**INVENTORY MANAGEMENT SYSTEM**

The aim of the project is to make a Database for Chain Of Stores to manage their Inventory by tracking the Items present and maintaining the transactions for all the items between warehouses to branch and warehouse to warehouse.

**0.1 Assumptions**

* + 1. **Main Inventory**

From Here one can access the data from all the warehouses and have he count of all the items present

* + 1. **Warehouse**

Each warehouse contains some specific products in some specific Quantity which can be ordered by customer

* + 1. **Customers**

They visit any of the warehouse and orders the items for desired quantity if they are present in the warehouse then the transaction is complete

* + 1. **Items**

This contains all the list of item and cost of item we can import the products if required some products might get expired which will have to be sent back to the imported company

* + 1. **Orders**

Orders are placed to company for receiving the items, which are further processed

* + 1. **Transaction**

This contains all the details regarding the transactions which took place either through Cash , Card

* + 1. **Products**

This contains all the items along with the quantity which are imported, Expiry date and the date of order are also mentioned

* + 1. **E items**

These are the items which are expired and returned back to the company

**0.1.9 Employee**

This contains the details of employees working in warehouses along with the manager details

**0.1.10 Supplier**

This contains the details of the supplier who is supplying the items to the warehouse

* 1. **Flow of Process**

The items are distributed to various Branches by various Warehouses,Main Inventory of Each branch is managed by a manager, the items are ordered by customers, they are imported and if any product is expired they are returned back to the company , If an order is valid the transaction is carried out by either cash or Card.

Inventory Management DatabaseA close up of text on a white background

Description automatically generated

|  |  |
| --- | --- |
| **employee** | |
| **PK** | empid |
| **FK**  **FK** | efirstname  elastname  eemailid  warehousenum  managerid |

# SCHEMA DIAGRAM OF Inventory Management Database

|  |  |
| --- | --- |
| **warehouse** | |
| **PK** | warehousenum |
| **FK** | Itemid  quantity  expirydate  status |

|  |  |
| --- | --- |
| **Products** | |
| **PK** | Itemid |
| **FK** | Itname  Company  costT  warehousenum |

|  |  |
| --- | --- |
| **imported** | |
| **FK** | Itemid |
| **FK** | quantity  expirydate  supplierid |

|  |  |
| --- | --- |
| **importedby** | |
| **PK** | supplierid |
| **FK** | sname  sphonenumber |

|  |  |
| --- | --- |
| **Eitems** | |
| **FK** | supplierid |
| **FK** | quantity  itemid |

|  |  |
| --- | --- |
| **Maininventory** | |
| **PK** | Managerid |
| **FK** | mfirstname  mlastname  memailid  warehousenum |

|  |  |
| --- | --- |
| **Visited\_by** | |
| **PK** | customerid |
|  | Name  cemailid  cphonenumber |

|  |  |
| --- | --- |
| **orderer** | |
| **PK** | orderid |
| **FK** | date  customerid  status |

|  |  |
| --- | --- |
| **Card** | |
| **PK** | orderid |
|  | Cvv  Cardname  Cardnumber  cexpirydate |

|  |  |
| --- | --- |
| **transactions** | |
| **PK** | orderid |
|  | totalprice  discountPERCENTAGE grossprice  PAYMENTtype |

|  |  |
| --- | --- |
| **itemsordered** | |
| **PK** | orderid |
| **FK** | quantity  itemid |

**After Normalization**

|  |  |
| --- | --- |
| **Entities** | **Attributes** |
| **Products** | **Itemid, Itname,Company,costT,warehousenum** |
| **warehouse** | **Warehousenum, Itemid,quantity,expirydate,status** |
| **employee** | **Empid, efirstname,Elastname,eemailid,warehousenum,managerid** |
| **imported** | **Itemid, quantity,Expirydate,supplierid** |
| **importedby** | **Supplierid, sname** |
| **supplier** | **Supplierid, sphonenumber** |
| **orderer** | **Orderid, datee,Customerid,status** |
| **Visited\_by** | **Customerid, Name,,Cemailid,** |
| **customer** | **Customerid, cphonenumber** |
| **itemsordered** | **Ordered, quantity,itemid** |
| **Card** | **Ordered, Cvv,Cardname,Cardnumber,Cexpirydate** |
| **Maininventory** | **Managerid, mfirstname,Mlastname,memailid,warehousenum** |
| **Eitems** | **Supplierid, quantity,itemid** |
| **transactions** | **orderid totalprice,** **discountPERCENTAGE,grossprice,** PAYMENTtype |

**CREATION AND INSERTION OF TABLES MENTIONED ABOVE**

***USE FINAL***

***create table PRODUCTS(***

***ITEMID VARCHAR(10),***

***Itname VARCHAR(20),***

***Company VARCHAR(20),***

***costT INTEGER,***

***warehousenum VARCHAR(10),***

***PRIMARY KEY (ITEMID));***

***create table warehouse(***

***Itemid VARCHAR(10),***

***quantity INTEGER,***

***expirydate DATE,***

***status VARCHAR(10),***

***warehousenum VARCHAR(10),***

***PRIMARY KEY (itemid);***

***CREATE TABLE Maininventory(***

***Managerid VARCHAR(10),***

***mfirstname VARCHAR(20),***

***mlastname VARCHAR(20),***

***memailid VARCHAR(20),***

***warehousenum VARCHAR(10),***

***PRIMARY KEY (MANAGERID));***

***CREATE TABLE EMPLOYEE(***

***empid VARCHAR(10),***

***efirstname VARCHAR(20),***

***elastname VARCHAR(20),***

***eemailid VARCHAR(20),***

***warehousenum VARCHAR(10),***

***managerid VARCHAR(10),***

***PRIMARY KEY (empid),***

***FOREIGN KEY (Managerid) REFERENCES Maininventory(Managerid));***

***CREATE TABLE IMPORTEDBY(***

***supplierid VARCHAR(10),***

***sname VARCHAR(20),***

***PRIMARY KEY (supplierid));***

***CREATE TABLE SUPPLIER(***

***supplierid VARCHAR(10),***

***sphonenumber VARCHAR(10),***

***FOREIGN KEY (supplierid) REFERENCES IMPORTEDBY(supplierid));***

***CREATE TABLE IMPORTED(***

***Itemid VARCHAR(10),***

***quantity INTEGER,***

***expirydate DATE,***

***supplierid VARCHAR(10),***

***FOREIGN KEY (supplierid) REFERENCES IMPORTEDBY(supplierid),***

***FOREIGN KEY (ITEMID) REFERENCES PRODUCTS(ITEMID));***

***CREATE TABLE VISITEDBY(***

***customerid VARCHAR(10),***

***CName VARCHAR(20),***

***cemailid VARCHAR(20),***

***PRIMARY KEY (customerid));***

***CREATE TABLE CUSTOMER(***

***customerid VARCHAR(10),***

***cphonenumber VARCHAR(10),***

***FOREIGN KEY (customerid) REFERENCES VISITEDBY(customerid));***

***CREATE TABLE ORDERER(***

***orderid VARCHAR(10),***

***datee date,***

***customerid VARCHAR(10),***

***status VARCHAR(10),***

***PRIMARY KEY (ORDERID),***

***FOREIGN KEY (customerid) REFERENCES VISITEDBY(customerid));***

***CREATE TABLE ITEMSORDERED(***

***orderid VARCHAR(10),***

***quantity INTEGER,***

***itemid VARCHAR(10),***

***PRIMARY KEY (ORDERID),***

***FOREIGN KEY (ITEMID) REFERENCES PRODUCTS(ITEMID),***

***FOREIGN KEY (orderid) REFERENCES ORDERER(orderid));***

***CREATE TABLE TRANSACTIONS(***

***orderid VARCHAR(10),***

***totalprice INTEGER,***

***discountPERCENTAGE INTEGER,***

***grossprice INTEGER,***

***PAYMENTtype VARCHAR(10),***

***PRIMARY KEY (ORDERID),***

***FOREIGN KEY (orderid) REFERENCES ORDERER(orderid));***

***CREATE TABLE CARD(***

***orderid VARCHAR(10),***

***Cvv INTEGER,***

***Cardname VARCHAR(20),***

***Cardnumber INTEGER,***

***cexpirydate INTEGER,***

***PRIMARY KEY (ORDERID),***

***FOREIGN KEY (orderid) REFERENCES ORDERER(orderid));***

***create table eitems(***

***supplierid VARCHAR(10),***

***itemid VARCHAR(10),***

***quantity integer,***

***FOREIGN KEY (ITEMID) REFERENCES PRODUCTS(ITEMID),***

***FOREIGN KEY (supplierid) REFERENCES IMPORTEDBY(supplierid));***

**OUTPUT OF CREATION OF TABLEA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generated**

**Values**

PRODUCTS

INSERT INTO products VALUES(1,"Bread","Thomas",10,10);

INSERT INTO products VALUES(2,"Noodles","Thomas",200,11);

INSERT INTO products VALUES(3,"Soup","Henry",70,10);

INSERT INTO products VALUES(4,"Steak","Henry",80,10);

INSERT INTO products VALUES(5,"Cheese","George",30,12);

INSERT INTO products VALUES(6,"Butter","George",50,12);

WAREHOUSE

INSERT INTO warehouse VALUES(1,1000,2020-03-20,"NO",10);

INSERT INTO warehouse VALUES(2,1500,2020-04-20,"NO",11);

INSERT INTO warehouse VALUES(3,2000,2020-03-25,"NO",11);

INSERT INTO warehouse VALUES(4,500,2020-04-20,"NO",10);

INSERT INTO warehouse VALUES(5,1000,2020-03-25,"NO",12);

INSERT INTO warehouse VALUES(6,1000,2020-03-24,"NO",12);

Main Inventory

INSERT INTO maininventory VALUES('A1','Ganesh','Gola',"ganesh@mmail.com",10);

INSERT INTO maininventory VALUES('A2','Chandro','Goli',"Chandro@mmail.com",11);

INSERT INTO maininventory VALUES('A3','Ramesh','Garatla',"[Ramesh@mmail.com](mailto:Ramesh@mmail.com)",12);

Employee

INSERT INTO employee VALUES('B1','Ramesh','Kande',"Ramesh@email.com",10,'A1');

INSERT INTO employee VALUES('B2','Suresh','Sama','Suresh@email.com',10,'A1');

INSERT INTO employee VALUES('B3','Ganesh','Konda','Ganesh@email.com',11,'A2');

INSERT INTO employee VALUES('B4','Rajesh','Kande','Rajesh@email.com',11,'A2');

INSERT INTO employee VALUES('B5','Ravi','Sama','Ravi@email.com',12,'A3');

INSERT INTO employee VALUES('B6','Satish','Gogla','Satish@email.com',12,'A3');

importedby

INSERT INTO importedby values('C1','Sai Baba');

INSERT INTO importedby values('C2','Laxmi');

INSERT INTO importedby values('C3','Maha Laxmi');

supplier

INSERT INTO supplier VALUES('C1',9101112567);

INSERT INTO supplier VALUES('C2',9010125341);

INSERT INTO supplier VALUES('C3',9384512345);

imported

INSERT INTO imported VALUES(1,500,2020-04-20,'C1');

INSERT INTO imported VALUES(2,750,2020-04-20,'C1');

INSERT INTO imported VALUES(3,1000,2020-03-25,'C2');

INSERT INTO imported VALUES(4,250,2020-04-20,'C2');

INSERT INTO imported VALUES(5,500,2020-03-25,'C3');

INSERT INTO imported VALUES(6,500,2020-03-24,'C3');

visitedby

INSERT INTO visitedby VALUES('D1','John','John@Dmail.com');

INSERT INTO visitedby VALUES('D2','George','George@Dmail.com');

INSERT INTO visitedby VALUES('D3','Seinfeld','Seinfeld@Dmail.com');

INSERT INTO visitedby VALUES('D4','Kramer','Kramer@Dmail.com');

INSERT INTO visitedby VALUES('D5','Sheldon','Sheldon@Dmail.com');

INSERT INTO visitedby VALUES('D6','Leonard',['Leonard@Dmail.com](mailto:'Leonard@Dmail.com)');

customer

INSERT INTO customer VALUES('D1',9000054321);

INSERT INTO customer VALUES('D2',9000054322);

INSERT INTO customer VALUES('D3',9000054323);

INSERT INTO customer VALUES('D4',9000054324);

INSERT INTO customer VALUES('D5',9000054325);

INSERT INTO customer VALUES('D6',9000054326);

itemsordered

INSERT INTO itemsordered VALUES('O1',10,1);

INSERT INTO itemsordered VALUES('O2',11,2);

INSERT INTO itemsordered VALUES('O3',12,3);

INSERT INTO itemsordered VALUES('O4',13,4);

INSERT INTO itemsordered VALUES('O5',14,5);

INSERT INTO itemsordered VALUES('O6',15,6);

orderer

INSERT INTO orderer VALUES('O1',2020-02-28,'D1',"YES");

INSERT INTO orderer VALUES('O2',2020-02-29,'D2',"YES");

INSERT INTO orderer VALUES('O3',2020-02-27,'D3',"YES");

INSERT INTO orderer VALUES('O4',2020-02-27,'D4',"YES");

INSERT INTO orderer VALUES('O5',2020-02-26,'D4',"YES");

INSERT INTO orderer VALUES('O6',2020-02-26,'D5',"YES");

transactions

INSERT INTO transactions VALUES('O1',100,0,100,"Cash");

INSERT INTO transactions VALUES('O2',2200,5,2090,"Cash");

INSERT INTO transactions VALUES('O3',840,2,823,"Cash");

INSERT INTO transactions VALUES('O4',960,2,940,"Card");

INSERT INTO transactions VALUES('O5',420,1,415,"Card");

INSERT INTO transactions VALUES('O6',750,2,735,"Card");

card

INSERT INTO card VALUES('O4',211,'John',04005684,721);

INSERT INTO card VALUES('O5',212,'George',05005792,822);

INSERT INTO card VALUES('O6',213,'Kramer',06008943,923);

**All the tables in DB**

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