Carter Williams

Team 7

11/20/22

Vehicle Management System

This project implements a system that is intended to help a car dealership store and interact with data related to their business. The data stored includes records of customers, employees, departments, vehicles, and vehicle sales. Obviously, this does not cover all the data storage and interaction requirements for a car dealership, but it focuses on a large portion of their data requirements. Dealership employees can perform CRUD operations on the data through a web interface implemented with Django. The system is not meant to be accessed by the dealership’s customer’s because it functions only as a management system for employees, inventory, and transactions.

Conceptual Schema (EER Diagram)

Diagram

Description automatically generated

Fig 1. EER diagram for the system. Provides data visualization

with little to no regard for implementation details.

The EER diagram depicted above shows the data requirements for the system at a high abstraction level. Entities are depicted as text inside rectangles, like User or Vehicle, and relationships among the entities are depicted as lines connecting the two. Customer and Employee are sub entities of User because they share common attributes but have their own respective attributes. Truck and Car are sub entities of Vehicle for the same reason. Customer, Employee, and Vehicle all relate to a sale entity. This entity is a weak entity because it would not exist without the three entities’ relationships. A customer, employee, and vehicle are all involved in the sale of a vehicle, so they are required for the relationship. One customer can buy many vehicles, and one employee can sell many vehicles. On the other hand, one vehicle can only be sold once. Bubbles connected to each entity represent attributes that describe the entity.

Database Schema

Diagram

Description automatically generated

Fig 2. Schema for database that depicts tables, columns, and keys.

Detailed Description

Development Environment

Evaluation of the System

Member Contributions

The system was created solely by me, Carter Williams. I was responsible for creating the EER diagram, implementing all parts of the system, writing the report, and creating the presentation.

References

No references were used to write this report, but there are several references I used to create the system. These will be listed here.