

1. INTRODUCTION

1.1 Purpose / Overview:

This Project is on “Online Dentist Appointment System” using SQL and PHP functions. Nowadays, technology has changed many aspects of life and people’s daily life is becoming indivisible from the network due to the development of Internet. With online dentist reservation system, the process gets much faster and more efficient than traditional way. Thousands of businesses and organizations have already discovered the advantage gained by using the online reservation system. Online dentist reservation system allows the system administrator to access and manage the database online, quickly pull data and create strong reports right from the online reservation system with most practical to find the fastest information, instead of having to maintain and manage separate data files, folders and spreadsheets. They simply navigate to the system just as any Web Site. The data will be housed securely and safely online.

1.2 Objectives:

The primary objectives of this project include:

1. The Online Dentist Appointment Booking System consists of various websites and mobile applications on the internet.
2. It provides the easier way for all the patients for scheduling the appointment as quickly as possible from anywhere.
3. My proposed Online Dentist Appointment Booking System that can help the patients book and view the time slot more easily also can help the dentists in their works.
4. The system allows the patients to book the empty slots online.
5. The system allows the dentists to manage their appointments by patients.
6. When the patient visits a dentist, his/her medical record is archived in the database by the dentist.
7. After the first medical report, the patients can view his/her medical record.

1.3 Scope of the Project:

The scope of this project includes:

- Development of a web-based application with separate modules for patients and dentists.
- Implementation of features such as appointment scheduling, patient records management, treatment history tracking, and billing.
- Integration with a secure payment system for seamless transactions.
- Enabling AI-driven diagnostic support for dental issues.
- Ensuring user-friendly access to dental records through dashboards and reports.
- Implementing a secure database to store patient and treatment-related data.
- Introducing IoT-based monitoring for dental imaging and real-time patient tracking.

2. SYSTEM REQUIREMENTS

The Dental Management System is a web-based application requiring the following hardware and software specifications:

Hardware Requirements:

- Server: Minimum 8 GB RAM, 500 GB SSD storage, Intel Core i5 processor or above.
- Client Device: PC, Laptop, or Mobile device with an internet connection.
- IoT Devices: Digital X-ray, intraoral cameras, and AI-powered diagnostic tool

Software Requirements:

- Backend: PHP with MySQL Database
- Frontend: HTML, CSS, JavaScript
- Database: MySQL (Using phpMyAdmin for management)
- Development Tools: XAMPP, Sublime Text 3.1.1, GitHub for version control
- Browser Compatibility: Google Chrome, Mozilla Firefox, Opera, Microsoft Edge
- AI and Machine Learning Libraries: TensorFlow, Scikit-learn for diagnostic support
- Blockchain Framework: Ethereum Smart Contracts for secure patient record storage

3.THEORETICAL BACKGROUND

3.1 Introduction to Project:

Dental management involves various activities such as appointment scheduling, patient data management, billing, and diagnostics. Traditional methods often lead to inefficiencies, data mismanagement, and patient dissatisfaction. This project aims to modernize the process by providing a web-based solution that centralizes dental operations and facilitates seamless communication between patients and dentists.

3.2 Existing System Design and Analysis:

The existing system largely relies on manual record-keeping, which is prone to errors, inefficiencies, and data loss. The major limitations of traditional dental management include:

- Lack of digital records: Patient data is maintained in physical files, making retrieval difficult.
- Limited patient access: Patients struggle to book appointments efficiently, leading to delays.
- Inefficient resource allocation: Improper tracking of schedules and inventory leads to financial losses.
- Lack of analytics: The absence of predictive analytics makes it challenging to optimize treatment plans.
- Absence of IoT monitoring: Dentists rely on manual diagnostics rather than real-time sensor data.

4. SYSTEM DESIGN

4.1 Table Description:

The database consists of the following key tables:

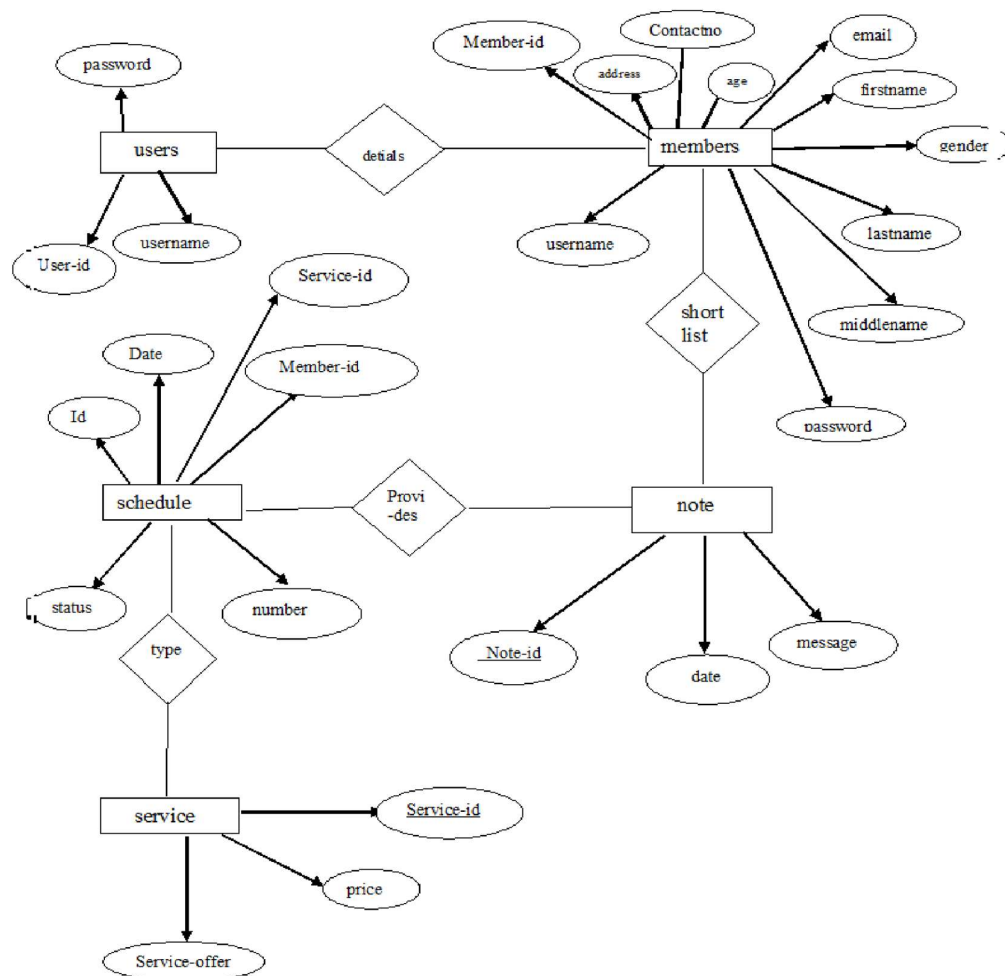
- Users Table: Stores user information (Patients, Dentists, Admins)
- Appointments Table: Manages appointment scheduling and tracking
- Treatments Table: Contains details about dental procedures and history
- Billing Table: Tracks payments and invoices
- Inventory Table: Manages dental supplies and equipment
- IoT Data Table: Stores real-time sensor readings from dental imaging and monitoring devices

4.2 Data Flow Diagram (DFD):

- Level 0: Represents user interaction with the system.
- Level 1: Shows how data flows between different modules (e.g., appointment booking, treatment records, and billing).
- Level 2: Details the data exchange between database tables and user requests.

4.3 Entity-Relationship Diagram (ERD):

The ERD illustrates the relationships between various entities such as users, appointments, treatments, billing, and inventory. This diagram visually represents how different entities interact within the system, ensuring efficient data management and streamlined dental operations.



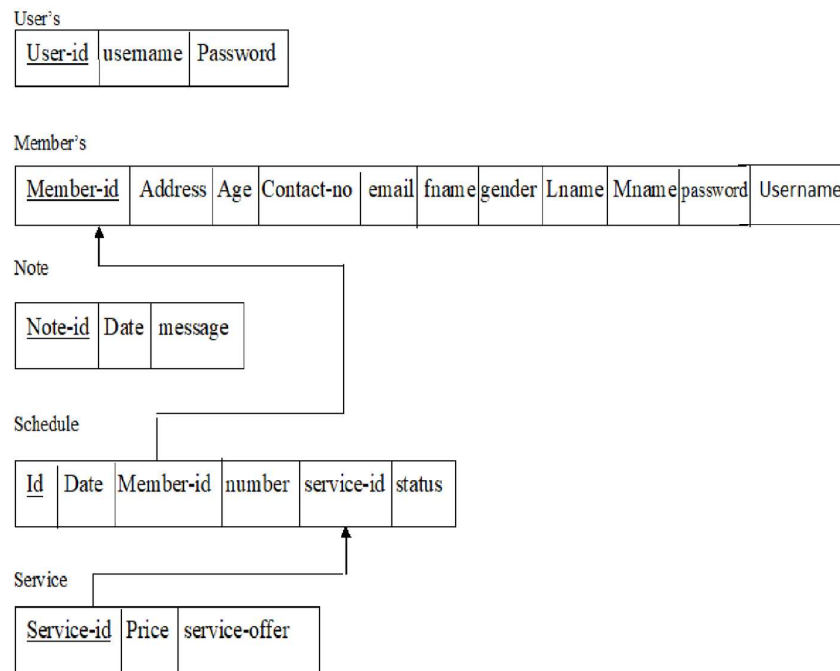
4.4 Schema Diagram:

The schema diagram provides a visual representation of the database structure, showing table relationships and primary keys.

IMPLEMENTATION

The implementation process involves:

1. Database Setup: Creating MySQL tables for storing patient-related data.
2. Backend Development: Implementing business logic using PHP.
3. Frontend Development: Designing user-friendly interfaces with HTML, CSS, and JavaScript.
4. IoT Sensor Integration: Connecting IoT devices for real-time dental imaging and monitoring.
5. AI and Machine Learning Models: Training models for predictive diagnostics and treatment recommendations.
6. Blockchain Integration: Implementing secure, decentralized patient records.
7. Testing: Performing unit, integration, and system testing.
8. Deployment: Hosting the application on a web server.



RESULTS

The successful implementation of the Farm Management System resulted in:

- Increased efficiency in patient record management.
- Better coordination between patients and dentists.
- Improved tracking of dental treatments and appointments.
- Enhanced decision-making through AI-driven diagnostics.
- Secure and seamless financial transactions.
- Real-time monitoring of dental imaging through IoT devices.
- AI-driven insights for optimizing treatment plans and preventive care.

CONCLUSION

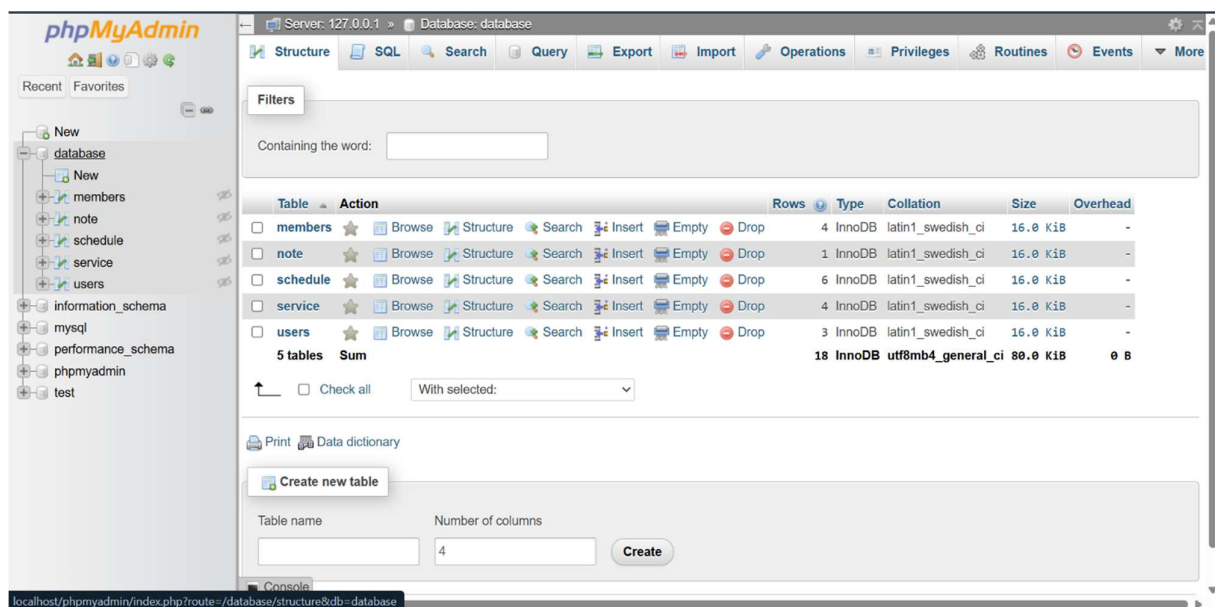
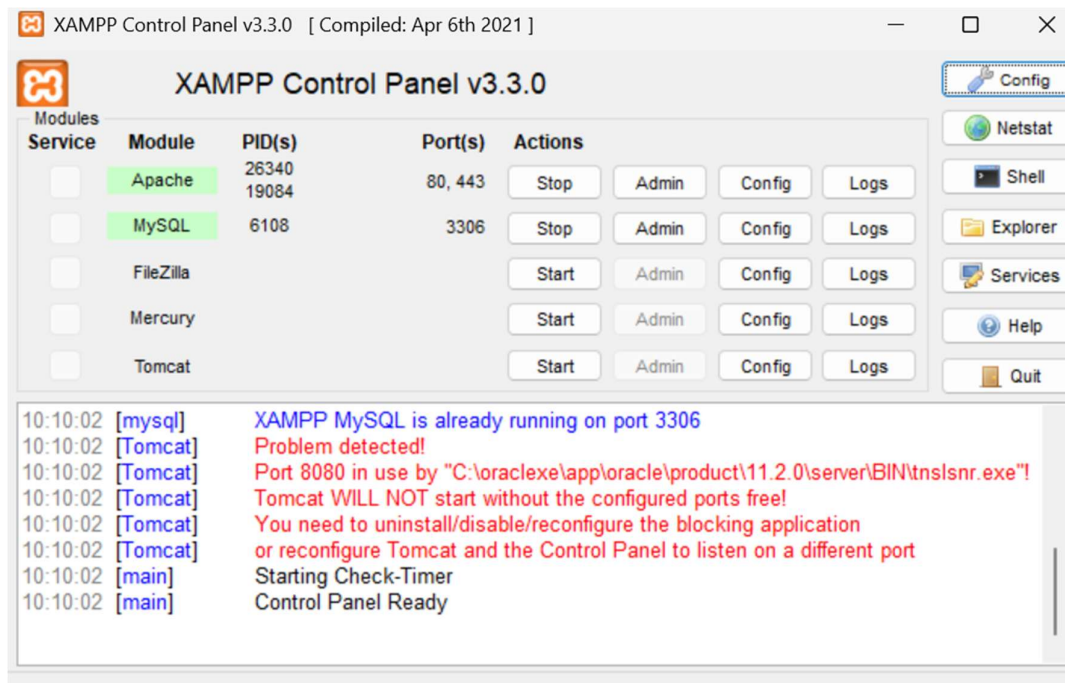
The Dental Management System introduces a modernized, digital approach to dental healthcare. By integrating technology into dentistry, this system enhances efficiency, reduces administrative burdens, and improves patient satisfaction. With real-time tracking, predictive analytics, and automated processes, dental clinics can now optimize their resources effectively.

Future improvements may include AI-driven recommendations for personalized dental care, blockchain integration for transparent record-keeping, and mobile application support for remote appointment management. Additionally, the integration of augmented reality (AR) for patient education and automated treatment simulations could further enhance patient experience and treatment outcomes.

REFERENCES

- Dental Technology Research Reports
- Web Development Documentation
- Database Management System Guidelines
- Digital Healthcare Guidelines
- IoT Implementation in Healthcare Research Papers
- Machine Learning for Medical Diagnosis Studies

OUTPUTS:



phpMyAdmin

Recent Favorites

- New
- database
- New
- members
- note
- schedule
- service
- users
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test

Server: 127.0.0.1 > Database: database > Table: members

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

SELECT * FROM `members`

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

Extra options

	member_id	firstname	lastname	middlename	address	email	contact_no	age	gender	us
<input type="checkbox"/>	1	stephanie	villanueva	batoong	Saraviaq	tephvillanueva.jk@gmail.com	0946651154	18	Male	te
<input type="checkbox"/>	7	john kevin	lorayna		bago city	jkevlorayna@gmail.com	0946651154	19	Male	q
<input type="checkbox"/>	8	testg	fasfsg		bagdahsd	kevin_lorayna@yahoo.com	31289417	12	Female	te
<input type="checkbox"/>	9	jessica	bela-ong		bbaaf	kasfasfas@yahoo.com	311fasf	19	Female	je

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 Console

phpMyAdmin

Recent Favorites

- New
- database
- New
- members
- note
- schedule
- service
- users
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test

Server: 127.0.0.1 > Database: database > Table: schedule

Showing rows 0 - 5 (6 total, Query took 0.0007 seconds.)

SELECT * FROM `schedule`

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

Extra options

	id	member_id	date	service_id	Number	status
<input type="checkbox"/>	76	1	11/09/2013	1	1	Done
<input type="checkbox"/>	77	1	11/09/2013	1	1	Pending
<input type="checkbox"/>	78	1	10/09/2013	1	1	Done
<input type="checkbox"/>	79	1	12/03/2025	1	1	Pending
<input type="checkbox"/>	80	1	28/03/2025	1	1	Pending
<input type="checkbox"/>	81	1	10/03/2025	4	1	Done

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

Console

phpMyAdmin

Recent Favorites

- New
- database
- New
- members
- note
- schedule
- service
- users
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test

Server: 127.0.0.1 > Database: database > Table: users

Showing rows 0 - 2 (3 total, Query took 0.0006 seconds.)

SELECT * FROM `users`

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

Extra options

	user_id	username	password
<input type="checkbox"/>	5	admin	admin
<input type="checkbox"/>	9	teph	teph
<input type="checkbox"/>	10	teph	teph

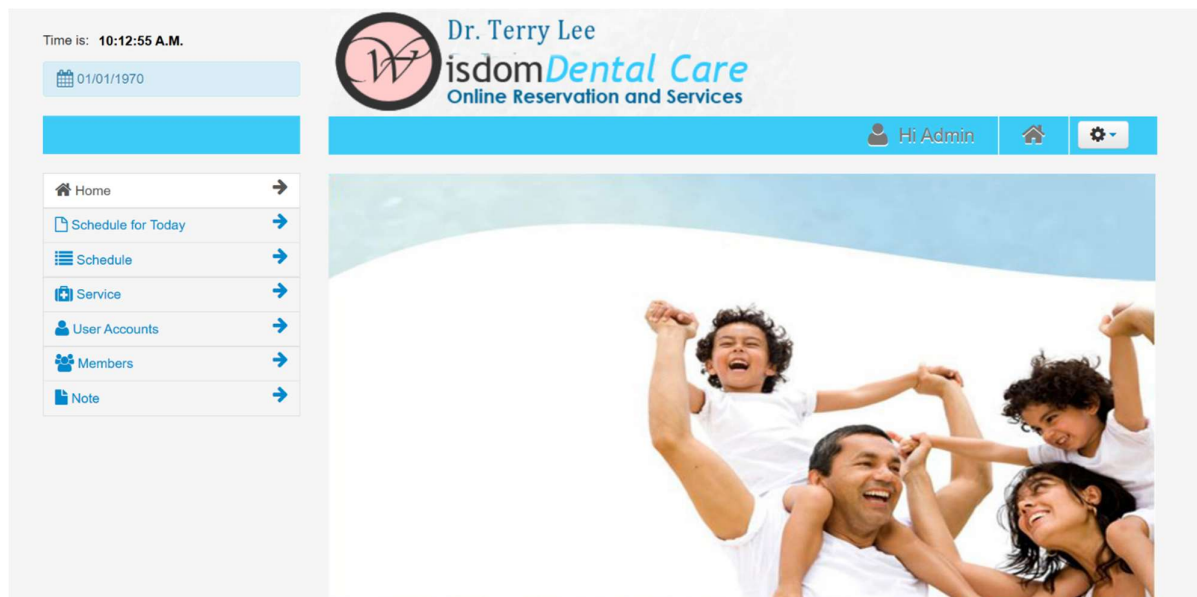
Check all | With selected: Edit Copy Delete Export

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

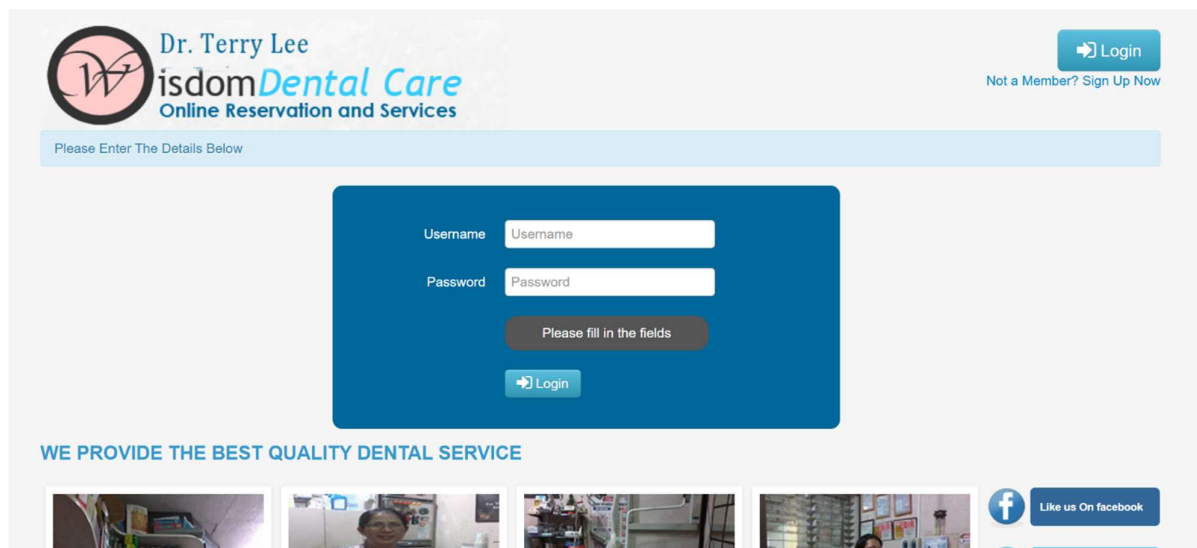
Query results operations

Print Copy to clipboard Export Display chart Create view

localhost/phpmyadmin/index.php?route=/sql&pos=0&db=database&table=users



HOME PAGE OF THE ADMIN LOGIN



ADMIN LOGIN PAGE

Welcome: stephanie villanueva
Account

Search

Create Account

Today is:

Tuesday, March 11, 2025

Time Guide for Each Number

Number 1 - 9:30 - 10:00
Number 2 - 10:00 - 10:30
Number 3 - 10:30 - 11:00
Number 4 - 11:30 - 12:00
Number 5 - 12:30 - 1:00
Number 6 - 3:00 - 3:30
Number 7 - 3:30 - 4:00
Number 8 - 4:30 - 5:00

Office Hours

Monday - Firday (9:30 am to 1:00 pm)
Monday - Friday (3:00 pm to 5:00 pm)

Dr. Terry Lee
isdomDental Care
Online Reservation and Services

Select Date of Appointment and Service Offer

Date

Service

Submit

NOTE

Doc terry will be out on august 3 2013

List of Services

Service Offer	Price
Cleaning	700.00
Regular Checkup	5000.00
Oral examinations	2000.00
Root canals	10000.00

Dr. Terry Lee

USER LOGIN PAGE

Create Account

Today is:

Tuesday, March 11, 2025

Time Guide for Each Number

Number 1 - 9:30 - 10:00
Number 2 - 10:00 - 10:30
Number 3 - 10:30 - 11:00
Number 4 - 11:30 - 12:00
Number 5 - 12:30 - 1:00
Number 6 - 3:00 - 3:30
Number 7 - 3:30 - 4:00
Number 8 - 4:30 - 5:00

Office Hours

Monday - Firday (9:30 am to 1:00 pm)
Monday - Friday (3:00 pm to 5:00 pm)

Dr. Terry Lee
isdomDental Care
Online Reservation and Services

Select Date of Appointment and Service Offer

Your appointment has been set on 11/03/2025.
THANK YOU

List of Services

Service Offer	Price
Cleaning	700.00
Regular Checkup	5000.00
Oral examinations	2000.00
Root canals	10000.00

Dr. Terry Lee

APPOINTMENT CONFIRMATION FOR THE USER

Time is: 10:14:12 A.M.
01/01/1970

Hi Admin

Home
Schedule for Today
Schedule
Service
User Accounts
Members
Note

Service Table

10 records per page
Search:

Number	Member	Date	Service	Price	Status	Action
1	stephanie villanueva	11/03/2025	Regular Checkup	5000.00	Pending	

Showing 1 to 1 of 1 entries
Previous 1 Next

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APPOINTMENTS REFLECTING IN ADMINS LOGIN

Home
Schedule for Today
Schedule
Service
User Accounts
Members
Note

Schedule Table

Sort

10 records per page
Search:

Number	Member	Date	Service	Price	Status	Action
1	stephanie villanueva	11/09/2013	Cleaning	700.00	Done	
1	stephanie villanueva	11/09/2013	Cleaning	700.00	Pending	
1	stephanie villanueva	10/09/2013	Cleaning	700.00	Done	
1	stephanie villanueva	12/03/2025	Cleaning	700.00	Pending	
1	stephanie villanueva	28/03/2025	Cleaning	700.00	Pending	
1	stephanie villanueva	10/03/2025	Regular Checkup	5000.00	Done	
1	stephanie villanueva	11/03/2025	Regular Checkup	5000.00	Pending	
1	jessica bela-ong	11/03/2025	Oral examinations	2000.00	Pending	

ALL THE SCHEDULES THAT THE DOCTOR HAS PERFORMED