IT 378 – DATABASE PROCESSING

Project Phase 1 – Design and ERD

Car Doctor – Phase 1

**Phase 1 of the project includes the design and ER diagramming for the narrative description below.**

Car Doctor needs a database to support its operations in its three locations in central Illinois.

Customers bring vehicles in for repair. Car Doctor wishes to maintain records of all customers and their vehicles. Customers are identified by a unique customer number, customer name, address, and phone number. Vehicle data to be tracked include the vehicle identification number (VIN) of the car, its year, make, and model, license plate number, and license state.

When a vehicle is repaired, a repair orderis created in the database. The repair order will include a repair order number, date, car odometer reading, and VIN number. Each repair order may require multiple parts, and all parts used in each repair order along with the respective quantities of use will need to be recorded. (For example, an oil change may require one oil filter, five quarts of 5W-30, and other supplies.)

Each of the three branch locations needs to keep track of the different car parts stored at its location, including a unique part number, part name, cost, the size, and the quantity in stock. Though Car Doctor wishes to keep records of its inventory for each branch, it currently does not feel the need to track which customers and vehicles come to which branch since all three locations will be using the same database.

**Deliverables for Phase 1 include the following:**

1. **Use ER Assistant, Visio, or another diagramming tool to draw an ERD representing the database. M:N relationships, if any, must be decomposed.**
2. **A list or narrative of any design decisions, issues or assumptions you may want to document. (This is optional.)**

**Note:**

1. **Your submission must be a Word or PDF document containing the ERD.**
2. **Only ONE submission is necessary from each team.**
3. **Names of your submitted files must include all team member names, such as *Phase1\_Name1\_Name2.doc*. Failure to do so will lead to a deduction for the team.**