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**GROUP B**

**Module**: **Web TECHNOLOGY**

**PROJECT NAME: Nursery Management System**

**Nursery Management System Documentation**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to provide comprehensive documentation for the Nursery Management System. It outlines the system's functionality, architecture, components, and usage instructions.

**1.2 Scope**

This document encompasses the entire nursery management system, including its features, modules, and operational aspects.

**2. System Overview**

**2.1 Description**

The Nursery Management System is designed to streamline and automate various processes involved in managing a nursery or childcare facility. It offers functionalities for managing student records, staff information, attendance tracking, billing, scheduling, and communication with parents.

**2.2 Key Features**

* Student Management
* Staff Management
* Attendance Tracking
* Billing and Invoicing
* Scheduling
* Communication Module

**3. System Architecture**

**3.1 Architecture Overview**

The system follows a modular architecture, comprising frontend and backend components. It utilizes PHP as the backend language, MySQL for the database, and HTML/CSS/JavaScript for the frontend.

**3.2 Components**

* **Frontend**: HTML, CSS, JavaScript
* **Backend**: PHP
* **Database**: MySQL

**3.3 Database Schema**

Below are the tables included in the database schema:

**3.3.1 Users Table**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| user\_id | INT | Primary key, auto-increment |
| Username | VARCHAR(50) | Unique username |
| Password | VARCHAR(100) | Encrypted password |
| Role | ENUM | User role (admin, teacher, parent) |

**3.3.2 Class Table**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| class\_id | INT | Primary key, auto-increment |
| class\_name | VARCHAR (50) | Name of the class |
| teacher\_id | INT | Foreign key referencing teachers table |

**3.3.3 Teachers Table**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Teacher | INT | Primary key, auto-increment |
| Name | VARCHAR (100) | Name of the teacher |
| Email | VARCHAR (100) | Email address |

**3.3.4 Attendances Table**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| attendance\_id | INT | Primary key, auto-increment |
| student\_id | INT | Foreign key referencing students table |
| Date | DATE | Date of attendance |
| Status | ENUM | Attendance status (present, absent) |

**3.3.5 Log Table**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Login id | INT | Primary key, auto-increment |
| user\_id | INT | Foreign key referencing users table |
| Action | VARCHAR (255) | Description of the action performed |

**Database Schema (Continued)**

**3.3.6 Updating and Deleting Records**

In addition to storing and retrieving data, the database schema also supports updating and deleting records as necessary. These operations are essential for maintaining the accuracy and integrity of the data within the system.

**Update Operations**

* **Users**: Administrators can update user information such as usernames, passwords, and roles. This functionality ensures that user accounts remain current and secure.
* **Teachers**: Administrators can update teacher information, including names and email addresses. This allows for the management of staff details and contact information.
* **Class**: Administrators can update class information, such as class names and assigned teachers. This enables the dynamic allocation and organization of classes within the system.
* **Attendances**: Teachers can update attendance records to reflect any changes, such as marking a student's absence as present or vice versa. This ensures the accuracy of attendance tracking.

**Delete Operations**

* **Users**: Administrators have the authority to delete user accounts as needed. This may be necessary in cases of staff turnover or when removing outdated accounts.
* **Teachers**: Administrators can delete teacher records if necessary, such as when a staff member leaves the institution or changes roles.
* **Class**: Administrators can delete classes that are no longer active or relevant. This ensures that the system remains organized and up to date.
* **Attendances**: Administrators may have the capability to delete attendance records in exceptional circumstances, such as data entry errors or duplicate entries.

**User Guide**

**User Roles**

* Administrator
* Teacher
* Parent

**XAMPP Description**

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends. It consists mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in PHP and Perl.

**Components of XAMPP**

* **Apache HTTP Server**: XAMPP includes Apache, the most widely used web server software. Apache is responsible for serving web pages to users' browsers.
* **MariaDB (MySQL)**: MariaDB, a fork of MySQL, is included as the database management system in XAMPP. It provides a relational database for storing and managing data used by web applications.
* **PHP**: XAMPP comes with PHP, a server-side scripting language that is widely used for web development. PHP enables dynamic content generation and interaction with databases.
* **Perl**: XAMPP also includes Perl, a high-level, general-purpose programming language often used for web development, system administration, and network programming.

**Relevance to Nursery Management System Project**

XAMPP provides a complete, ready-to-use development environment for building and testing web applications like the Nursery Management System. It includes all the necessary components—web server, database server, and scripting language interpreter—required to run PHP-based applications locally on a developer's machine.

By using XAMPP, developers can set up a local development environment quickly and efficiently, allowing them to develop, debug, and test the nursery management system without the need for a dedicated web server or database server. This enhances productivity and simplifies the development process, ensuring smooth and efficient software development.