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Prof. C.

Database Management

Project 2 Inventory Database Design

Purpose of Database:

The databases allow for inventory of parts supplied by certain vendors and the products that they make to be tracked and managed, as well as any other information such as a vendor's address, the people that work for said vendor, and price changes that occur for a product. Insertion of data is displayed as well as code that ensures things such as if the price for a product is changed, the previous price is stored in a variable called last_price and the older duplicate is removed. The data is updated and duplicates are either not allowed or updates the specified information and deleted the old version. Questions such as what parts do vendors sell, what products are in stock in the inventory, and what is a vendor's contact information based on part are easily answered.

Demonstration of Database:

The database's capabilities are displayed with three particular statements. The first is a select and join statement for the product and prodparts tables within the Products database. By joining the prodparts to product with the corresponding pid, it is shown what the current prices are for individual products.

The second statement is a join between the company of a vendor and the salespeople that are assigned to them. Each salesperson possesses a vcid of the vendor they work for, and by joining the two tables the corresponding vendor can be shown for each salesperson.

The third statement displays the connection between vendors and vendor parts. It joins the two tables together and shows the company address for each part. This can be useful as company policies may require the address to be connected in some way to the product they are selling.

The fourth statement shows which specific vendor parts go towards a product and the price of said product by joining the vendorpart table with the product table .

ERD:

The ERD below displays the relationships between the three databases of vendors, products, and parts. A company can have multiple salespeople working for it, but a salesperson may only work for one vendor. The same can be said for a part, as a product can have many parts but a part can only make up one specific product. A vendor can also have multiple parts they sell, but a part may only have one vendor. By having unique IDs such as employee ID, vendor ID, and product ID, any constraints on foreign keys are met.