DBMS LAB (02-09-2022)

Exercise -2 (for B. Tech)

ER Modelling

Walmart is a nationwide retail chain with their head office in New York has its retail outlet presence across various cities in USA, and is popular for the various schemes and the value for money that they bring to their customers. The customer can purchase items from various retail outlets. Walmart has its warehouse situated in New York. Customer has attributes cid, cname and contact_no. Item has information of item_id, item_name and price. Retail outlet has attributes ret_out_id and its location.

Every retail outlet has a retail outlet manager and several employees who are responsible for the operations at the retail outlet. An employee is assigned to only one retail outlet. An employee has attributes eid, ename, designation and salary.

The procurement of the items from different suppliers is based on the quotations that are provided by various suppliers. Supplier has attributes sid, sname and scontact_no.
The rules to procure the items are defined by the Walmart management as follows:
One supplier can provide quotations for different items.
Different suppliers can provide the quotation for the same item.
For each item, a supplier has to provide a separate quotation.

Walmart management has the right to accept or reject a quotation based on the quoted price. The management places the orders for the accepted quotations. Quotation has attributes qid, quoted_price, status and quotation_date. Item has attributes item_id, price, quantity_on_hand. An item is moved to multiple outlets from the warehouse and each retail outlet has multiple items. An item moved to a particular outlet with a particular quantity.

Design an ER model for the given scenario using Chen notation with the help of EdrawMax tool by

a) Identifying entity types and attributes (1 Mark)
b) Identifying relationship types and cardinality constraints (1 Mark)
c) Correctness of implementation (1 Mark)