Transit to

Retail Store

Manages

Manages

ISA

Storage

Central Storage

Subsidiary Storage

Human Resource Management

Sells

Transportation Department

Stores

Stores

Supplier Contracts

Supplies

Items

Send to

Send to

Send to

Extension Plan

Transit to

Retail Store

Send to

Manages

Manages

ISA

Storage

Central Storage

Subsidiary Storage

Human Resource Management

Sells

Transportation Department

Stores

Stores

Supplier Contracts

Supplies

Items

Send to

Send to

Buys From

Returned

Contact

Returns

Buys

Customer

Recycle Facility

Contact

Customer Service

Contingency Plan

Transit to

Retail Store

Send to

Send to

Send to

ISA

Storage

Central Storage

Subsidiary Storage

Sells

Stores

Stores

Supplier Plan

Supplies

Items

Schema

Supplier Contracts:

Primary Key:

Supplier ID, Contract ID

Other Fields:

Supplier Name, Product ID, Product Name, Delivery Date, Delivery Amount, Batch Number

SQL

CREATE TABLE SUPPLIER

(SID INTEGER,

CID INTEGER,

SUPPLIERNAME CHAR(20),

PID INTEGER,

PNAME CHAR(20),

DDATE CHAR(20),

DAMOUNT INTEGER,

BATCHID INTEGER,

PRIMARY KEY (SID,CID))

FOREIGN KEY (sid)

REFERENCES Students

ON DELETE CASCADE

ON UPDATE SET DEFAULT )

Supplier Send to:

Primary Key:

Delivery ID

Foreign Key:

Contract ID

Other Fields:

Received Date, Received Location ID, Batch Number, Amount

SQL

CREATE TABLE SUPPSEND

(

DID INTEGER,

CID INTEGER,

RECDATE CHAR(20),

RECLOC CHAR(20),

BATCHID INTEGER,

AMOUNT INTEGER,

PRIMARY KEY(DID),

FOREIGN KEY(CID)

REFERENCE SUPPLIER)

Central Storage:

Primary Key:

Central Storage ID, Storage Type

Other Fields:

Available Space, Used Space, Location, Number of Employee

SQL

CREATE TABLE CENTST(

CSID INTEGER,

STOTYPE INTEGER,

AVASPACE INTEGER,

USESPACE INTEGER,

LOCATION CHAR(20),

EMPLOYNO INTEGER,

PRIMARY KEY (CSID, STOTYPE))

Central Storage Send to:

Primary Key:

ID

Foreign Key:

Transportation Service ID, Central Storage ID, Subsidiary Storage ID

Other Fields:

Sent Date, Received Date, Amount, Batch ID

SQL:

CREATE TABLE CENTSTSEND

(ID INTEGER,

TSID INTEGER,

CSID INTEGER,

SUBSID INTEGER,

SENTDATE CHAR(20),

RECDATE CHAR(20),

AMOUNT INTEGER,

BATCHID INTEGER,

PRIMARY KEY(ID),

FOREIGN KEY(TSID) REFERENCE TPSERV,

FOREIGN KEY(CSID) REFERENCE CENTST,

FOREIGN KEY(SUBSID) REFERENCE SUBST)

Subsidiary Storage:

Primary Key:

Subsidiary Storage ID, Storage Type

Other Fields:

Available Space, Used Space, Location, Employee Number

SQL

CREAT TABLE SUBST

(

SSTID INTEGER,

STOTYPE INTEGER,

AVASPACE INTEGER,

USESPACE INTEGER,

LOC CHAR(20),

EMPLOYNO INTEGER,

PRIMARY KEY(SSTID,STOTYPE))

Subsidiary Storage Transition:

Primary Key:

ID

Foreign Key:

Transportation Service ID, Subsidiary Storage ID

Other Fields:

Sent Date, Received Date, Amount, Batch Number, Destination ID

CREATE TABLE SUBSTTRANS

(

ID INTEGER,

TSID INTEGER,

SUBSID INTEGER,

SENTDATE CHAR(20),

RECDATE CHAR(20),

AMOUNT INTEGER,

BATCHID INTEGER,

DESTID CHAR(20),

FOREIGN KEY(TSID) REFERENCE TPSERV,

FOREIGN KEY(SUBSID) REFERENCE SUBST)

Subsidiary Storage Send to:

Primary Key:

ID

Foreign Key:

Transportation Service ID, Subsidiary Storage ID, Retail Store ID

Other Fields:

Sent Date, Received Date, Amount, Batch Number

SQL

CREATE TABLE SUBSTSEND

(

ID INTEGER,

TSID INTEGER,

SUBSTID INTEGER,

RTSTID INTEGER,

SENTDATE CHAR(20),

RECDATE CHAR(20),

AMOUNT INTEGER,

BATCHID INTEGER,

FOREIGN KEY(TSID) REFERENCE TPSERV,

FOREIGN KEY(SUBSID) REFERENCE SUBST)

FOREIGN KEY(RTSTID) REFERENCE RTST)

Retail Store:

Primary Key:

Retail Store ID, Storage Type

Other Fields:

Location, Open Hours, Employee Number

SQL

CREATE TABLE RTST

(

RTSTID INTEGER,

STOTYPE INTEGER,

LOC CHAR(20),

OPENHR CHAR(20),

EMPLOYNO INTEGER,

PRIMARY KEY( RTST, STOTYPE))

Items:

Primary Key:

Product ID, Batch Number

Other Fields:

Product Name, Weight, Size, Special Handling, Expiration Date, Customer Rating, Number of Complaints Filed Against it, Amount In Storage

SQL

CREATE TABLE ITEM

(

PID INTEGER,

BATCHID INTEGER,

PNAME CHAR(20),

WEIGHT INTEGER,

SIZE INTEGER,

SPH CHAR(20),

EXP INTEGER,

CUSRATE INTEGER,

COMPLIANT INTEGER,

PRIMARY KEY(PID,BATCHID))

Supplies Items:

Primary Key:

ID

Foreign Key:

Delivery ID, Product ID

Other Fields:

Amount, Date Delivered

SQL

CREATE TABLE SUPITEM(

ID INTEGER,

DID INTEGER,

PID INTEGER,

AMOUNT INTEGER,

DATEDEV CHAR(20),

FOREIGN KEY(DID) REFERENCE SUPPSEND,

FOREIGN KEY(PID) REFERENCE ITEM)

Central Storage Stores Items:

Primary Key:

ID

Foreign Key:

Central Storage ID, Product ID

Other Fields:

Amount, Date In, Date Out

Subsidiary Storage Stores Items:

Primary Key:

ID

Foreign Key:

Subsidiary Storage ID, Product ID

Other Fields:

Amount, Date In, Date Out

Retail Store Sells Items:

Primary Key:

ID

Foreign Key:

Retail Store ID, Product ID

Other Fields:

Amount, Date In, Date Sold

Transportation Department:

Primary Key:

Transportation Center ID, Vehicle Type

Other Fields:

Number of Vehicles, Capacity of Vehicles

Transportation Department Services:

Primary Key:

Transportation Service ID

Foreign Key:

Batch Number, Central Storage ID, Subsidiary Storage ID, Subsidiary Storage ID

Other Fields:

Request Received Date, Vehicle Sent Date, Vehicle Returned Date

Human Resource Management

Primary Key:

Labor Force Type

Other Fields:

Available Labor Force, Used Labor Force

Inventory Department Manages:

Primary Key:

Labor Force Dispatch Number

Foreign Key:

Central Storage ID, Subsidiary Storage ID, Retail Store ID, Labor Force Type

Other Fields:

Request Received Date, Labor Force Dispatched Date