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CIS 552: Database Design – Homework 1 – Part 1

ER Schema

In this stage, we developed an Entity-Relationship (ER) diagram for the MAIL_ORDER database. This process is significant as it takes customer requirements and converts them into a graphical representation of entities and relationships. This section also teaches us how to create an ER schema based on text requirements.

From the requirements given, we understand that the system is a mail-order process with customers, employees, and parts entities. As per the design, the schema will consist of four tables - 'EMPLOYEES', 'ORDERS', 'CUSTOMERS', and 'PARTS'.

The attributes outlined in the requirements were transformed into columns in the respective tables. The relationships were established based on the understanding that multiple employees can take orders, but each order must have a linked employee. Likewise, multiple customers can place orders, but each order must be associated with one customer. The assumption was made that an order could consist of multiple parts, and the same part could be included in different orders, leading to the creation of a mapping table with the quantity of parts linked to the order.