Daycare Center Database Project Report

Course: CIS 244 – Intro to Database Management

Emmanuel Pena

Mini World: Daycare Center

This project focuses on designing and implementing a database system for a daycare center. The goal is to efficiently manage the data associated with children, their guardians, staff members, classroom assignments, enrollment history, and daily attendance. A well-structured database will help daycare staff keep accurate records and support day-to-day operations such as tracking student presence, staff roles, and class distribution by age group.

To begin the project, I analyzed what real-world data a daycare would need to store and manage. The main information areas include:

Children: Full name, date of birth, allergies, and a link to their parent or guardian.
Parent/Guardian: Contact details, address, and their relation to the child.
Staff: Employees assigned to classrooms, their role, and schedules.
Classrooms: Age groupings, room numbers, and staff assignments.
Enrollment: Which child is enrolled in which classroom and on what date.
Attendance: Daily presence tracking for each child.

I work next to a daycare center and used them as my interview . I just asked simple questions to the employees and what they thought would be important information, allergies and

parent identification were the most common concerns, with attendance being the following in importance.

From these requirements, I created six main tables: ParentGuardian, Child, Classroom, Staff, Enrollment, and Attendance. Foreign key relationships were added to ensure data integrity, such as linking children to parents and enrollments

I struggled with the chen style diagram and honestly still am not sure how well or how bad my daycare based diagram will be, but the access diagram covers the gaps in understanding.

Using Microsoft Access, I built the database tables and entered 5–10 sample records per table to test data entry and relationships, with exception to class rooms and staff due to the nature of a small daycare. Afterward, I recreated the DB using SQL scripts in MySQL. Some foreign key issues occurred during initial inserts due to order of data entry, which I fixed by ensuring parent records were created before child records.

Foreign Key Constraints: I encountered "Error Code: 1452" multiple times, which resulted from trying to insert child records without the parent records being present. This was fixed by reordering the insert statements.

ER Diagram Formatting: Creating a clean and understandable Chen diagram that accurately reflects all relationships took several revisions. And quite honestly still needs work