CLIENT MANAGEMENT SYSTEM

By

DANGBIN PARFA WUYEP

IDEAS/24/44867

SUPERVISOR

MR. HAYAT SULEIMAN TUGE

SUBMITTED TO

DEPARTMENT OF SOFTWARE ENGINEERING

FACULTY OF INFORMATION TECHNOLOGY

BAZE UNIVERSITY ABUJA (IDEAS)

SEPTEMBER, 2024

Abstract

The Client Management System (CMS) is a webbased application developed using PHP and MySQL to help businesses manage their client information, interactions, and communications. The system simplifies tasks such as client onboarding, managing client information, tracking communication history, and generating reports on client activities. By centralizing clientrelated data, businesses can improve customer relationships, streamline workflows, and ensure timely communication. The CMS allows users to assign tasks, track performance, and manage interactions in a secure and efficient manner. The system is designed to be userfriendly, scalable, and adaptable to different business needs.

Table of Contents

Chapter 1

Introduction

1.1 Background of the Study

In modern business, managing client relationships is crucial to success. Many companies struggle with tracking client data, communications, and tasks, especially when dealing with a large number of clients. A Client Management System (CMS) is needed to help companies organize their clientrelated activities in a systematic and efficient manner.

1.2 Problem Statement

Managing client relationships manually or through unintegrated systems can result in lost data, missed opportunities, and inefficient workflows. Businesses need a system that can manage client data, track communications, and generate reports on client interactions.

1.3 Objectives of the Project

The primary objective of this project is to develop a webbased Client Management System (CMS) that simplifies and automates client management tasks. Specific objectives include:

To provide a central platform for storing and managing client information.

To enable tracking of client interactions and communications.

To offer task management features to assign and monitor activities related to clients.

To generate reports that provide insights into client activities.

1.4 Scope of the Project

The system will provide the following functionalities:

Client registration and information management.

Communication history tracking.

Task assignment and monitoring.

Reporting on client activities.

Secure, rolebased access for different users.

1.5 Significance of the Study

This system will help businesses improve client relationships, enhance workflow efficiency, and provide insights into client activities through reporting. It will benefit businesses by reducing manual work and providing a centralized platform for client data management.

1.6 Definition of Terms

CMS: Client Management System.

Database: A structured set of data held in a computer, especially accessible in various ways.

PHP: Hypertext Preprocessor, a serverside scripting language used for web development.

MySQL: An opensource relational database management system.

Chapter 2

System Analysis

2.1 Overview of Existing Systems

Many businesses use a combination of manual processes and simple software to manage client information. These systems often lack integration and features like task tracking and communication history, making them inefficient for managing a large client base.

2.2 Limitations of Existing Systems

Lack of a centralized platform for client information.

Inability to track communication history.

Poor reporting capabilities.

Inefficient task assignment and monitoring processes.

2.3 Proposed System Overview

The CMS will provide a centralized platform where businesses can store and manage client data, track communication history, assign tasks, and generate reports.

2.4 Functional and NonFunctional Requirements

Functional Requirements:

Client registration and management.

Communication tracking.

Task assignment and monitoring.

Rolebased user access.

NonFunctional Requirements:

Data security.

System scalability.

High performance.

2.5 Use Case Diagrams

A use case diagram will depict how different users (admin, client manager, support staff) interact with the system.

2.6 System Users

Admin: Full control over the system, including user management.

Client Manager: Manages client information and tasks.

Support Staff: Handles specific clientrelated tasks and communications.

Chapter 3

System Design

3.1 System Architecture

The CMS will be built using a threetier architecture:

Presentation Layer: HTML, CSS, JavaScript for the user interface.

Business Logic Layer: PHP for serverside functionality.

Data Layer: MySQL for database management.

3.2 Database Design and ER Diagrams

The database will contain tables for clients, communications, tasks, and users. The EntityRelationship Diagram (ERD) will show how these entities are related.

3.3 Data Flow Diagrams (DFDs)

Context Diagram: Illustrates how the CMS interacts with external systems or users.

Level 1 DFD: Breaks down the system’s main processes such as client management, task tracking, and reporting.

3.4 User Interface Design

The user interface will be designed to be userfriendly and intuitive, with simple forms for client data entry and dashboards for task and communication tracking.

3.5 System Modules

Client Management: Stores client information such as contact details, business history, etc.

Communication Tracking: Logs interactions with clients, such as emails and meetings.

Task Management: Allows tasks to be assigned to users, and tracks the progress of each task.

Reporting: Generates reports on client activities, communications, and tasks.

Chapter 4

System Implementation

4.1 Tools and Technologies Used

Frontend: HTML, CSS, JavaScript for creating a responsive and userfriendly interface.

Backend: PHP for handling serverside logic.

Database: MySQL for managing data storage and retrieval.

4.2 System Modules Implementation

Each system module will be implemented with PHP for the serverside logic and MySQL for database interaction.

4.2.1 Client Registration and Management

This module will allow users to add, update, and view client information.

4.2.2 Communication Tracking

This module will log all communications between clients and the business, enabling users to keep track of past interactions.

4.2.3 Task Assignment and Monitoring

Users will be able to assign tasks related to clients, monitor their progress, and mark them as complete once done.

4.2.4 Reporting Module

This module will generate custom reports on client activities, such as communication logs and task completion rates.

4.2.5 Rolebased Access Control

The system will include rolebased access control to ensure different users have access only to the features they need.

4.3 Security Implementation

The system will include features like login authentication, user session management, and data encryption to ensure security.

Chapter 5

Testing and Evaluation

5.1 Testing Methodology

Testing will be conducted using a combination of unit tests, integration tests, and systemwide tests.

5.2 Unit Testing

Each module, such as client management and communication tracking, will be tested individually to ensure correct functionality.

5.3 Integration Testing

Testing will be performed to ensure that different system modules work together seamlessly.

5.4 System Testing

The entire system will be tested to ensure that it works in realworld scenarios.

5.5 User Acceptance Testing (UAT)

Key users will test the system to verify that it meets business requirements and is userfriendly.

5.6 System Performance Evaluation

The system’s performance will be evaluated based on speed, scalability, and its ability to handle large volumes of client data.

Conclusion

In conclusion, the Client Management System provides an effective solution for businesses to manage client interactions and tasks. The system can be further improved by adding mobile compatibility and integrating third