**The Database System of Inventory Management System** (a brief description)

The word inventory means stock. The stock can be of anything(goods etc.) which can be at any particular place(in a market or a super store). As far as the database system of inventory management system is concerned, we will find that any kind of this system we will be looking at, would give the same bird’s eye view to us, means that there would be many things that we would find very common. Many of the attributes would be similar.

First of all I would like to recall the functions of DBMS to support my explanation. For each and every kind of DBMS, there should be following functions that should always be present:

**i.e.**

1. Data storage
2. Data retrieval
3. Upgradation of data
4. User accessible catalogue
5. Transaction support
6. Concurrency control
7. Recovery services
8. Authorization services
9. Integrity services
10. Any other

All of these would be circulating in every Database System.

Considering the database system of the inventory management, the above functions should be kept in mind.

The first question aroused would be of the related data, and how to organize that related data.

**We can explore the following attributes in general:**

1. Name
2. Product number
3. Type
4. Serial or product number
5. Price
6. Manufacturing date
7. Expiry date(subject to the type of product)
8. Requirements(subject to the demand of the product)
9. Other related information about the products
10. Purchasing date
11. Selling date

One thing to be mentioned here as I have also mentioned above is that all or some of the above listed attributes would be present in almost every kind of database system, other attributes would be subjected to the type of that database system.

For example, considering a shop related to electronic appliances, and relating it with the above mentioned list, we can have the following attributes of the schema:

**Appliances’/products’ related attributes can be:**

1. Appliance name
2. Product code
3. Batch number
4. Serial number
5. Model number
6. Price
7. Manufacturer/vendor of the appliance
8. Color
9. Weight
10. Dimensions
11. Demand of the product by the customers
12. Quantity already in stock
13. Names or codes of appliances in stock
14. Quantity ordered to the manufacturer
15. Quantity delivered by the manufacturer
16. Ordering date of the products by the store owner
17. Names or codes of the received appliances
18. Selling date of the appliances to customers
19. Quantity of sold appliances
20. Names or codes of sold appliances
21. Names or codes of ordered appliances
22. Quantity of ordered appliances
23. Delivery date to the customer
24. Total quantity of appliances in stock
25. Quantity delivered to the customer
26. Remaining quantity in stock
27. Quantity of the damaged appliances
28. Names or codes of damaged appliances
29. Quantity of replaceable appliances
30. Names or codes of the replaceable appliances
31. Quantity of the unsalable appliances
32. Names or codes of the unsalable appliances

**Manufacturer or vendors’ related attributes can be:**

1. Names of manufactures/vendor
2. Contact numbers of manufactures
3. Delivery date and time of the appliances from manufacturer
4. Payment date to manufacturer
5. Payment method to manufacturer
6. Contact numbers if the customers
7. Discount rate from vendor

**Customers’ related Attributes can be:**

1. Names of the customers
2. Discount allowed to customers
3. Names of customers who have purchased
4. Names of customers who have ordered
5. Selling method (Cash or Credit etc.)

**Attributes related to authorized dealers (if there is any) can be:**

1. Names of authorized dealers
2. Contact numbers of authorized dealers

**Attributes related to salesmen/workers can be:**

1. Name of salesmen who sold the appliance
2. Codes of the salesmen
3. Duration of duties
4. Posts
5. Attendance
6. Pays
7. Addresses
8. Contact numbers
9. Pay date
10. Date of joining
11. Advance pay(if taken)
12. Bonus/or extra pay(if offered)
13. Increments(if given)

After such long lists of the attributes, the other attributes can still be added.

All or some of the immediate required attributes can be used by us for making the database system of inventory management of an electronic appliances’ shop. By the help of these attributes, we can easily enter and process the data and we would be able to make a sensible database system that would be concrete enough to support all the needed and basic functions.

Relationships

Unary relation

Binary relations

Vendor

Sells

The Product

Retailer

Wholesaler

Customer

Customers

The product (to)

Delivers

Customers

Receives

The price from

Pays

The price

To

Shopkeeper/Salesman

Orders

Purchases

The Product

The Product

Owner of the shop

Manages/Controls/

Checks/

Keeps an eye on/

Looks after/

Contacts

Customers

Quality of the products

The staff

Quantity of the products

Supply/demand

Vendor/manufacturer

Financial statements