University at Buffalo
School of Management

Database Solution for FarmKart- Farmer's Market on Wheels

Version: V0.4
Date: 04/26/2021

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1. Introduction

Our service is the emblem of Freshness to your doorstep. We believe in the accessibility of local fresh produce for everyone, starting with those in the Buffalo area. Our vision is simple: Save the community whilst adding nourishment to everyone's lives. FarmKart will take produce that is locally grown, such as fresh fruits, vegetables, bread, eggs, butter, cheese, etc. and deliver them to the Buffalo community on a scheduled biweekly (twice a week), basis. This way, we can ensure freshness of all our products and ultimately, we can ensure happiness from our customers and our clients.

2. Project Overview

FarmKart will have both web based as well as mobile application catering to the end users. In addition to this, we will have internal applications required for the day-to-day logistics & operational needs of the business. To handle such large volumes of data interacting with multiple entities, we would need a robust database built. Our project will include the design and build of a database to manage an array of data ranging from customers to vendors (trucks, logistics, farmers, etc.,). Both web and mobile applications will have bi-directional flow of data. Data will be securely stored in the database with access controls and restrictions in place. This database will be designed to ensure it can be scalable, since the scope of the project is for Buffalo neighborhood, however, will be able to handle data for entire US demographics as well in future. The data stored in the database, will further be used for reporting and analytical needs to analyze the performance efficiency of the business and to identify areas of improvement.

3. Project Scope

The scope of our database project will ensure we cover all the entities involved in running a successful business. Our database will house data covering, end customers, their demographics, order history, payment information, preferred locations, vendor data to manage the logistics and operations, employee data, vehicle, and store facilities data. All these data will be governed by

unambiguous business rules and will be designed as per 3rd normal form principles. The following will be our scope of the database system:

1. The user demographics shall be restricted to Buffalo region (But database will be scalable)
2. Consumer, Employee and Vendor demographics data will be captured in detail with an upper limit of not more than 20 parameters
3. FarmKart schedules will be limited to bi-weekly for every designated neighborhood
4. Vehicle categories will be limited to trucks and buses
5. Cash, Credit Card, Debit Card and Online Payment are the only supported transaction methods
6. Product Cost matrix will be defined and maintained based on supply & demand
7. Following will be the product categories: Fruits, Vegetables, and Dairy products
8. POS data will be stored real time
9. Time log will be defined and maintained to adhere with vehicle and employee compliance

4. Business Rules

The below details the business rules based on which the Entity Relationship diagram is constructed. The business rules are categorized as per below:

4.1 Customer Rules

1. A given customer can have one or many addresses.
2. A given customer's address can belong to many customers.
3. A given customer can have one or many contacts.
4. A given customer's contact can belong to only one customer at a given point of time.

4.2 Employee Rules

5. A given employee can have one or many addresses.
6. A given employee's address can belong to many employees.
7. A given employee can have one or many contacts.
8. A given employee's contact can belong to only one employee at a given point of time.

4.3 Order- Payment Rules

9. A given order can be paid by only one payment type.
10. A payment type can have multiple associated orders.
11. A given customer can have one or many orders.

12. An order can be placed by only one customer.

4.4 Order- Product Rules

13. A given order can have one or many products.
14. A given product can belong to multiple orders.

4.5 Order-Vehicle Rules

15. A given order can be picked from one vehicle.
16. A vehicle can have multiple orders.

4.6 Order-Location Rules

17. A given order can be picked from only one location.
18. A location can have one or many orders.

4.7 Order-Vendor Rules

19. A given vendor can have one or many vendor orders.
20. A vendor order can belong to one or multiple vendors.
21. A Vendor Order can be paid by only one payment type.
22. A payment type can have multiple associated vendor orders.

4.8 Vehicle Rules

23. A given employee can only drive one vehicle at a given point of time.
24. A given vehicle can be driven by one employee.

4.9 Vehicle-Location Rules

25. A vehicle can go to one or multiple locations.
26. A given location can have exactly one vehicle.

4.10   Warehouse Rules

27. A warehouse can hold one or multiple products.
28. A product can be in one or multiple warehouses.
29. A vendor order will go to exactly one warehouse.
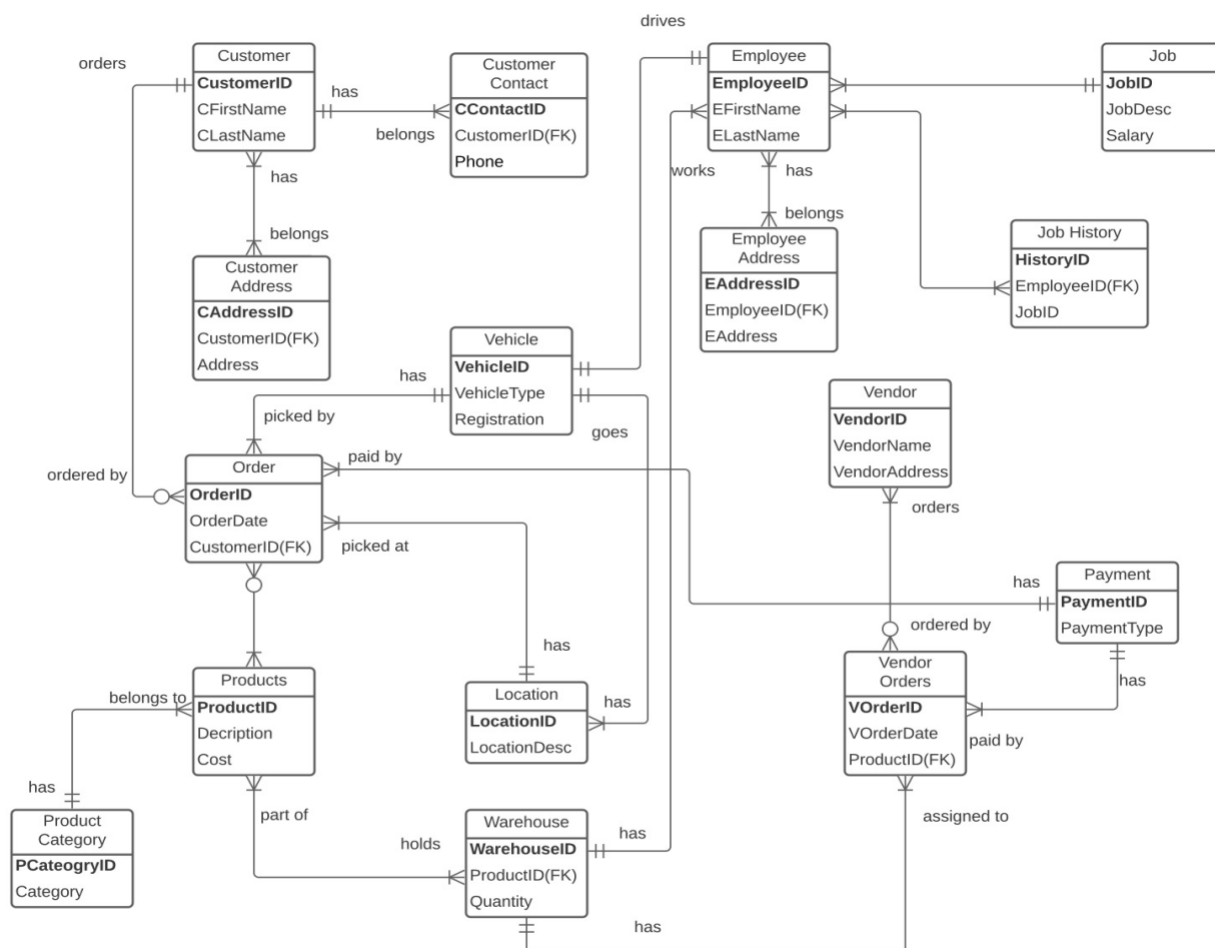30. A warehouse can have multiple vendor orders.
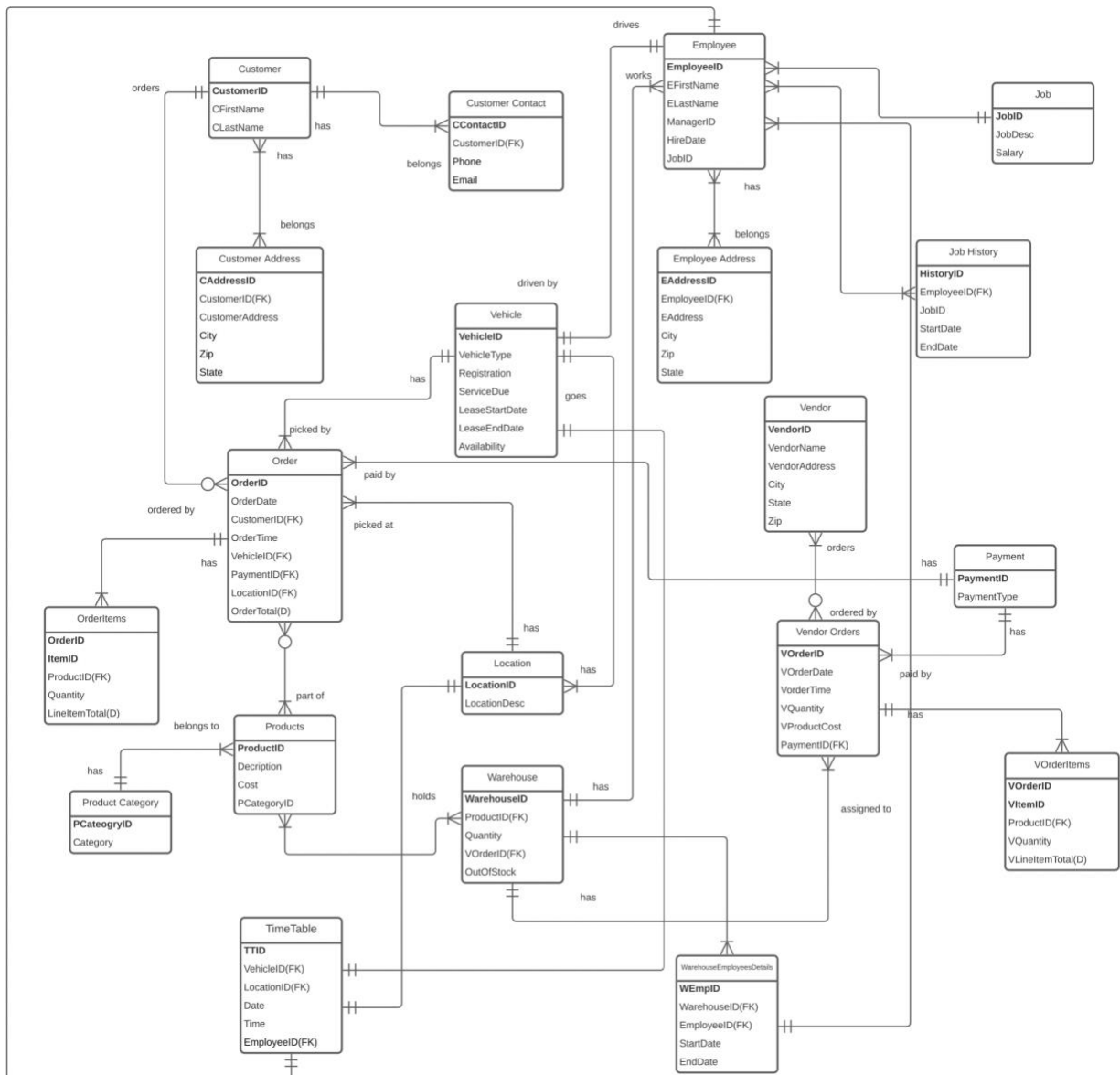31. A warehouse can have multiple employees.
32. An employee can work in exactly one warehouse at a given point of time.

4.11   Product Category Rules

33. A given product category can have one or more products.
34. A product can have only one product category.

5. Entity Relationship Diagram

6. Database Schema Diagram

The below details the database schema diagram where all tables are in 3 normal form. When we implement the database, audit columns such as Create_Date, Create_Time, Update_Date, Update_Time and User_ID will be available in every table. The same are not depicted in the ER and DB schema diagrams and in the DDL statements to avoid redundancies

7. DDL Statement

```
CREATE TABLE Customer (
    CustomerID int NOT NULL,
    CLastName varchar (255),
    CFirstName varchar (255),
    Address varchar (255),
    City varchar (255),
    PRIMARY KEY(CustomerID)

);

CREATE TABLE CustomerAddress (
    CAddressID int NOT NULL,
    CustomerID int,
    CustomerAddress varchar (255),
    City varchar (255),
    Zip varchar (255),
    State varchar (255),
    PRIMARY KEY (CAddressID)
) ;


CREATE TABLE CustomerContact (
    CContactID int NOT NULL,
    CustomerID int,
    Email varchar (255),
    Phone int,
    PRIMARY KEY (CContactID)
) ;


CREATE TABLE Job (
    JobID int NOT NULL,
    JobDesc Varchar (255),
    Salary int,
    PRIMARY KEY (JobID)
) ;


CREATE TABLE Employees (
    EmployeeID int NOT NULL,
    EFirstName varchar (255),
    ELastName varchar (255),
    ManagerID int,
    HireDate Date,
    JobID,
    PRIMARY KEY (EmployeeID),
    CONSTRAINT FK_JobEmployees FOREIGN KEY (JobID)
    REFERENCES Job (JobID)
);
```

```
 CREATE TABLE JobHistory (
     HistoryID int NOT NULL,
     JobID int NOT NULL,
     StartDate date,
     EndDate date,
     PRIMARY KEY (HistoryID),
     CONSTRAINT FK_HistoryJob FOREIGN KEY (JobID)
     REFERENCES Job (JobID)
   );


CREATE TABLE Vehicle (
     VehicleID int NOT NULL,
     VehicleType varchar (255),
     RegNumber int ,
     ServiceDue date,
     LeaseStartDate date,
     LeaseEndDate date,
     Availability_Bool varchar(2),
     PRIMARY KEY (VehicleID)
   );


CREATE TABLE Warehouse (
     WarehouseID int NOT NULL,
     ProductID int,
     VOrderID int ,
     Quantity int,
     EmployeeID int,
     OutOfStock varchar(2),
     PRIMARY KEY (WarehouseID),
     CONSTRAINT FK_ProductID FOREIGN KEY (ProductID) REFERENCES
Products (ProductID),
       CONSTRAINT FK_VOrderID FOREIGN KEY (VOrderID) REFERENCES
VendorOrder (VOrderID),
       CONSTRAINT FK_EmployeeID FOREIGN KEY (EmployeeID)
REFERENCES Employees (EmployeeID)
   );
```

```
CREATE TABLE Products(
     ProductID int NOT NULL,
     Quantity int,
     Description varchar(255),
     ProductCost numeric ,
       PCategoryID int,
     PRIMARY KEY (ProductID),
     CONSTRAINT FK_PCategoryID FOREIGN KEY (PCategoryID)
REFERENCES ProductCategory (PCategoryID)
   );


CREATE TABLE TimeTable(
     TTID int NOT NULL,
     VehicleID int,
     LocationID int,
     TTDate date ,
     TTTime timestamp,
     PRIMARY KEY (TTID),
     CONSTRAINT FK_VehicleID FOREIGN KEY (VehicleID) REFERENCES
Vehicle (VehicleID),
       CONSTRAINT FK_LocationID FOREIGN KEY (LocationID)
REFERENCES Location (LocationID)
   );


CREATE TABLE ProductCategory(
     PCategoryID int NOT NULL,
     Category varchar (255),
     PRIMARY KEY (PCategoryID)
     );


CREATE TABLE OrderItems(
     OrderID int NOT NULL,
     ItemID int,
     ProductID int,
     ProductCost numeric ,
      Quantity int,
     PRIMARY KEY PK_OrderItems(OrderID, ItemID),
     CONSTRAINT FK_ProductID FOREIGN KEY (ProductID) REFERENCES
Products (ProductID)
   );
```

```
CREATE TABLE VOrderItems(
    VOrderID int NOT NULL,
    ItemID int,
    ProductID int,
        VQuantity int,
    PRIMARY KEY PK_VOrderItems(VOrderID, ItemID),
    CONSTRAINT FK_ProductID FOREIGN KEY (ProductID) REFERENCES
    Products (ProductID)
 );


CREATE TABLE WarehouseEmployees(
    WEMPID int NOT NULL,
    WarehouseID int,
    EmployeeID int,
    StartDate Date,
    EndDate Date,
    PRIMARYKEY (WEMPID),
    CONSTRAINT FK_EMPLOYEEID FOREIGN KEY (EmployeeID)
    REFERENCES Employees (EmployeeID)
);

CREATE TABLE Employee_Address(
    EAddress_ID int NOT NULL,
    EmployeeID int,
    Employee_Address varchar2(),
    Employee_City varchar2(),
    Employee_State varchar2(2),
    Employee_Country varchar2(),
    Employee_ZIP int,
    PRIMARY KEY (EAddress_ID),
    CONSTRAINT FK_EMPLOYEEID FOREIGN KEY (EmployeeID)
    REFERENCES Employees (EmployeeID)
);


CREATE TABLE Employee_Contact(
    EContact_ID int NOT NULL,
    EmployeeID int,
    Employee_Email varchar2(),
    Employee_Phone int,
    PRIMARY KEY (EContact_ID),
    CONSTRAINT FK_EMPLOYEEID FOREIGN KEY (EmployeeID)
    REFERENCES Employees (EmployeeID)
);
```

```
CREATE TABLE Vendor (
     Vendor_ID int NOT NULL,
     Vendor_Name varchar2(),
     Vendor_Address varchar2(),
     Vendor_City varchar2(),
     Vendor_State varchar2(2),
     Vendor_Country varchar2(),
     Vendor_ZIP int,
     PRIMARY KEY (Vendor_ID),
);

CREATE TABLE Order(
     Order_ID int NOT NULL,
     Order_Date Date,
     Order_Time TIMESTAMP,
     CustomerID int,
     VehicelID int,
     PaymentID int,
     LocationID int,
     Order_Total(D) NUMBER,
     PRIMARY KEY (Order_ID),
     CONSTRAINT FK_CUSTOMERID FOREIGN KEY (CustomerID)
     REFERENCES Customer (CustomerID,
     CONSTRAINT FK_PRODUCTID FOREIGN KEY (ProductID) REFERENCES
     Product (ProductID),
     CONSTRAINT FK_VEHICELID FOREIGN KEY (VehiceleID) REFERENCES
     Vehicle (VehicleIdD),
     CONSTRAINT FK_PAYMENTID FOREIGN KEY (PaymentID) REFERENCES
     Payment (PaymentID),
     CONSTRAINT FK_LOCATIONID FOREIGN KEY (LocationID)
     REFERENCES Location (LocationID),
);

CREATE TABLE VOrder(
     VOrder_ID int NOT NULL,
     VOrder_Date Date,
     VOrder_Time TIMESTAMP,
     VendorID int,
     PaymentID int,
     VOrder_Total(D) NUMBER,
     PRIMARY KEY (VOrder_ID),
     CONSTRAINT FK_PRODUCTID FOREIGN KEY (ProductID) REFERENCES
     Product (ProductID),
     CONSTRAINT FK_VENDORID FOREIGN KEY (VendorID) REFERENCES
     Vendor (VendorID),
```

```
        CONSTRAINT FK_PAYMENTID FOREIGN KEY (PaymentID) REFERENCES
        Payment (PaymentID),
);

CREATE TABLE Payment(
Payment_ID int NOT NULL,
Payment_Type varchar2 NOT NULL,
PRIMARY KEY (Payment_ID)
);

CREATE TABLE Location(
Location_ID int NOT NULL,
Location_Desc varchar2 NOT NULL,
PRIMARY KEY (Location_ID)
);
```

8. DDL Statement

1. Customer Table

```
INSERT INTO Customers (CustomerID, CFirstName, CLastName)
VALUES
(
        1, 'Allen', 'Abel',
        2, 'Sundar', 'Ande',
        3, 'Mozhe', 'Atkinson',
        4, 'David', 'Austin',
        5, 'Hermann', 'Baer',
        6, 'Shelli', 'Baida',
        7, 'Amit', 'Banda',
        8, 'Elizabeth', 'Bates',
        9, 'Sarah', 'Bell',
        10, 'David', 'Bernstein',
        11, 'Laura', 'Bissot',
        12, 'Harrison', 'Bloom',
        13, 'Alexis', 'Bull',
        14, 'Anthony', 'Cabrio',
        15, 'Gerald', 'Cambrault',
        16, 'Nanette', 'Cambrault',
        17, 'John', 'Chen',
        18, 'Kelly', 'Chung',
        19, 'Karen', 'Colmenares',
        20, 'Curtis', 'Davies',
        21, 'Lex', 'De Haan',
        22, 'Julia', 'Dellinger',
        23, 'Jennifer', 'Dilly',
        24, 'Louise', 'Doran',
        25, 'Bruce', 'Ernst',
        26, 'Alberto', 'Errazuriz',
        27, 'Britney', 'Everett',
        28, 'Daniel', 'Faviet',
```

```
        29, 'Pat', 'Fay',
        30, 'Kevin', 'Feeney'
);
```

2. Customer Address:

```
INSERT INTO CustomerAddress(CAddressId, CustomerID, CustomerAddress_, City,
Zip, State)
VALUES
(
        '1', 1, '197 Madison St', 'Buffalo', 14201, 'New York',
        '2', 2, '106 Wallace Ave', 'Buffalo', 14202, 'New York',
        '3', 3, '102 Sunset St', 'Buffalo', 14203, 'New York',
        '4', 4, '81 Mills St', 'Buffalo', 14204, 'New York',
        '5', 5, '141 Bush St', 'Buffalo', 14205, 'New York',
        '6', 6, 'Murtenstrasse 921', 'Buffalo', 14206, 'New York',
        '7', 7, 'Schwanthalerstr. 7031', 'Buffalo', 14207, 'New York',
        '8', 8, '2011 Interiors Blvd', 'Buffalo', 14208, 'New York',
        '9', 9, 'Mariano Escobedo 9991', 'Buffalo', 14209, 'New York',
        '10', 10, '20 Rue des Corps-Saints', 'Buffalo', 14210, 'New York',
        '11', 11, '1298 Vileparle (E)', 'Buffalo', 14211, 'New York',
        '12', 12, '9702 Chester Road', 'Buffalo', 14212, 'New York',
        '13', 13, '2007 Zagora St', 'Buffalo', 14213, 'New York',
        '14', 14, '12-98 Victoria Street', 'Buffalo', 14214, 'New York',
        '15', 15, '147 Spadina Ave', 'Buffalo', 14215, 'New York',
        '16', 16, '"Magdalen Centre', ' The Oxford Science Park"', '14216',
        '17', 17, 'Rua Frei Caneca 1360', 'Buffalo', 14217, 'New York',
        '18', 18, '2014 Jabberwocky Rd', 'Buffalo', 14218, 'New York',
        '19', 19, '2017 Shinjuku-ku', 'Buffalo', 14219, 'New York',
        '20', 20, 'Pieter Breughelstraat 837', 'Buffalo', 14220, 'New York'
        '21', 21, '2004 Charade Rd', 'Buffalo', 14221, 'New York',
        '22', 22, '6092 Boxwood St', 'Buffalo', 14222, 'New York',
        '23', 23, '197 Madison St', 'Buffalo', 14223, 'New York',
        '24', 24, '106 Wallace Ave', 'Buffalo', 14224, 'New York',
        '25', 25, '102 Sunset St', 'Buffalo', 14225, 'New York',
        '26', 26, '81 Mills St', 'Buffalo', 14226, 'New York',
        '27', 27, '141 Bush St', 'Buffalo', 14227, 'New York',
        '28', 28, '147 Spadina Ave', 'Buffalo', 14228, 'New York',
        '29', 29, '"Magdalen Centre', ' The Oxford Science Park"', '14229',
        '30', 30, 'Rua Frei Caneca 1360', 'Buffalo', 14230, 'New York'

);
```

3. Employee Table

```
INSERT INTO Employee(EmployeeID, JobID, EFirstName, ELastName, ManagerID,
HireDate)
VALUES
(
        '5', '1', 'oell', 'Insole', '16', '11/21/20',
        '6', '2', 'olande', 'Northing', '5', '2/17/21',
        '7', '3', 'Lindi', 'Portman', '6', '10/14/20',
        '8', '4', 'amaal', 'Berndt', '7', '12/21/20',
        '9', '5', 'Carmencita', 'Dennis', '8', '11/19/20',
        '10', '6', 'Allie', 'Ganderton', '9', '9/28/20',
        '13', '9', 'Ali', 'Yannoni', '10', '11/16/20',
        '15', '8', 'Aurea', 'Wightman', '13', '11/13/20',
        '16', '7', 'Katherina', 'Petrello', '15', '1/13/21',
        '18', '1', 'Ingelbert', 'Ivanov', '16', '3/11/21',
        '19', '10', 'Sherrie', 'Brankley', '18', '6/18/20',
        '22', '2', 'acki', 'Mitchell', '19', '11/26/20',
        '23', '3', 'Danielle', 'Pevreal', '2', '2/27/21',
        '24', '1', 'Roda', 'Schwieso', '16', '4/17/21',
        '25', '5', 'Hertha', 'astwood', '24', '10/4/20'

  ) ;
```

4. Employee History Table:

```
INSERT INTO EmployeeHistory (EmployeeId, StartDate, EndDate, JobID,
HistoryID)
VALUES
(
        '1', '9/22/2020', '4/19/2021', '1', '1');
        '2', '7/13/2020', '3/21/2021', '2', '2');
        '3', '3/23/2021', '1/24/2021', '3', '3');
        '4', '1/10/2021', '3/26/2021', '14', '4');
        '11', '5/13/2020', '3/1/2021', '5', '5');
        '12', '2/20/2021', '4/22/2021', '6', '6');
        '17', '9/12/2020', '5/7/2020', '7', '7');
        '20', '11/24/2020', '9/21/2020', '8', '8');
        '21', '1/30/2021', '2/2/2021', '9', '9');
        '14', '3/18/2021', '6/23/2020', '10', '10');
)
```

5. Customer Contact Table

```
INSERT INTO CustomerContact(CustomerID, CContactId, Email, Phone)
VALUES
(

        1, '1', 'fbotsford@yahoo.com', '716 2409550',
        2, '2', 'dietrich.helmer@ritchie.com', '716 7809525',
        3, '3', 'ferry.broderick@gmail.com', '716 4409001',
        4, '4', 'adella.howell@yahoo.com', '716 2202546',
        5, '5', 'keaton48@gmail.com', '716 2409777',
        6, '6', 'vkerluke@schumm.biz', '716 2482733',
        7, '7', 'alexie90@crist.biz', '716 2482733',
        8, '8', 'fahey.rebeka@yahoo.com', '716 3118495',
        9, '9', 'harris.mckenzie@littel.com', '716 3718496',
        10, '10', 'gusikowski.suzanne@hotmail.com', '716 8548615',
        11, '11', 'kole.beier@yahoo.com', '716 8941759',
        12, '12', 'wilkinson.kyra@hotmail.com', '716 4643393',
        13, '13', 'okon.milan@gmail.com', '716 2401234',
        14, '14', 'smccullough@hotmail.com', '716 5679807',
        15, '15', 'maurice66@gmail.com', '716 3008954',
        16, '16', 'mosciski.elbert@gmail.com', '716 2340954',
        17, '17', 'iconroy@murazik.com', '716 3479081',
        18, '18', 'hilario58@cremin.org', '716 5679024',
        19, '19', 'ylesch@gmail.com', '7164348959',
        20, '20', 'mauricio88@kuhn.net', '7168499900',
        21, '21', 'hegmann.lucius@grimes.info', '7164569872',
        22, '22', 'sammy10@rice.biz', '7163409812',
        23, '23', 'weimann.florida@shanahan.com', '7165436782',
        24, '24', 'ummings.jarret@robel.biz', '7164027482',
        25, '25', 'agrimes@deckow.com', '7168920462',
        26, '26', 'willa94@hotmail.com', '7163020912',
        27, '27', 'omari05@bauch.com', '7169531235',
        28, '28', 'flang@parisian.com', '7163864389',
        29, '29', 'bergstrom@hotmail.com', '7163289103',
        30, '30', 'tyshawn36@hotmail.com', '7162380237'

);
```

6. Job Table:

```
INSERT INTO Job(JobID, JobDesc, Salary)
VALUES
(
    '1', 'Driver', 27098,
    '2', 'Marketing Manager', 40433,
    '3', 'Senior Developer', 47528,
    '4', 'Accountant', 33316,
    '5', 'Human Resources ', 27614,
    '6', 'Sales Manager', 48673,
    '7', 'Transportation Manager', 34732,
    '8', 'Vice President', 60000,
    '9', 'Recruiter', 39161,
    '10', 'President', 80000
);
```

7. Employee Address Table:

```
insert into EmployeeAddress  values (1, 05, '1 Elm Street', 'Buffalo',
'14201' , 'New York');
insert into EmployeeAddress  values (2, 06, '70759 North French Road',
'Amherst', '14226', 'New York');
insert into EmployeeAddress  values (3, 07, '926 Boca Place', 'East Amherst',
'14051', 'New York');
insert into EmployeeAddress  values (4, 08, '79 Clemons Road', 'Clarence',
'14001', 'New York');
insert into EmployeeAddress  values (5, 09, '1591 Rusk Park',
'Williamsville', '14221', 'New York');
insert into EmployeeAddress  values (6, 10, '31013 Hazelcrest Road',
'Amherst', '14226', 'New York');
insert into EmployeeAddress  values (7, 13, '5752 Lake View Road', 'Amherst',
'14226', 'New York');
insert into EmployeeAddress  values (8, 15, '3178 Dockside Drive', 'Amherst',
'14226', 'New York');
insert into EmployeeAddress  values (9, 16, '521 Sheridan Place', 'Hamburg',
'14075', 'New York');
insert into EmployeeAddress  values (10,18, '50 Rigney Terrace', 'Amherst',
'14226', 'New York');
insert into EmployeeAddress  values (11,19, '28 Olympic Ave', 'Amherst',
'14226', 'New York');
insert into EmployeeAddress  values (12,22, '305 Duncan Ave', 'Amherst',
'14226', 'New York');
insert into EmployeeAddress  values (13,23, '307 North St #172', 'Amherst',
'14226', 'New York');
insert into EmployeeAddress  values (14,24, '218 Gene', 'Hamburg', '14075',
'New York');
insert into EmployeeAddress  values (15,25, '2935 Buffalo W Springs Hwy',
'Amherst', '14226', 'New York');
```

8. Employee Contact Table:

```
insert into EmployeeContact  values
(1, 05,  'Joellinsole@gmail.com',   '716-349-5292');
insert into EmployeeContact  values
(2, 06,  'Eolandenorthing@gmail.com',  '716-214-7104');
insert into EmployeeContact  values
(3, 07,  'Lindiportman@uol.com',  '716-790-0093');
insert into EmployeeContact  values (4, 08,  'Jamaalberndt@gmail.com',
'719-971-8868');
insert into EmployeeContact  values
(5, 09,  'Carmencitadennis@msn.com',    '716-741-7722');
insert into EmployeeContact  values
(6, 10,  'Allieganderton@gmail.com',   '716-921-6388');
insert into EmployeeContact  values
(7, 13,  'Aliyannoni@gmail.com',  '433-644-0835');
insert into EmployeeContact  values (8, 15,  'Aureawightman@gmail.com',
'716-871-5149');
insert into EmployeeContact  values
(9, 16,  'Katherinapetrello@gmail.com',  '716-203-6247');
insert into EmployeeContact  values (10,
18,  'Ingelbertivanov@gmail.com',   '204-148-8811');
insert into EmployeeContact  values (11,
19,  'Sherriebrankley@gmail.com',   '716-921-6388');
insert into EmployeeContact  values (12,
22,  'Jackimitchell@gmail.com',  '433-644-0835');
insert into EmployeeContact  values (13, 23,  'Daniellepevreal@gmail.com',
'716-871-5149');
insert into EmployeeContact  values (14,
24,  'Rodaschwieso@gmail.com',  '716-203-6247');
insert into EmployeeContact  values (15,
25,  'Herthaeastwood@gmail.com',   '204-148-8811');
```

9. Location Table:

```
insert into Locations values (1001, 'East Amherst');
insert into Locations values (1002, 'Amherst');
insert into Locations values (1003, 'Clarence');
insert into Locations values (1004, 'Williamsville');
insert into Locations values (1005, 'Lockport');
insert into Locations values (1006, 'Hamburg');
insert into Locations values (1007, 'Orchard Park');
insert into Locations values (1008, 'Cheektowaga');
```

10. Vehicle Table:

```
insert into Vehicle  values (1, 'Ford Transit Full-Size Van', '9055441508',
'2022/10/05', '2020-10-12', '2024/10/05', T);
insert into Vehicle  values (2, 'Volkswagen Westfalia Bus', '7852697423',
'2022/03/15', '2020-12-17', '2024/10/12', F);
insert into Vehicle  values (3, 'Ford F-450 Cutaway', '2227098415',
'2022/06/27', '2021-04-03', '2025/09/25', T);
insert into Vehicle  values (4, 'Freightliner Sprinter Crew Van',
'2594325130', '2022/10/09', '2020-10-10', '2025/05/25', F);
insert into Vehicle  values (5, 'Ford Transit Full-Size Van', '2041792466',
'2022/02/28', '2020-10-16', '2025/08/04', T);
insert into Vehicle  values (6, 'Ford Transit Full-Size Van', '9692176674',
'2022/05/02', '2020-11-15', '2024/06/09', F);
insert into Vehicle  values (7, 'Ford Transit Full-Size Van', '6297105687',
'2021/12/03', '2020-10-02', '2025/04/30', T);
insert into Vehicle  values (8, 'Freightliner Sprinter Crew Van',
'6465667831', '2022/02/27', '2020-11-01', '2024/08/04', T);
insert into Vehicle  values (9, 'Freightliner Sprinter Crew Van',
'9142307371', '2022/07/09', '2020-11-14', '2025/12/05', T);
insert into Vehicle  values (10, 'Freightliner Sprinter Crew Van',
'7172520061', '2022/05/24', '2021-01-05', '2026/01/11', F);
```

11. Product Table:

```
INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
1, 'Apples', 2, 1
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
2, 'Grapes', 3, 1
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
3, 'Strawberries', 3, 1
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
4, 'Mangoes', 6, 1
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
```

```
(
5, 'Cucumbers', 2, 2
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
6, 'Tomatoes', 2, 2
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
7, 'Eggplant', 3, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
8, 'Raddish', 1, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
9, 'Carot', 2, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
10, 'Pickles', 3, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
11, 'Cabbage', 2, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
12, 'Cauliflower', 2, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
```

```
VALUES
(
13, 'Mushrooms', 3, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
14, 'Onions', 1.5, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
15, 'Potatoes', 1.99, 2
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
16, 'Rice', 8, 3
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
17, 'Wheat', 5, 3
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
18, 'Milk', 1.25, 4
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
19, 'Butter', 2.25, 4
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
20, 'Cheese', 2.8, 4
);
```

```
INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
21, 'Yoghurt', 3, 4
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
22, 'Tea', 3.4, 5
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
23, 'Coffee', 4.8, 5
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
24, 'Brown Eggs', 1.99, 6
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
25, 'Eggs', 1.4, 6
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
26, 'Chicken Breast', 5.5, 7
);
INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
27, 'Chicken Drumsticks', 4.8, 7
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
28, 'Chicken Wings', 4.5, 7
);


INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
```

```
(
29, 'Beef', 7, 7
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
30, 'Pork', 12.45, 7
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
31, 'Salmon', 7.85, 8
);

INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
32, 'Shrimps', 6.35, 8
);
INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
33, 'Crabs', 11.1, 8
);
INSERT INTO Products(ProductID, Description, ProductCost, PCategoryID)
VALUES
(
34, 'Lobsters', 12.1, 8
);
```

12. TimeTable Table:

```
INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
1, 1, 1001, '3/1/21', '3/1/21 9:00:00 AM', '5'
);
INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
2, 2, 1002, '3/1/21', '3/1/21 4:00:00 PM', '5'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
3, 3, 1003, '3/2/21', '3/2/21 9:00:00 AM', '5'
);
INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
```

```
4, 4, 1004, '3/2/21', '3/2/21 4:00:00 PM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
5, 5, 1005, '3/3/21', '3/3/21 9:00:00 AM', '24'
);
INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
6, 6, 1006, '3/3/21', '3/3/21 4:00:00 PM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
7, 7, 1007, '3/4/21', '3/4/21 9:00:00 AM', '5'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
8, 8, 1008, '3/4/21', '3/4/21 4:00:00 PM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
9, 9, 1001, '3/5/21', '3/5/21 9:00:00 AM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
10, 10, 1002, '3/5/21', '3/5/21 4:00:00 PM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
11, 1, 1003, '3/6/21', '3/6/21 9:00:00 AM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
```

```
12, 2, 1004, '3/6/21', '3/6/21 4:00:00 PM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
13, 3, 1005, '3/7/21', '3/7/21 9:00:00 AM', '5'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
14, 5, 1006, '3/7/21', '3/7/21 4:00:00 PM', '24'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
15, 8, 1007, '3/8/21', '3/8/21 9:00:00 AM', '5'
);


INSERT INTO TimeTable(TTID, VehicleID, LocationID, Date, Time, EmployeeID)
VALUES
(
16, 4, 1008, '3/8/21', '3/8/21 4:00:00 PM', '24'
);
```

13. Product Category Table:

```
INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
1, 'Fruits'
);


INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
2, 'Vegetables'
);


INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
3, 'Foodgrains'
);
```

```
INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
4, 'Dairy'
);

INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
5, 'Beverages'
);

INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
6, 'Eggs'
);
INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
7, 'Meat'
);
INSERT INTO ProductCategory(PCategoryID, Category)
VALUES
(
8, 'Fish'
);
```

14. Warehouse Employee Details Table

```
INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
1, 1, 1, '3/2/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
2, 1, 2, '4/4/20', '6/10/20'
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
3, 1, 3, '6/4/20', ''
);
```

```
INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
4, 2, 4, '7/7/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
5, 2, 2, '15/10/2020', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
6, 2, 6, '4/4/20', '8/12/20'
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
7, 3, 7, '5/22/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
8, 3, 8, '4/26/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
9, 3, 9, '9/15/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
```

```
(
10, 3, 10, '11/14/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
11, 4, 11, '6/9/20', '9/23/20'
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
12, 4, 12, '4/6/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
13, 4, 13, '4/7/20', '12/31/20'
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
14, 5, 14, '7/8/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
15, 5, 15, '12/9/20', ''
);


INSERT INTO WarehouseEmployeeDetails(WEMPID, WarehouseID, EmployeeID,
StartDate, EndDate)
VALUES
(
16, 5, 11, '10/12/20', ''
);
```

15. Payment Table:

insert into Payment (PaymentID, Payment_Type) values ('1','Credit Card');
insert into Payment (PaymentID, Payment_Type) values ('2','Debit Card');
insert into Payment (PaymentID, Payment_Type) values ('3','Apple Pay');
insert into Payment (PaymentID, Payment_Type) values ('4','Google Pay');
insert into Payment (PaymentID, Payment_Type) values ('5','Samsung Pay');
insert into Payment (PaymentID, Payment_Type) values ('6','Paypal');
insert into Payment (PaymentID, Payment_Type) values ('7','Zelle');
insert into Payment (PaymentID, Payment_Type) values ('8','Venmo');

16. Vendor Table:

insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('1','Buffalo State Farm','36, North rally drive','Buffalo','NY','14226','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('2','New Fresh Estate','168 Callodine Ave','Buffalo','NY','13089','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('3','Fresh Mart','151 Springville Ave','Buffalo','NY','15609','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('4','Farm Kart','97 Englewood Ave','Buffalo','NY','15610','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('5','New Produce','77 Tenneson Drive','Buffalo','NY','15611','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('6','Farmers Market','30 Wallstreet Ave','Buffalo','NY','15612','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('7','Zelly's Farm','197 Heath Street','Buffalo','NY','15613','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('8','Farmer's Home','210 Mary Drive','Buffalo','NY','15614','US');

insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('9','FreshFruits','90 Merrimac Street','Buffalo','NY','15615','US');
insert into
Vendor(VendorID,Vendor_Name,Vendor_Address,Vendor_City,Vendor_State,Vendor_ZIP,Vendor
_Country) values
('10','Grocery Mart','23 Montrose Ave','Buffalo','NY','16616','US');

17. Order Table:
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('1','03/20/2021','09:10:00','1','1','1','1001','8');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('2','03/21/2021','10:10:00','2','2','2','1002','19');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('3','03/22/2021','11:10:00','3','3','3','1003','8');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('4','03/23/2021','12:10:00','4','4','4','1004','3');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('5','03/24/2021','13:10:00','5','5','2','1005','19');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('6','03/25/2021','14:10:00','6','6','3','1006','3');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('7','03/26/2021','15:10:00','7','7','7','1007','18');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('8','03/27/2021','16:10:00','8','8','8','1008','18');

insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('9','03/28/2021','17:10:00','9','9','2','1001','19');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('10','03/29/2021','18:10:00','10','10','1','1002','3');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('11','03/30/2021','14:10:00','11','1','2','1003','12');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('12','03/31/2021','15:10:00','12','2','3','1004','10');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('13','04/01/2021','16:10:00','13','3','4','1005','6');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('14','04/02/2021','17:10:00','14','4','5','1006','21.95');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('15','04/03/2021','18:10:00','15','5','6','1007','48');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('16','04/04/2021','19:10:00','16','6','2','1008','10');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('17','04/05/2021','11:10:00','17','7','3','1001','3.75');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('18','04/06/2021','12:10:00','18','8','7','1002','9');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values

('19','04/07/2021','13:10:00','19','9','8','1003','6');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('20','04/08/2021','14:10:00','20','10','7','1004','2');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('21','04/09/2021','15:10:00','21','1','8','1005','9');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('22','04/10/2021','13:10:00','22','2','5','1006','46.95');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('23','04/11/2021','14:10:00','23','3','6','1007','2.5');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('24','04/12/2021','15:10:00','24','4','2','1008','4.5');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('25','04/13/2021','14:10:00','25','5','3','1001','11.2');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('26','04/14/2021','15:10:00','26','6','5','1002','6');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('27','04/15/2021','16:10:00','27','7','6','1003','6.8');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('28','04/16/2021','13:10:00','28','8','2','1004','13');
insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('29','04/17/2021','14:10:00','29','9','3','1005','16');

insert into Order
(OrderID,Order_Date,Order_Time,CustomerID,VehicleID,PaymentID,LocationID,Order_Total(D))
values
('30','04/18/2021','15:10:00','30','10','7','1006','21.5');

18. Order Item Table:

insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('1','1','1','1','2');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('1','2','2','2','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('2','1','4','1','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('2','2','5','2','4');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('2','3','2','3','9');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('3','1','6','4','8');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('4','1','7','1','3');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('5','1','8','2','2');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('5','2','9','3','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('5','3','10','3','9');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('5','4','1','2','2');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('6','1','2','1','3');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('7','1','3','6','18');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('8','1','4','3','18');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('9','1','5','1','2');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('9','2','6','4','8');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('9','3','7','2','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('9','4','8','3','3');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values

```
('10','1','9','1','3');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('11','1','10','4','12');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('12','1','11','5','10');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('13','1','12','3','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('14','1','13','2','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('14','2','14','4','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('14','3','15','5','9.95');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('15','1','16','6','48');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('16','1','17','2','10');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('17','1','18','3','3.75');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('18','1','19','4','9');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('19','1','11','2','6');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('20','1','12','1','2');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('21','1','13','3','9');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('22','1','14','2','3');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('22','2','15','5','9.95');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('22','3','16','3','24');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('22','4','17','2','10');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('23','1','18','2','2.5');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('24','1','19','2','4.5');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('25','1','20','4','11.2');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('26','1','21','2','6');
```

insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('27','1','22','2','6.8');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('28','1','16','1','8');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('28','2','17','1','5');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('29','1','16','2','16');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('30','1','17','2','10');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('30','2','18','2','2.5');
insert into Order (OrderID,ItemID,ProductID,Quantity_In_LBS,LineItemTotal(D)) values
('30','3','19','4','9');

19. Vendor Order Table:
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('1','1','03/19/2021','09:10:00','1','200');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('2','2','03/20/2021','10:10:00','2','300');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('3','3','03/21/2021','11:10:00','3','300');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('4','4','03/22/2021','12:10:00','4','180');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('5','5','03/23/2021','13:10:00','2','200');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('6','6','03/24/2021','14:10:00','3','600');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('7','7','03/25/2021','15:10:00','7','300');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('8','8','03/26/2021','16:10:00','8','100');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('9','9','03/27/2021','17:10:00','2','200');

insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('10','10','03/28/2021','18:10:00','1','300');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('11','1','03/29/2021','14:10:00','2','200');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('12','2','03/30/2021','15:10:00','3','200');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('13','3','03/31/2021','16:10:00','4','300');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('14','4','04/01/2021','17:10:00','5','900');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('15','5','04/02/2021','18:10:00','6','1194');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('16','6','04/03/2021','19:10:00','2','400');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('17','7','04/04/2021','11:10:00','3','250');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('18','8','04/05/2021','12:10:00','7','1250');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('19','9','04/06/2021','13:10:00','8','450');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('20','10','04/07/2021','14:10:00','7','560');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('21','1','04/08/2021','15:10:00','8','1200');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('22','2','04/09/2021','13:10:00','5','340');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('23','3','04/10/2021','14:10:00','6','480');

insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('24','4','04/11/2021','15:10:00','2','1393');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('25','5','04/12/2021','14:10:00','','1400');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('26','6','04/13/2021','15:10:00','','0');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('27','7','04/14/2021','16:10:00','','0');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('28','8','04/15/2021','13:10:00','','0');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('29','9','04/16/2021','14:10:00','','0');
insert into VOrder (VOrderID,VendorID,VOrder_Date,VOrder_Time,PaymentID,Vorder_Total(D))
values
('30','10','04/17/2021','15:10:00','','0');

20. Vendor Order Item Table:
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('1','1','1','100','200');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('2','1','2','100','300');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('3','1','3','100','300');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('4','1','4','30','180');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('5','1','5','100','200');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('6','1','6','300','600');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('7','1','7','100','300');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('8','1','8','100','100');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('9','1','9','100','200');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values
('10','1','10','100','300');

insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('11','1','11','100','200');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('12','1','12','100','200');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('13','1','13','100','300');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('14','1','14','600','900');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('15','1','15','600','1194');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('16','1','16','50','400');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('17','1','17','50','250');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('18','1','18','1000','1250');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('19','1','19','200','450');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('20','1','20','200','560');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('21','1','21','400','1200');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('22','1','22','100','340');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('23','1','23','100','480');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('24','1','24','700','1393');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('25','1','25','1000','1400');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('26','1','1','100','0');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('27','1','2','100','0');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('28','1','3','100','0');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('29','1','4','30','0');
insert into Order (VOrderID,VItemID,ProductID,VQuantity_In_LBS,VLineItemTotal(D)) values ('30','1','5','100','0');

21. Warehouse Table:
INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 1, 1, 5, 'Y'
);

INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 11, 2, 10, 'Y'
);

INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 3, 2, 15, 'Y'
);

INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 2, 3, 20, 'Y'
);

INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 5, 3, 40, 'Y'
);

INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 7, 4, 10, 'Y'
);

INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)

```
VALUES
(
1, 7, 5, 5, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 17, 5, 5, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 16, 5, 5, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 4, 6, 5, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 2, 7, 5, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 6, 8, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
```

```
2, 10, 9, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 18, 9, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 7, 9, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 4, 9, 15, 'N'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 4, 10, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 12, 11, 25, 'N'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 4, 12, 10, 'Y'
);
```

```
INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 19, 13, 40, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 18, 13, 20, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 4, 14, 80, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 1, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 2, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 3, 15, 15, 'Y'
);
```

```sql
INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 4, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 4, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 13, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 15, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
3, 17, 15, 15, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
4, 25, 16, 20, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
```

```
(
4, 22, 16, 20, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
4, 28, 17, 10, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
5, 30, 18, 45, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
5, 33, 19, 10, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 9, 20, 40, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 12, 21, 10, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 14, 22, 15, 'Y'
```

```
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 19, 23, 20, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 22, 24, 25, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 16, 24, 25, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
1, 14, 25, 10, 'N'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 22, 26, 30, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 19, 27, 45, 'Y'
);
```

```
INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 12, 28, 40, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
2, 34, 29, 25, 'N'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
5, 17, 30, 10, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
5, 18, 30, 10, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
5, 19, 30, 10, 'Y'
);


INSERT INTO Warehouse(WarehouseID, ProductID, VOrderID_, Quantity, Out_Of_Stock_YN)
VALUES
(
5, 20, 30, 10, 'Y'
);
```

9. Self-Evaluated Business Queries

The below are the business questions which we have self-evaluated to analyze the efficiency of the data model we are designing,

1. What is the average order value till date by products sold?
   SELECT B.DESCRIPTION AS PRODUCT_NAME, AVG(B.COST*A.QUANTITY)
   FROM ORDERITEMS A
   LEFT JOIN PRODUCTS B ON A.PRODUCT_ID=B.PRODUCT_ID
   GROUP BY B.DESCRIPTION;

2. Which products have been sold the most by quantity till date?
   SELECT B.DESCRIPTION AS PRODUCT_NAME,SUM(A.QUANTITY)
   FROM ORDERITEMS A
   LEFT JOIN PRODUCTS B ON A.PRODUCT_ID=B.PRODUCT_ID
   GROUP BY B.DESCRIPTION;

3. Most preferred payment type by Vendor and Customer
   The below query will return the count of each payment type used in both customer and vendor orders. From the same, the payment type with maximum count can be observed

   SELECT A.PAYMENTTYPE,COUNT(PAYMENTTYPE)
   FROM PAYMENT A
   LEFT JOIN ORDER B ON A.PAYMENTID=B.A.PAYMENTID
   LEFT JOIN VENDORORDERS C ON A.PAYMENTID=C.A.PAYMENTID
   GROUP BY A.PAYMENTTYPE;

4. List the top 10 customer by order amount till date
   SELECT B.CFIRSTNAME,SUM(A.ORDERTOTAL),DENSE_RANK() OVER (ORDER BY SUM(A.ORDERTOTAL) DESC) RN
   FROM ORDER A
   INNER JOIN CUSTOMER B ON A.CUSTOMERID=B.CUSTOMERID
   GROUP BY B.CFIRSTNAME
   WHERE RN<=10;