a teaspoon of turmeric in a glass of warm milk.	https://turmericrecipe.com
87	Ginger Tea Elixir	Ginger, Tea leaves, Honey	Boil water with crushed ginger, add tea leaves, strain, and add honey if desired.	link1
89	Honey Lemon Soother	Lemon, Tea, Honey	Mix honey and lemon in warm water or tea; consume as directed.	link2

CHAPTER 4 IMPLEMENTATION DETAILS

4.1 Database implementation

4.1.1 Table Creation

Table Name: disease Schema: mydb

	disease_id	category	symptom	disease_name
▶	1	gastro intestinal	sweating,paleness,vomiting,increase...	nausea
	2	upper respiratory	swollen and red tonsils,hoarse voice,...	sorethroat
	3	gastro intestinal	abdominal pain,bloating,vomiting	digestive issues
	4	sleep disorder	daytime fatigue,irritability,non restori...	insomnia
*	5	musculo skeletal disorder	inflammation,redness around joint,stiff...	joint pain
*	NULL	NULL	NULL	NULL

Table Name: doctor

	doctor_id	doctor_name	qualification
▶	1	Sanjana	MBBS
	2	Rithesh	MBBS
	3	Bhavya	MBBS
	4	Sandesh	MBBS
*	5	Madan	MBBS
*	NULL	NULL	NULL

Table Name: herb Schema: mydb

	herb_id	ingredient	local_name	scientific_name	image
	1	ginger	adrak	Zingiber officinale	-
	2	tea leaves	chai patti	Camellia sinensis	-
	3	honey	shahad	Apis mellifera	-
	4	lemon	Nimbu	Citrus limon	-
	5	cumin	jeera	Cuminum	-
	6	turmeric	Haldi	Curcuma longa	-
	7	chamomile flowers	Babune ka phool	Matricaria chamomilla	-
	NULL	NULL	NULL	NULL	NULL

Table Name: **herbal_medicine** Schema: **mydb**

	medicine_id	medicine_name	dosage	disease_name(herbal_medicine)
▶	1	ginger tea elixer	30 ml thrice a day	nausea
	2	honey lemon soother	60 ml thrice a day	sorethroat
	3	cumin soaked tonic	15 ml twice a day	digestive issues
	4	joint relief paste	handful once a day	joint pain
*	5	Chamomile Sleep Infusion	once a day before sleeping	insomnia
	NULL	NULL	NULL	NULL

Table Name: **home_remedy_recepie** Schema: **mydb**

	recepie_id	recepie_name	ingredients	procedure	vedio_link
▶	1	ginger tea elixer	ginger ,tealeaves,honey	NauseaGinger Tea (Adrak Chai)Ginge...	-
	2	honey lemon soother	honey,lemon , water ,tea	Mix honey and lemon in warm water ...	-
	3	cumin soaked tonic	cumin seeds,water	Soak cumin seeds overnight, strain, a...	-
	4	joint relief paste	water,turmeric	Joint PainTurmeric PasteTurmeric, wa...	-
*	5	Chamomile Sleep Infusion	chamomile flowers,water	InsomniaChamomile TeaChamomile fl...	-
	NULL	NULL	NULL	NULL	NULL

Table Name: **medical_record** Schema: **mydb**

	record_id	medication	condition	surgery	date-time
▶	347	aspirin,vitamin-D	nausea	no	2014-02-15 00:00:00
	23	ibuprofen,statin	sorethroat	no	2015-08-10 00:00:00
	22	birth control,prozac	digestive issues	yes	2017-05-22 00:00:00
	312	-	insomnia	no	2022-01-05 00:00:00
*	414	metmorphin,lisinopril	joint pain	yes	2023-06-05 00:00:00
	NULL	NULL	NULL	NULL	NULL

Table Name: **patient** Schema: **mydb**

	patient_id	name	gender	address	email
▶	1	Ananth	male	Flat 201, Indira Gates, Bayappanahalli	anath12@gmail.com
	2	Rekha	female	Flat 505, Sattva Divinity, Nayandahalli	rekha23@yahoo.com
	3	Sanjay	male	S 22, Suraj Towers, 23rd Cross Road...	sanjay23@gmail.com
	4	Divya	female	Flat A7-1104, Elita Promenade, 7th P...	divya44@gmail.com
*	5	Rahul	male	Flat 1202, Jasmine Tower, Global Gat...	rahull3@yahoo.com
	NULL	NULL	NULL	NULL	NULL

Table creation Queries:

```
CREATE TABLE disease ( disease_id INT PRIMARY KEY NOT NULL, category VARCHAR(100),
symptom VARCHAR(100), disease_name VARCHAR(100)
);
```

```
CREATE TABLE doctor ( doctor_id INT PRIMARY KEY NOT NULL, doctor_name VARCHAR(100),
qualification VARCHAR(100), disease_name VARCHAR(100)
);
```

```
CREATE TABLE herb ( herb_id INT PRIMARY KEY NOT NULL,
ingredient VARCHAR(100), localname VARCHAR(100), scientific_name VARCHAR(100)
);
```

```
CREATE TABLE herb_medicine ( medicine_id INT PRIMARY KEY NOT NULL, medicine_name
VARCHAR(100), dosage VARCHAR(100), disease_name VARCHAR(100)
);
```

```
CREATE TABLE home_remedy_recipe ( recipe_id INT PRIMARY KEY NOT NULL, recipe_name
VARCHAR(100), ingredient VARCHAR(100), procedure VARCHAR(500)
);
```

```
CREATE TABLE medical_record ( record_id INT PRIMARY KEY NOT NULL, medication
VARCHAR(100), condition VARCHAR(100), surgery VARCHAR(500), date_time DATE
);
```

```
CREATE TABLE patient ( patient_id INT PRIMARY KEY NOT NULL, name VARCHAR(100), gender
VARCHAR(50), address VARCHAR(500), email VARCHAR(100));
```

4.1.2 Table Population

```
INSERT INTO patient (patient_id, name, gender, address, email)  
VALUES
```

```
(1, 'Rahul Sharma', 'Male', '123 Main Street, City', 'rahul@example.com'),  
(2, 'Priya Patel', 'Female', '456 Oak Avenue, Town', 'priya@example.com'),  
(3, 'Amit Kumar', 'Male', '789 Maple Lane, Village', 'amit@example.com'),  
(4, 'Sneha Verma', 'Female', '101 Pine Road, Suburb', 'sneha@example.com'),  
(5, 'Raj Singh', 'Male', '202 Cedar Drive, Hamlet', 'raj@example.com');
```

```
INSERT INTO medical_record (record_id, medication, condition, surgery, date_time) VALUES
```

```
(1, 'Aspirin', 'Headache', 'None', '2024-01-01'),  
(2, 'Ibuprofen', 'Fever', 'Appendectomy', '2024-02-15'),  
(3, 'Antibiotics', 'Infection', 'Knee Replacement', '2024-03-10'),  
(4, 'Insulin', 'Diabetes', 'Gallbladder Removal', '2024-04-20'),  
(5, 'Morphine', 'Pain Management', 'Heart Bypass', '2024-05-05');
```

```
INSERT INTO home_remedy_recipe (recipe_id, recipename, ingredient, procedure) VALUES
```

```
(1, 'Turmeric Milk', '1 cup milk, 1 teaspoon turmeric powder, 1/2 teaspoon cinnamon', 'Heat the milk, add turmeric and cinnamon, stir well and drink before bedtime.'),  
(2, 'Tulsi Tea', '1 cup water, 5-6 fresh tulsi leaves, 1 teaspoon honey', 'Boil water, add tulsi leaves, steep for 5 minutes, strain, add honey and drink.'),  
(3, 'Ginger Lemon Honey Tea', '1 cup water, 1 teaspoon grated ginger, 1 teaspoon honey, 1 teaspoon lemon juice', 'Boil water, add ginger, simmer for 5 minutes, strain, add honey and lemon juice, and drink.'),  
(4, 'Neem Juice', '10 neem leaves, 1 cup water, 1 teaspoon honey', 'Blend neem leaves with water, strain, add honey, and drink on an empty stomach.'),  
(5, 'Mint Infusion', '1 cup water, 10 fresh mint leaves, 1 teaspoon honey', 'Boil water, add mint leaves, steep for 10 minutes, strain, add honey and enjoy.');
```

4.1.3 Query Execution and Output

```
SELECT recipe_name  
FROM homer_emedy_recipe  
WHERE ingredient LIKE '%water%';
```

```
SELECT medication  
FROM medical_record  
WHERE surgery = 'None';
```

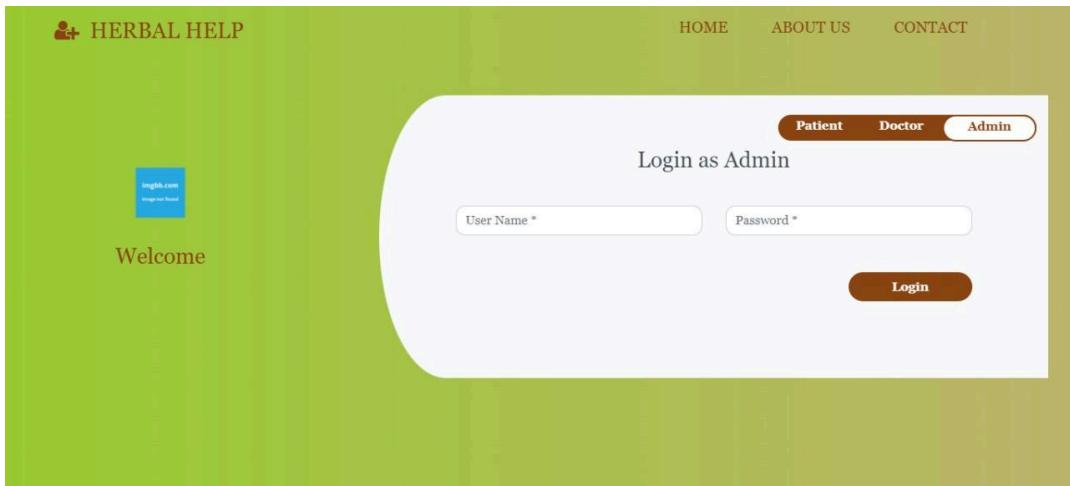
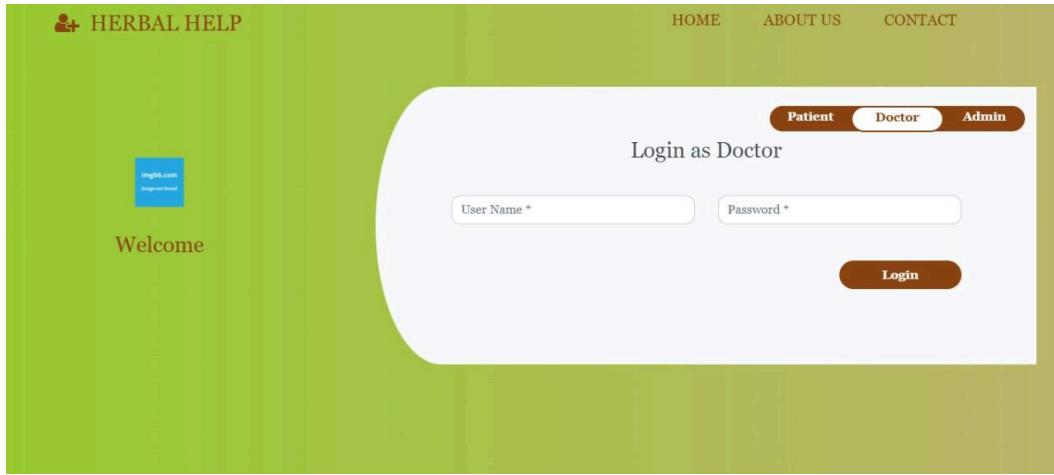
```
SELECT name  
FROM patient  
WHERE gender = 'Female';
```

```
SELECT name  
FROM patient  
WHERE gender = 'Male';
```

4.2 Front End implementation

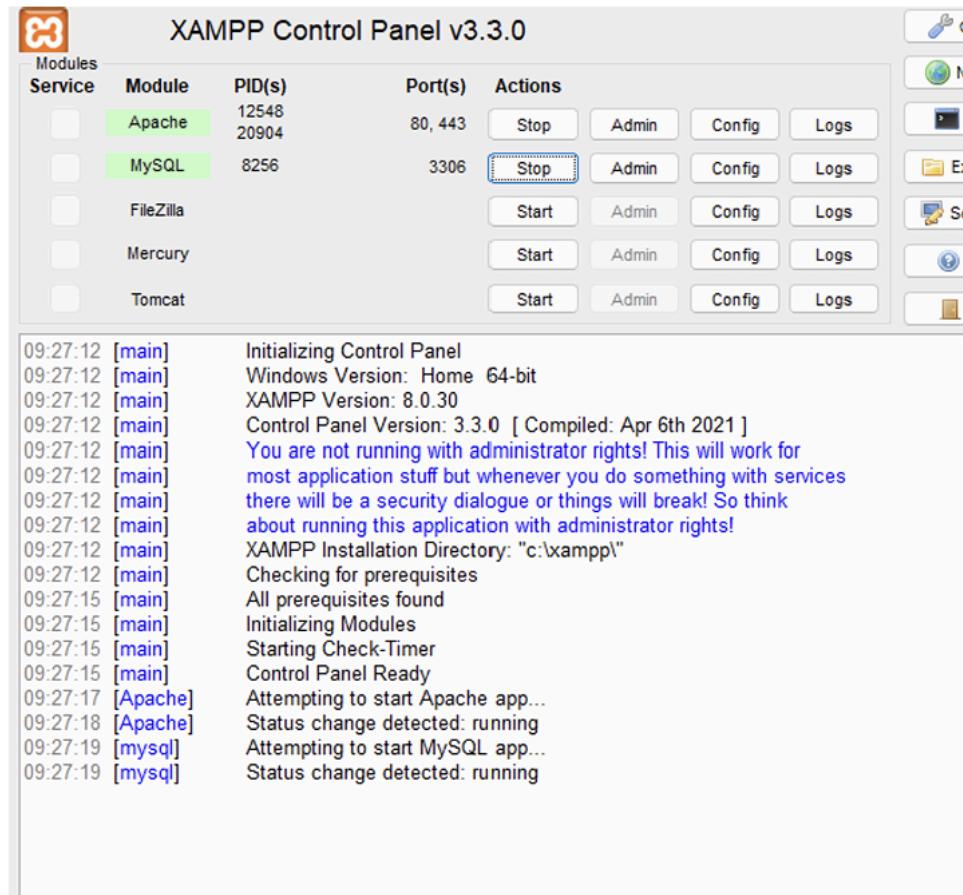
4.2.1 Form Creation

The form design focuses on optimizing the ordering process for efficiency and accuracy within the canteen management system. It employs user-friendly elements such as dropdown menus and checkboxes for menu item selection, while text fields capture specific preferences. Integration with a database ensures swift retrieval and storage of information, facilitating seamless order processing. Robust security measures safeguard sensitive data, and validation checks enhance accuracy. Clear instructions and an intuitive interface contribute to a positive user experience, promoting overall efficiency in the canteen management system.



4.2.2 Connectivity to the Database

Connecting to a XAMPP (Cross-Platform Apache, MySQL, PHP, and Perl) server is a crucial step in web development. XAMPP provides a local server environment for testing and developing dynamic websites. To establish connectivity, developers typically configure their web applications to interact with the XAMPP server by specifying the server's address (usually "localhost") and appropriate port numbers. In the context of PHP applications, the connection details to the XAMPP server are often configured within the PHP scripts to link to the MySQL database hosted on the server. The connection string includes parameters like server name, username, password, and database name. Once properly configured, developers can test and debug their applications locally before deploying them to a live server.



4.2.3 Report generation

Our project includes features that allow users to look up any herb by its name, find a home remedy recipe by its name, locate a doctor by email ID, and identify a customer by contact number.

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- [Prescriptions](#)
- [Add Medical Record](#)
- [View Remedy Recipes](#)
- [View Herb Details](#)

[Click here to search herb images](#)

ID	Recipe Name	Ingredient	Procedure	Video Link
44	Honey Garlic Paste	Honey	Grind garlic and mix honey to make a paste. Apply it to throat.	https://helloworld.com
51	Turmeric Milk	Turmeric	Mix a teaspoon of turmeric in a glass of warm milk.	https://turmericrecipe.com
87	Ginger Tea Elixir	Ginger, Tea leaves, Honey	Boil water with crushed ginger, add tea leaves, strain, and add honey if desired.	link1
89	Honey Lemon Soother	Lemon, Tea, Honey	Mix honey and lemon in warm water or tea; consume as directed.	link2

Recipe ID	Recipe Name	Ingredient	Procedure	Video Link
44	Honey Garlic Paste	Honey	Grind garlic and mix honey to make a paste. Apply it to throat.	https://helloworld.com

[Back to dashboard](#)

Recipe ID	Recipe Name	Ingredient	Procedure	Video Link
44	Honey Garlic Paste	Honey	Grind garlic and mix honey to make a paste. Apply it to throat.	https://helloworld.com

[Back to dashboard](#)

=

4.2.4 Security features

In the Herbal Health Management System, robust security practices are implemented to safeguard user credentials, particularly passwords. To fortify the protection of sensitive information, a state-of-the-art password hashing mechanism is employed. During user registration or password updates, the PHP `password_hash()` function is utilized, generating secure hash values for user passwords. The process

incorporates automatic salting, where a unique random string is added to each password before hashing, further enhancing security by thwarting common attack methods. Subsequently, during the login process, the `password_verify()` function is employed to compare the entered plaintext password with the securely stored hashed password in the system's database. This cryptographic approach ensures that even in the event of a data breach, user passwords remain cryptographically protected, and the original passwords cannot be easily reconstructed. The integration of password hashing exemplifies a commitment to user data security, aligning with best practices in safeguarding sensitive information within the Herbal Health Management System.

username	password	email	spec	docFees
ashok	ashok123	ashok@gmail.com	General	500
arun	arun123	arun@gmail.com	Cardiologist	600
Dinesh	dinesh123	dinesh@gmail.com	General	700
Ganesh	ganesh123	ganesh@gmail.com	Pediatrician	550
Kumar	kumar123	kumar@gmail.com	Pediatrician	800
Amit	amit123	amit@gmail.com	Cardiologist	1000
Abbis	abbis123	abbis@gmail.com	Neurologist	1500
Tiwary	tiwary123	tiwary@gmail.com	Pediatrician	450
ashish	ashish123	ashish@gmail.com	General	900
Vivek	vivek1234	vivek@gmail.com	Cardiologist	900
Aniket	aniket123	aniket@gmail.com	Cardiologist	550
Parth	\$2y\$10\$zZ5RJ3H8Do5aBVz7cslbO.MSCfQgd/50hSbZu/kb7rl...	parth@gmail.com	Neurologist	900
Goutham	\$2y\$10\$PMgYozB9/gZgyj7ZN0Kb.FcfDKrNCsETtzPef4Kwvt...	goutham@gmail.com	Neurologist	700

CHAPTER 5 TESTING AND RESULTS

5.1 Database Testing

Database testing is performed to verify that it is a fully functioning end-to-end database project. Testing can be performed to check the validity across a number of cases as shown below.

Herb information storage

Test Case 1: Ensure that detailed information about each herb is accurately stored in the database.

Test Case 2: Verify that additions or updates to herb information reflect accurately in the database.

User Profiles:

Test Case 3: Validate that new users can be successfully registered, and their profile details are correctly stored in the database.

Test Case 4: Confirm that changes to user profiles like new or canceled appointments or updatations to their medical record are accurately updated in the database.

Herb Image Search:

Test Case 5: Check that the herb image search results are correctly linked to the respective herbs searched by the user.

Test Case 6: Verify that additions or changes to the herb or remedy recipe database by the admin are accurately reflected in the search results.

Educational Modules:

Test Case 7: Ensure that doctors can search for their patients by their contact numbers, cancel appointments and provide necessary prescriptions.

Test Case 8: Ensure that the admin can add/delete doctors, herb data, recipe data successfully and the changes are properly reflected in the database.

Community Contributions:

Test Case 9: Provides users/patients to provide reviews and leave message to enable a feedback system.

Test Case 10: Check that content removal or updates are reflected correctly in the database.

Security Measures:

Test Case 11: Ensure that security measures, such as hashing of sensitive data like passwords, are effectively implemented in the database.

Test Case 12: Validate that access controls and permissions are correctly configured in the database.

User Interaction Logs:

Test Case 15: Check that user interactions, including searches, clicks, and views, are accurately logged in the database.

Test Case 16: Confirm that the log records are appropriately updated and maintained.

5.2 Front End Testing

User Interface (UI) Elements:

Test Case 1: Verify that all UI elements, such as buttons, input fields, dropdowns, and images, are displayed correctly on various devices and browsers.

Test Case 2: Ensure consistent alignment, spacing, and styling for a visually appealing layout across different screen sizes.

Navigation:

Test Case 3: Confirm that all navigation links and buttons lead to the correct pages within the Herbal Health Management System.

Test Case 4: Check the behavior of the navigation menu, ensuring it collapses or expands appropriately on different screen sizes.

Responsiveness:

Test Case 5: Validate the responsiveness of the system, ensuring it adapts appropriately to different screen sizes, including desktops, tablets, and mobile devices.

Test Case 6: Confirm that font sizes and images scale proportionally, contributing to an optimal user experience.

Input Validation:

Test Case 7: Test input fields for accepting correct data types and formats (e.g., ensuring proper handling of dates, phone numbers, and email addresses).

Test Case 8: Verify the display of appropriate error messages when users input invalid data, providing clear guidance for corrections.

Forms and Submissions:

Test Case 9: Confirm the functionality of form submissions, ensuring users receive accurate confirmation messages for successful submissions.

Test Case 10: Validate that required fields are enforced, preventing form submission if essential information is missing, and displaying relevant prompts.

User Interaction Enhancements:

Test Case 11: Check for interactive features, such as tooltips or pop-ups, providing additional information or guidance to users.

Test Case 12: Ensure that dynamic elements function smoothly and enhance user engagement.

Browser Compatibility:

Test Case 13: Test the system's compatibility with various browsers, including Chrome, Firefox, Safari, and Edge, to ensure consistent performance.

Accessibility:

Test Case 14: Verify that the system adheres to accessibility standards, enabling users with disabilities to navigate and interact seamlessly.

CHAPTER 6 CONCLUSION

6.1 Limitations

Limited Herbal Database:

The effectiveness of the herb image search may be constrained by the extent of the available herbal database, potentially limiting the diversity and comprehensiveness of the search results.

Dependency on Internet Connection:

The herb image search feature relies on an internet connection to retrieve images from the web database. Limited or unstable internet connectivity may impact the user experience.

Accuracy of Predictive Analysis :

If predictive analysis is employed, its accuracy is contingent on the quality and relevance of the data used for training. Inaccuracies may arise in predicting user preferences for herb searches.

User Skill Dependency:

Users' ability to effectively use the herb image search relies on their skill in formulating search queries. Less tech-savvy users may face challenges in obtaining desired results.

Incomplete Herb Information:

The availability and accuracy of detailed information about herbs may vary. Incomplete or inaccurate information could impact the reliability of the platform's educational content.

Compatibility Issues:

Compatibility with various devices and browsers may present challenges. The user experience may vary based on the device or browser used to access the platform.

Security Concerns:

The integration with external databases for herb images raises security concerns. Ensuring the privacy and security of user data and interactions with the external database is crucial.

Resource Intensiveness:

The herb image search feature, particularly if implemented with advanced functionalities, may be resource-intensive, requiring sufficient server resources for optimal performance.

Limited Language Support:

Language support for herb names and information retrieval may be limited, potentially excluding certain regions or communities from accessing relevant herbal content.

6.2 Future Enhancements

Expanded Herb Database:

Continuously augment the herb database to include a wider variety of herbs, fostering a more comprehensive and diverse herbal knowledge repository.

Enhanced Predictive Analysis:

Refine and expand predictive analysis capabilities to better anticipate user preferences, improving the accuracy and responsiveness of the herb image search feature over time.

Multi-Language Support:

Introduce support for multiple languages to make the platform more inclusive, allowing users from diverse linguistic backgrounds to access herbal information in their preferred language.

Mobile Application Development:

Develop a dedicated mobile application to provide users with a seamless and optimized experience on various mobile devices, enhancing accessibility and convenience.

Integration with Wearable Devices:

Explore integration with wearable devices to extend the reach of the platform, allowing users to access herb information and conduct searches directly from their wearable devices.

User-Generated Content:

Implement features that enable users to contribute content, share personal experiences with herbal remedies, and participate in community-driven discussions, fostering a collaborative and engaging platform.

Personalized User Profiles:

Introduce personalized user profiles where individuals can track their herb-related interests, saved searches, and receive tailored recommendations based on their preferences and usage patterns.

Educational Modules and Courses:

Develop educational modules and courses within the platform to offer structured learning paths for users interested in deepening their knowledge of herbal remedies and holistic health practices.

Integration with Health Wearables:

Explore integration with health monitoring wearables to provide users with insights into how herbal remedies may complement their health and wellness goals based on real-time health data.

Interactive Virtual Assistance:

Implement an interactive virtual assistant powered by natural language processing to guide users in their herbal exploration, answer queries, and offer personalized suggestions based on individual health profiles.

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APPENDIX A- CODE SNIPPETS

```
<div class="tab-pane fade" id="lisp-pres" role="tabpanel" aria-labelledby="lisp-pres-list">

<table class="table table-hover">
<thead>
<tr>
    <th scope="col">Recipe ID</th>
    <th scope="col">Recipe Name</th>
    <th scope="col">Ingredient</th>
    <th scope="col">Procedure</th>
    <th scope="col">Video Link</th>
</tr>
</thead>
<tbody>
<?php

$con=mysqli_connect("localhost","root","","myhmsdb");
global $con;

$query = "select rid, rname, ingredient, proced, videolink from recipe;";

$result = mysqli_query($con,$query);
if(!$result){
echo mysqli_error($con);
}

while ($row = mysqli_fetch_array($result)){
?>
<tr>
<td><?php echo $row['rid'];?></td>
```

```
<div class="tab-pane fade" id="lisp-pres" role="tabpanel" aria-labelledby="lisp-pres-list">

<table class="table table-hover">
<thead>
<tr>
    <th scope="col">Recipe ID</th>
    <th scope="col">Recipe Name</th>
    <th scope="col">Ingredient</th>
    <th scope="col">Procedure</th>
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</tr>
</thead>
<tbody>
<?php

$con=mysqli_connect("localhost","root","","myhmsdb");
global $con;

$query = "select rid, rname, ingredient, proced, videolink from recipe;";

$result = mysqli_query($con,$query);
if(!$result){
echo mysqli_error($con);
}

while ($row = mysqli_fetch_array($result)){
?>
<tr>
<td><?php echo $row['rid'];?></td>
```

```

<div class="tab-pane" id="list-pres" role="tabpanel" aria-labelledby="list-pre> .nav-top
Aa ab,* No results ↑
<table class="table table-hover">
    <thead>
        <tr>
            <th scope="col">Allergy</th>
            <th scope="col">Medication</th>
            <th scope="col">Condition</th>
            <th scope="col">Surgery Required</th>
        </tr>
    </thead>
    <tbody>
        <?php
            $con=mysqli_connect("localhost","root","","myhmsdb");

            $result = mysqli_query($con, "SELECT medical_record FROM patreg WHERE pid = '$pid'");
            $row=mysqli_fetch_array(($result))['medical_record'];
            if(!$result){
                echo mysqli_error($con);
            }
        ?>
        <tr>
            <td><?php echo json_decode($row)->allergy;?></td>
            <td><?php echo json_decode($row)->medication;?></td>
            <td><?php echo json_decode($row)->condition;?></td>
            <td><?php echo json_decode($row)->surgreq;?></td>
        </tr>
    </tbody>
</table>
```

```

3 <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Herb Search</title>
7 </head>
8 <body>
9     <h1>Herb Search</h1>
0     <form method="post" action=<?php echo $_SERVER['PHP_SELF']; ?>>
1         <label for="herb">Enter Herb Name:</label>
2             <input type="text" id="herb" name="herb">
3             <button type="submit" name="submit">Search</button>
4 </form>

5
6 <?php
7 if (isset($_POST['submit'])) {
8     // Read CSV file
9     $file = 'herbimage.csv';
0     $herb = $_POST['herb'];
1     $found = false;

3     if (($handle = fopen($file, 'r')) !== false) {
4         // Read headers
5             $headers = fgetcsv($handle);

6             // Search for the herb
8             while (($data = fgetcsv($handle)) !== false) {
9                 if (strcasecmp($data[1], $herb) == 0) { // Case-insensitive comparison
0                     $found = true;
1                     echo '<h2>Herb: ' . $data[1] . '</h2>';
2                     echo '<p><strong>Herbarium Image and Uses:</strong> <a href="' . $data[4] . '" target="_blank">' . $data[4] . '</a><br>' . $data[4];
3                     break;
4             }
5         }
6     }
7 }
8
9
0
1
2
3
```

APPENDIX B –SCREENSHOTS

The screenshot shows the 'Register as Patient' form. At the top right are three tabs: 'Patient' (selected), 'Doctor', and 'Admin'. Below the tabs are four input fields: 'First Name *', 'Last Name *', 'Your Email *', and 'Your Phone *'. Underneath these are two password fields: 'Password +' and 'Confirm Password+'. Below the password fields are gender selection buttons ('Male' and 'Female') and a link 'Already have an account?'. A large 'Register' button is at the bottom right.

The page features a header with 'HERBAL HELP' and navigation links for 'HOME', 'ABOUT US', and 'CONTACT'. Below the header is a section titled 'HERBAL HOSPITAL' with the subtext 'Providing best quality herbal care for your needs'. To the left of a central image of various herbs in bowls, there is a list of three features with checkmarks:

- Easy user interface
Simply sign in and get your herbal prescription
- Choose your favourite herbal recipes
From a range of different herbal recipes that are ayurvedic
- Find further details about herbs
Find all necessary herb details you need

A 'LEARN MORE >' button is located below the list. At the bottom left is a user menu with 'Herbal Help' and 'Logout'.

Welcome shashwat hotani

The left sidebar has a 'Book Appointment' tab selected. The main area is titled 'Create an appointment' and contains the following fields:

- Specialization: Select Specialization
- Doctors: Select Doctor
- Consultancy Fees
- Appointment Date: dd-mm-yyyy
- Appointment Time: Select Time

A green 'Create new entry' button is at the bottom left.

 Herbal Help 

Welcome shashwat hotani

Dashboard
Book Appointment
Appointment History
Prescriptions
Add Medical Record
View Remedy Recipes
View Herb Details

Search

[Click here to search herb images](#)

Recipe ID	Recipe Name	Ingredient	Procedure	Video Link
44	Honey Garlic Paste	Honey	Grind garlic and mix honey to make a paste. Apply it to throat.	https://helloworld.com
51	Turmeric Milk	Turmeric	Mix a teaspoon of turmeric in a glass of warm milk.	https://turmericrecipe.com
87	Ginger Tea Elixir	Ginger, Tea leaves, Honey	Boil water with crushed ginger, add tea leaves, strain, and add honey if desired.	link1
89	Honey Lemon Soother	Lemon, Tea, Honey	Mix honey and lemon in warm water or tea; consume as directed.	link2

 HERBAL HELP

[HOME](#) [ABOUT US](#) [CONTACT](#)

[Patient](#) [Doctor](#) [Admin](#)

Login as Doctor

[Login](#)

Welcome



 Herbal Help 

WELCOME RECEPTIONIST

Dashboard
Doctor List
Patient List
Appointment Details
Prescription List
Add Doctor
Delete Doctor
Add Herb
Add Recipe

Recipe ID:

Recipe Name:

Ingredient:

Procedure:

Video Link:

[Add Recipe](#)