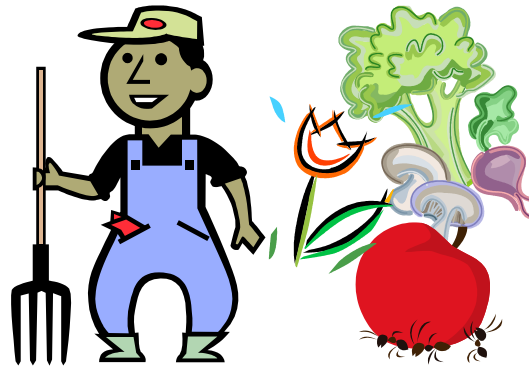


**THQ-1
PIERRE LEGUME**



“Pierre Legume (PL)” imports European vegetables, fruits and flowers (like tulips) from Holland, grapes from France and Germany and sprouts and endive from Belgium. The increased success of his store (Located in Newark, Delaware) makes an adequate accounting information system urgent. Pierre Legume provides us the following information:

PL deals with more than 200 vendors in Europe. In addition, he has a list of another 250 suppliers (vendors) of European vegetables, fruits and flowers who want to do business with him. For each item he has at least one vendor recorded. Some vendors offer more than one item. For each vendor, P.L. records at least one item. He has exclusive agreements with some vendors. For example, one contract requires him to buy tulips exclusively from ‘De Bloem’ in Holland. He agreed to buy at least 2000 (!) tulips every month. For each purchase, there is exactly one vendor.

PL’s buyers are highly specialized employees. Most of them (all of them except one) are specialized in exactly one item. His son Jim is his only employee who has expertise for more than one item -- Greek Olives and Italian grapes. PL has at least one buyer for each item he actually purchases. Last month PL hired two new buyers. They have to attend three specialized courses before they can actually buy items. For some purchases there is a team of buyers. For each purchase there is at least one buyer. Of course, the same buyer may be involved in more than one purchase. PL wants to know the time each buyer spends on a particular purchase.

All purchases involve exactly one item (like Corsican lemons). PL wants to know the quantity on hand for each item. PL also wants a detailed description (exactly one) for each item: country, region and temperature needed. He has detailed descriptions for all items except one. Each description is related to exactly one item. PL also includes items that he has never bought before (no expertise is available). Actually, only 20 % of the items recorded are items he has really in stock.

PL sells most items directly to individuals. He does not want to record potential customers. Most customers buy from P.L. at least two times each month. Exactly one customer is involved in each sale. Customers can buy items in two different ways: they can go to Newark and buy the items they want. They can also buy items by fax or phone. Only in the latter case a Salesperson (one) is involved. A salesperson can only be recorded after he sold his first item. A salesperson can be involved in many sales. PL estimates that only 5% of his sales are done by phone or fax. At least one item is involved in each sale. The same item can be involved in many sales.

1. Draw an E-R Diagram.
2. Convert the E-R Diagram into a Relational Database Structure.

Attributes:

Description_name

Buyer_code

Buyer_status

Vendor_name

Purchase_#

Item_qoh

Description_description

Sale_amount

Customer_address

Salesperson_code

Purchase_date

Sale_#

Description_country

Buyer_name

Vendor_address

Vendor_accounts_payable

Purchase_amount

Item_name

Description_temperature

Customer_name

Customer_accounts_receivable

Salesperson_name

Purchase_Buyer_time

Item_code

Sale_date

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