Phase Two Deliverable

12.4.19
Data Lobsters

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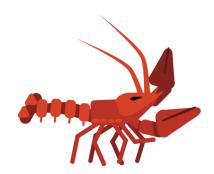
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CREATE & POPULATE

Create Statements

CREATE TABLE PLANT(

       PlantID   DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY KEY,

       Street   VARCHAR(40),

       City   VARCHAR(20),

       State   VARCHAR(2),

       Zip   VARCHAR(10),

       Country   VARCHAR(20));

CREATE TABLE PRODUCT(

       MaterialID   DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY KEY,

       Name   VARCHAR(25),

       MaterialType VARCHAR(11) NOT NULL);

CREATE TABLE MATERIAL(

       MAMaterialID   DECIMAL(8,0) PRIMARY KEY,

       Description   VARCHAR(20),

       StandardWeight   DECIMAL(6,0) DEFAULT '1',

       Type   VARCHAR(3)

       CONSTRAINT Material_Product_FK FOREIGN KEY (MAMaterialID)

REFERENCES PRODUCT(MaterialID)

ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE MTO (

       MTOMaterialID   DECIMAL(8,0) PRIMARY KEY,

       Manufacturedate   DATE

       CONSTRAINT MTO_Material_FK FOREIGN KEY (MTOMaterialID)

REFERENCES MATERIAL(MAMaterialID)

         ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE MERCHANDISE (

       MEMaterialID   DECIMAL(8,0) PRIMARY KEY,

       Roll#   DECIMAL(8,0) NOT NULL UNIQUE,

       Size   DECIMAL(7,2) CHECK(Size > 0),

       Length   DECIMAL(7,2) CHECK(Length > 0)

       CONSTRAINT Merchandise_Product_FK FOREIGN KEY (MEMaterialID)

REFERENCES PRODUCT(MaterialID)

         ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE COMPOSITION(

       CompositionID   DECIMAL(8,0) IDENTIFY (10000000,1) PRIMARY KEY,

       MAMaterialID   DECIMAL(8,0) NOT NULL,

       MEMaterialID   DECIMAL(8,0) NOT NULL,

       Description   VARCHAR(100),

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        CONSTRAINT Composition_MA_FK FOREIGN KEY (MAMaterialID)
REFERENCES MATERIAL(MAMaterialID)
        ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Composition_ME_FK FOREIGN KEY (MEMaterialID)
REFERENCES MERCHANDISE(MEMaterialID)
        ON UPDATE NO ACTION ON DELETE NO ACTION);

CREATE TABLE TRAINING (
        CourseID          DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY KEY,
        Name              VARCHAR(15),
        Description       VARCHAR(100));

CREATE TABLE EMPLOYEE (
        EmployeeID        DECIMAL(9,0) IDENTITY(100000000,1) PRIMARY KEY,
        EmpFirst          VARCHAR(20) NOT NULL,
        EmpLast           VARCHAR(20) NOT NULL,
        Street            VARCHAR(40) NOT NULL,
        City              VARCHAR(30) NOT NULL,
        State             VARCHAR(2),
        Zip               VARCHAR(10) ,
        Country           VARCHAR(20) NOT NULL,
        Phone             DECIMAL(10,0) NOT NULL,
        BirthDate         DATE,
        HireDate          DATE NOT NULL,
        Department        VARCHAR(15) NOT NULL);

CREATE TABLE SALES (
        SEmployeeID              DECIMAL(9,0) PRIMARY KEY
        CONSTRAINT Sales_Emp_FK FOREIGN KEY (SEmployeeID) REFERENCES
EMPLOYEE(EmployeeID)
        ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE TRANSPORTATION (
        TEmployeeID              DECIMAL(9,0) PRIMARY KEY
        CONSTRAINT Transporation_Emp_FK FOREIGN KEY (TEmployeeID)
REFERENCES EMPLOYEE(EmployeeID)
        ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE CARRIER (
        CarrierID         DECIMAL(6,0) IDENTITY(100000,1) PRIMARY KEY,
        Name              VARCHAR(40) NOT NULL,
        Street            VARCHAR(40),
        City              VARCHAR(30),
        State             VARCHAR(2),
        Zip               VARCHAR(10),
        CusRepPhone       DECIMAL(10,0));
```

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CREATE TABLE NONCOMPLIANCE (
        NoncomplianceID         DECIMAL(6,0) IDENTITY(100000,1) PRIMARY KEY,
        CarrierID               DECIMAL(6,0) NOT NULL,
        NoncomplianceDate       DATE NOT NULL,
        Description             VARCHAR(255) NOT NULL,
        CONSTRAINT NonCompliance_Carrier_FK FOREIGN KEY (CarrierID)
REFERENCES CARRIER(CarrierID)
            ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE CUSTOMER (
        CustomerID      DECIMAL(6,0) IDENTITY(100000,1) PRIMARY KEY,
        CusFirst        VARCHAR(20) NOT NULL,
        CusLast         VARCHAR(20) NOT NULL,
        Street          VARCHAR(40) NOT NULL,
        City            VARCHAR(30) NOT NULL,
        State           VARCHAR(2),
        Zip             VARCHAR(10),
        Country         VARCHAR(20) NOT NULL,
        Phone           DECIMAL(10,0) NOT NULL,
        Email           VARCHAR(50));

CREATE TABLE STATUS (
        StatusID        DECIMAL(3,0) IDENTITY(100,1) PRIMARY KEY,
        Name            VARCHAR(25) NOT NULL,
        Description     VARCHAR(255));

CREATE TABLE SMARTWAY (
        SmartwayID              DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY
KEY,
        Date                    DATE,
        EfficiencyMetric        VARCHAR(20),
        Note                    VARCHAR(20),
        EfficiencyRate          DECIMAL(2,0),
        PlantID                 DECIMAL(8,0) NOT NULL,
        CONSTRAINT Smartway_Plant_FK FOREIGN KEY (PlantID) REFERENCES
PLANT(PlantID)
            ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE EMPLOYMENT (
        EmploymentID            DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY
KEY,
        PlantID                 DECIMAL(8,0) NOT NULL,
        EmployeeID              DECIMAL(9,0) NOT NULL,
        StartDate               DATE CHECK (StartDate <= GETDATE()),
        EndDate                 DATE CHECK (EndDate <= GETDATE()),
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        Title                   VARCHAR(20),
        CONSTRAINT Employment_Plant_FK FOREIGN KEY (PlantID) REFERENCES
PLANT(PlantID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Employment_Employee_FK FOREIGN KEY (EmployeeID)
REFERENCES EMPLOYEE(EmployeeID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT CK_StartDate_EndDate CHECK (StartDate < EndDate));

CREATE TABLE COMPLETION (
        CompletionID        DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY KEY,
        Date                DATE,
        EmployeeID          DECIMAL(9,0) NOT NULL,
        CourseID            DECIMAL(8,0) NOT NULL,
        CONSTRAINT Completion_Employee_FK FOREIGN KEY (EmployeeID)
REFERENCES EMPLOYEE(EmployeeID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Completion_Training_FK FOREIGN KEY (CourseID)
REFERENCES TRAINING(CourseID)
                ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE SHIPMENT (
        ShipmentID          DECIMAL(10,0) IDENTITY(1000000000,1) PRIMARY KEY,
        Type                VARCHAR(20),
        ContainerID         DECIMAL(8,0),
        Status              VARCHAR(20),
        ShippingDate        DATE,
        PlannedDate         DATE,
        TEmployeeID         DECIMAL(9,0) NOT NULL,
        CarrierID           DECIMAL(6,0) NOT NULL
        CONSTRAINT Shipment_TEmp_FK FOREIGN KEY (TEmployeeID)
REFERENCES TRANSPORTATION(TEmployeeID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Shipment_Carrier_FK FOREIGN KEY (CarrierID) REFERENCES
CARRIER(CarrierID)
                ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE STORAGE (
        StorageID           DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY KEY,
        QtyonHand           DECIMAL(8,0) CHECK(QtyonHand >= 0),
        QtyOrder            DECIMAL(8,0) CHECK(QtyOrder >= 0),
        QtyBackOrder        DECIMAL(8,0) CHECK(QtyBackOrder >= 0),
        ReorderPoint DECIMAL(8,0) CHECK(ReorderPoint >= 0),
        PlantID             DECIMAL(8,0) NOT NULL,
        MaterialID          DECIMAL(8,0) NOT NULL,
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        CONSTRAINT Storage_Plant_FK FOREIGN KEY (PlantID) REFERENCES
PLANT(PlantID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Storage_Material_FK FOREIGN KEY (MaterialID) REFERENCES
PRODUCT(MaterialID)
                ON UPDATE CASCADE ON DELETE NO ACTION);


CREATE TABLE PACKAGE (
        PackageID           DECIMAL(10,0) IDENTITY(1000000000,1) PRIMARY KEY,
        ShipmentID          DECIMAL(10,0) NOT NULL,
        StorageID           DECIMAL(8,0) NOT NULL
        CONSTRAINT Package_Shipment_FK FOREIGN KEY (ShipmentID)
REFERENCES SHIPMENT(ShipmentID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Package_Storage_FK FOREIGN KEY (StorageID)
REFERENCES STORAGE(StorageID)
                ON UPDATE CASCADE ON DELETE NO ACTION);


CREATE TABLE ORDERS (
        OrderID                     DECIMAL(8,0) IDENTITY(10000000,1) PRIMARY
KEY,
        OrderDate           DATE,
        ProductInfo         VARCHAR(30),
        SEmployeeID              DECIMAL(9,0) NOT NULL,
        CustomerID          DECIMAL(6,0) NOT NULL,
        CONSTRAINT Order_Sales_FK FOREIGN KEY (SEmployeeID) REFERENCES
SALES(SEmployeeID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Order_Customer_FK FOREIGN KEY (CustomerID)
REFERENCES CUSTOMER(CustomerID)
                ON UPDATE CASCADE ON DELETE NO ACTION);


CREATE TABLE DELIVERY (
        DeliveryID          DECIMAL(10,0) IDENTITY(1000000000,1) PRIMARY KEY,
        ContainerID         DECIMAL(8,0),
        ExpectedDelDate     DATE,
        ShipmentID          DECIMAL(10,0) NOT NULL,
        CONSTRAINT Delivery_Shipment_FK FOREIGN KEY (ShipmentID)
REFERENCES SHIPMENT(ShipmentID)
                ON UPDATE CASCADE ON DELETE NO ACTION);


CREATE TABLE ORDERLINE (
        OrderlineID         DECIMAL(10,0) IDENTITY(1000000000,1) PRIMARY KEY,
        Quantity            DECIMAL(6,0) CHECK(Quantity > 0),
        Weight                  DECIMAL(6,2) CHECK(Weight >0),
        Cost                DECIMAL(9,2),
```

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        MaterialID              DECIMAL(8,0) NOT NULL,
        OrderID                 DECIMAL(8,0) NOT NULL,
        DeliveryID              DECIMAL(10,0),
        ProductInfo             VARCHAR (250),
        CONSTRAINT Orderline_Material_FK FOREIGN KEY (MaterialID)
REFERENCES PRODUCT(MaterialID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Orderline_Orders_FK FOREIGN KEY (OrderID) REFERENCES
ORDERS(OrderID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Orderline_Delivery_FK FOREIGN KEY (DeliveryID)
REFERENCES DELIVERY(DeliveryID)
                ON UPDATE NO ACTION ON DELETE NO ACTION);

CREATE TABLE ORDERSTATUS (
        OrderID                 DECIMAL(8,0) NOT NULL,
        StatusID                DECIMAL(3,0) NOT NULL,
        DATE                    DATE
        CONSTRAINT Orderstatus_Comp_PK PRIMARY KEY (OrderID, StatusID),
        CONSTRAINT Orderstatus_Orders_FK FOREIGN KEY (OrderID)
REFERENCES ORDERS(OrderID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Orderstatus_Status_FK FOREIGN KEY (StatusID)
REFERENCES STATUS(StatusID)
                ON UPDATE CASCADE ON DELETE NO ACTION);

CREATE TABLE ORDERLINESTATUS (
        OrderlineID             DECIMAL(10,0) NOT NULL,
        StatusID                DECIMAL(3,0) NOT NULL,
        DATE                    DATE
        CONSTRAINT Orderlinestatus_Comp_PK PRIMARY KEY (OrderlineID,
StatusID),
        CONSTRAINT Orderlinestatus_Orderline_FK FOREIGN KEY (OrderlineID)
REFERENCES ORDERLINE(OrderlineID)
                ON UPDATE CASCADE ON DELETE NO ACTION,
        CONSTRAINT Orderlinestatus_Status_FK FOREIGN KEY (StatusID)
REFERENCES STATUS(StatusID)
                ON UPDATE CASCADE ON DELETE NO ACTION);
```

Alter & Inserts Statements

INSERT INTO PLANT VALUES ('20 Pierce Street', 'Montgomery', 'AL', '36109', 'US');
INSERT INTO PLANT VALUES ('8852 West Mill Street', 'Media', 'PA', '19063', 'US');
INSERT INTO PLANT VALUES ('103 Jefferson Street', 'Grovetown', 'GA', '30813', 'US');
INSERT INTO PLANT VALUES ('46 Lakewood Street', 'Dedham', 'MA', '02026', 'US');
INSERT INTO PLANT VALUES ('9533 East Sugar Avenue', 'Chelmsford', 'MA', '01824', 'US');
INSERT INTO PLANT VALUES ('73 St Louis Lane', 'Greensburg', 'PA', '15601', 'US');
INSERT INTO PLANT VALUES ('3198 Heritage Drive', 'Calgary', 'AB', 'T2V 2W2', 'Canada');
INSERT INTO PLANT VALUES ('2616 Adelaide St', 'Toronto', 'ON', 'M5H 1P6', 'Canada');
INSERT INTO PLANT VALUES ('110 Brackley Road', 'Ticehurst', 'ES', 'TN5 8BW', 'UK');
INSERT INTO PLANT VALUES ('1938 Jett Lane', 'Gardena', 'CA', '90247', 'US');

ALTER TABLE PRODUCT ALTER COLUMN Name VARCHAR(50);
ALTER TABLE PRODUCT ADD CONSTRAINT CA_ProductType_Type CHECK (MaterialType IN ('Material', 'Merchandise'));
INSERT INTO PRODUCT VALUES ('Accent Opaque Digital RE-30 Text and Cover', 'Merchandise');
INSERT INTO PRODUCT VALUES ('Springhill Opaque Cover', 'Merchandise');
INSERT INTO PRODUCT VALUES ('Williamsburg Opaque Offset PLUS','Merchandise');
INSERT INTO PRODUCT VALUES ('HP Everyday','Merchandise');
INSERT INTO PRODUCT VALUES ('Tecnis Laser','Merchandise');
INSERT INTO PRODUCT VALUES ('Kodak Premium Inkjet Paper','Merchandise');
INSERT INTO PRODUCT VALUES ('Saturating Kraft', 'Merchandise');
INSERT INTO PRODUCT VALUES ('Gypsum Facing Paper', 'Merchandise');
INSERT INTO PRODUCT VALUES ('Bliss Fluff Pulp', 'Material');
INSERT INTO PRODUCT VALUES ('Northern Bleached Hardwood Kraft', 'Material');
INSERT INTO PRODUCT VALUES ('SuperSoft Odor Control', 'Material');

ALTER TABLE MATERIAL ADD CONSTRAINT CA_MaterialType_Type CHECK (Type IN ('MTO', 'MTS'));
ALTER TABLE MATERIAL ALTER COLUMN Description VARCHAR(50);
INSERT INTO MATERIAL VALUES (10000019, 'Bliss Fluff Pulp', 500, 'MTS');
INSERT INTO MATERIAL VALUES (10000020, 'Northern Bleached Hardwood Kraft', 750, 'MTS');
INSERT INTO MATERIAL VALUES (10000021, 'SuperSoft Odor Control', 1, 'MTO');

ALTER TABLE MTO ADD CONSTRAINT CK_ManuDate_Date CHECK (ManufactureDate <= GETDATE());
INSERT INTO MTO VALUES (10000021, '06/29/2019');

INSERT INTO MERCHANDISE VALUES (10000011, 54455162, 10, 10);

INSERT INTO MERCHANDISE VALUES (10000012, 69594227, 20, 30);
INSERT INTO MERCHANDISE VALUES (10000013, 11235576, 10, 25);
INSERT INTO MERCHANDISE VALUES (10000014, 63509997, 21, 14);
INSERT INTO MERCHANDISE VALUES (10000015, 84043183, 50, 25);
INSERT INTO MERCHANDISE VALUES (10000016, 62891257, 25, 12);
INSERT INTO MERCHANDISE VALUES (10000017, 24517919, 60, 11);
INSERT INTO MERCHANDISE VALUES (10000018, 57198923, 30, 6);

INSERT INTO COMPOSITION VALUES (10000019, 10000011, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000019, 10000012, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000019, 10000013, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000020, 10000014, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000020, 10000015, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000020, 10000016, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000020, 10000017, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000021, 10000017, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000021, 10000018, 'Description regarding how much material was used');
INSERT INTO COMPOSITION VALUES (10000021, 10000012, 'Description regarding how much material was used');

INSERT INTO TRAINING VALUES ('Safety', 'One week program . Learn about unsafe work environments and situational awareness.');
INSERT INTO TRAINING VALUES ('Skills', '1 month of skills training. Will learn from a senior level employee');
INSERT INTO TRAINING VALUES ('Leadership', 'Two week online program. Leadership development at various stages of their professional career.');
INSERT INTO TRAINING VALUES ('Orientation', 'One day event formally welcoming and introducing new hires.');
INSERT INTO TRAINING VALUES ('On Boarding', 'One week department specific sessions help employees be successful in their new roles.');
INSERT INTO TRAINING VALUES ('Coaching', 'Help team leaders create positive environment.');
INSERT INTO TRAINING VALUES ('Team Building', 'Provide participants with an awareness and understanding of their workplace styles.');
INSERT INTO TRAINING VALUES ('SQL001', 'SQL introduction course');
INSERT INTO TRAINING VALUES ('SQL002', 'Advanced SQL course');
INSERT INTO TRAINING VALUES ('Python001', 'Python introduction course');

INSERT INTO TRAINING VALUES ('Python002', 'Advanced python course');

INSERT INTO EMPLOYEE VALUES('Wayne','Smith','20851 PRIDE-BAYWOOD RD','Wellsburg','IA',50680,'US',29538189,'1/27/1965','3/22/1998','Sales');
INSERT INTO EMPLOYEE VALUES('Ross','OBryan','1465 AUDUBON AVE','Adair','OK',74330,'US',4943072117,'5/25/1972','9/11/1996','Sales');
INSERT INTO EMPLOYEE VALUES('Jacob','Rodgers','1955 ARKANSAS ST','Southampton','NY',11968,'US',5841804670,'2/18/1994','8/6/2003','Transportation');
INSERT INTO EMPLOYEE VALUES('Sydney','Brown','11542 PAMELA DR','Santa Rosa','CA',95403,'US',5118397517,'12/19/1996','4/7/1999','Sales');
INSERT INTO EMPLOYEE VALUES('Lauren','Wilson','2364 GARDERE LN','Darrington','WA',98241,'US',5639406854,'3/9/1985','6/27/2010','Sales');
INSERT INTO EMPLOYEE VALUES('Nicole','Vargas','10021 BREEDEN DR','Pierce','TX',77467,'US',9781011467,'1/13/1991','10/20/2012','Sales');
INSERT INTO EMPLOYEE VALUES('Melissa','Norman','923 CROWN WAY','Albion','NE',68620,'US',1107839405,'11/26/1960','10/23/1995','Transportation');
INSERT INTO EMPLOYEE VALUES('Brad','Hicks','7019 FLORIDA BLVD','San Antonio','TX',78227,'US',658983625,'4/27/1956','12/13/2000','Sales');
INSERT INTO EMPLOYEE VALUES('Scott','Adams','1128 FLORA LN','Abbeville','MS',38601,'US',2249241380,'1/14/1983','4/2/1999','Sales');
INSERT INTO EMPLOYEE VALUES('Vanessa','Baker','6910 LASALLE AVE','Friars Point','MS',38631,'US',1961247664,'7/9/1951','5/27/1986','Sales');
INSERT INTO EMPLOYEE VALUES('Ruth','Mang','2711 WINBOURNE AVE','Enterprise','LA',71425,'US',3524295319,'8/25/1971','4/28/1999','Sales');
INSERT INTO EMPLOYEE VALUES('Cooper','Lee','16488 SAMUELS RD','Manhattan','IL',60442,'US',9385557295,'9/27/1986','10/24/2005','Transportation');
INSERT INTO EMPLOYEE VALUES('Marabel','Turner','763 LAKELAND DR','Swanquarter','NC', 27885, 'US', 576915298, '6/15/1956', '3/28/1994', 'Transportation');
INSERT INTO EMPLOYEE VALUES('John','Robinson','10209 BLUEBONNET BLVD','Wilbur','WA',99185,'US',250552263,'5/5/1971','1/6/2006','Transportation');
INSERT INTO EMPLOYEE VALUES('Dominic','Iafelice','536 FALL RIVER DR','Motley','MN',56466,'US',3671232600,'9/23/1983','12/3/2006','Transportation');
INSERT INTO EMPLOYEE VALUES('Carol','Dana','10209 FREDERICK BLVD','Tocksville','OH',99185,'US',7264938274,'5/5/1988','1/6/2014','Sales');
INSERT INTO EMPLOYEE VALUES('Dana','Himalaya','130 STONE BLVD','Tocksville','PA',28037,'US',8932074658,'5/5/1988','1/6/2014','Sales');
INSERT INTO EMPLOYEE VALUES('Mana','Merril','2764 Wonderland Way','Johnsonville','MS',50680,'US',29638189,'1/27/1965','3/22/2009','Sales');
INSERT INTO EMPLOYEE VALUES('Jane','Ferril','3875 Gipsy Rd','Jacksonville','TX',76245,'US',29748189,'1/27/1965','4/25/2009','Transportation');

INSERT INTO CARRIER VALUES ('FedEx', '604 W. Saxon Circle', 'North Bergen', 'NJ', 07047, 9088948994);
INSERT INTO CARRIER VALUES ('UPS', '130 Bedford Street', 'Erlanger', 'KY', 41018, 2702206551);

INSERT INTO CARRIER VALUES ('R+L Carriers', '800 Elliot Avenue', 'Seattle', 'WA', 98109, 2064024432);
INSERT INTO CARRIER VALUES ('Old Dominion Freight Line', '3055 Dog Hill Lane', 'Hiawatha', 'KS', 66434, 7857416517);
INSERT INTO CARRIER VALUES ('DHL', '2841 Coplin Street', 'Detroit', 'MI', 48215, 3138989400);
INSERT INTO CARRIER VALUES ('The Rapid Crew', '2447 Rosebud Avenue', 'Pine Bluff', 'AR', 71603, 8702092352);
INSERT INTO CARRIER VALUES ('We Deliver Fast', '157 Hillview Street', 'Columbia', 'SC', 29210, 8037590769);
INSERT INTO CARRIER VALUES ('Lightning Fast Services', '3858 Bernardo Street', 'Ortonville', 'MN', 56278, 8132792742);
INSERT INTO CARRIER VALUES ('Gold Medal Deliveries', '3128 Adamsville Road', 'Mission', 'TX', 78572, 9565851630);
INSERT INTO CARRIER VALUES ('Boxes in a Flash', '572 Dovetail Estates', 'Great Barrington', 'MA', 01230, 5809645353);

ALTER TABLE NONCOMPLIANCE ADD CONSTRAINT CK_NonCompDate_Date CHECK (NoncomplianceDate <= GETDATE());
INSERT INTO NONCOMPLIANCE VALUES (100000, '06/28/2004','Accountability');
INSERT INTO NONCOMPLIANCE VALUES (100001, '02/19/2019', 'Health, Safety and Environment');
INSERT INTO NONCOMPLIANCE VALUES (100000, '06/29/2014','Accountability');
INSERT INTO NONCOMPLIANCE VALUES (100004, '02/19/2008', 'Business Conduct and Ethics');
INSERT INTO NONCOMPLIANCE VALUES (100002, '10/30/1999', 'Accountability');
INSERT INTO NONCOMPLIANCE VALUES (100001, '08/01/2000', 'Health, Safety and Environment');
INSERT INTO NONCOMPLIANCE VALUES (100001, '12/20/1994', 'Accountability');
INSERT INTO NONCOMPLIANCE VALUES (100003, '11/20/2013', 'Accountability');
INSERT INTO NONCOMPLIANCE VALUES (100002, '08/01/2010', 'Health, Safety and Environment');
INSERT INTO NONCOMPLIANCE VALUES (1000005, '12/20/2009', 'Accountability');

ALTER TABLE CUSTOMER ALTER COLUMN State VARCHAR(20);
ALTER TABLE CUSTOMER ALTER COLUMN ZIP VARCHAR(10);
INSERT INTO CUSTOMER VALUES ('David', 'Long', '123 Southside Dr.', 'Houston', 'TX', 32146, 'US', 1234567899, 'davidlong@gmail.com');
INSERT INTO CUSTOMER VALUES ('Amelia', 'Davis', '321 Northside Dr.', 'Charleston', 'SC', 32145, 'US', 1234567891, 'ameliadavis@gmail.com');
INSERT INTO CUSTOMER VALUES ('Logan', 'Haymaker', '456 Eastside Dr.', 'Greenville', 'SC', 32144, 'US', 1234567892, 'loganhaymaker@gmail.com');
INSERT INTO CUSTOMER VALUES ('Wesley', 'Staten', '654 Westside Dr.', 'New York City', 'NY', 32143, 'US', 1234567893, 'wesleystaten@gmail.com');
INSERT INTO CUSTOMER VALUES ('Amondrea', 'Davis', '789 Penny Ln.', 'St. Louis', 'MO', 32142, 'US', 1234567894, 'amondreadavis@gmail.com');

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INSERT INTO CUSTOMER VALUES ('Emily',  'Porter', '446 Painted Bunting Wy.',
'Raleigh', 'NC', 32141, 'US', 1234567895, 'emilyporter@gmail.com');
INSERT INTO CUSTOMER VALUES ('Harlan', 'Gibson', '2345 West Beaver Creek Dr.',
'Knoxville', 'TN', 32147, 'US', 1234567896, 'harlangibson@gmail.com');
INSERT INTO CUSTOMER VALUES ('Colt', 'Drew', '1654 Henly St.', 'Knoxville', 'TN',
32148, 'US', 1234567897, 'coltdrew@gmail.com');
INSERT INTO CUSTOMER VALUES ('Danielle', 'Drew', '432 Greenback Rd.', 'Atlanta',
'GA', 32148, 'US', 1234567898, 'danielledrew@gmail.com');
INSERT INTO CUSTOMER VALUES ('Avery', 'Gibson', '1422 Beamer Wy.',
'Blacksburg', 'VA', 32151, 'US', 1234567881, 'averygibson@gmail.com');
INSERT INTO CUSTOMER VALUES ('Irene', 'Frye', '1198  Robson St', 'Vancouver',
'BC', 'V6B 3K9', 'Canada', 6046646701, 'FryeVC@groupbuff.com');
INSERT INTO CUSTOMER VALUES ('Isabella', 'Watts', '99 Stamford Road', 'Ardbeg',
'II', 'PA42 7BG', 'UK', 7924354083, 'bellawatt@classesmail.com');


INSERT INTO STATUS VALUES ('Order Placed', 'Order has been submitted');
INSERT INTO STATUS VALUES ('Processing', 'Order is in processing');
INSERT INTO STATUS VALUES ('Shipped', 'Order has been shipped');
INSERT INTO STATUS VALUES ('Paid', 'Order has been paid');
INSERT INTO STATUS VALUES ('Completed', 'Order has been completed');
INSERT INTO STATUS VALUES ('Submitted', 'Order item has been submitted for
shipping');
INSERT INTO STATUS VALUES ('Awaiting Picking', 'Order item confirmed and
awaiting picking');
INSERT INTO STATUS VALUES ('Awaiting Packing', 'Warehouse awaiting packing');
INSERT INTO STATUS VALUES ('Item Shipped', 'Order item has been shipped');
INSERT INTO STATUS VALUES ('Item Delivered', 'Order item has been delivered');


ALTER TABLE SMARTWAY ADD CONSTRAINT CK_ReportDate_Date CHECK (Date
<= GETDATE());
ALTER TABLE SMARTWAY ALTER COLUMN PlantID DECIMAL(8,0) NOT NULL;
INSERT INTO SMARTWAY VALUES ('11/3/2019','Cubic Ft.', 'Great
Job!',10,10000000);
INSERT INTO SMARTWAY VALUES ('10/3/2018','Cubic M.', 'Awesome
Job!',9,10000004);
INSERT INTO SMARTWAY VALUES ('9/3/2017','Cubic Cm.', 'Solid Job!',8,10000001);
INSERT INTO SMARTWAY VALUES ('8/3/2016','Cubic Ft.', 'Decent Job!',7,10000001);
INSERT INTO SMARTWAY VALUES ('7/3/2015','Cubic M.', 'Okay Job!',6,10000002);
INSERT INTO SMARTWAY VALUES ('6/3/2014','Cubic Cm.', 'Satisfactory
Job!',5,10000004);
INSERT INTO SMARTWAY VALUES ('5/3/2013','Cubic Ft.', 'Lackluster
Job!',4,10000002);
INSERT INTO SMARTWAY VALUES ('4/3/2012','Cubic M.', 'Bad Job!',3,10000005);
INSERT INTO SMARTWAY VALUES ('3/3/2011','Cubic Cm.', 'Terrible
Job!',2,10000004);
INSERT INTO SMARTWAY VALUES ('2/3/2010','Cubic Ft.', 'Scary Job!',1,10000004);
```

```
INSERT INTO EMPLOYMENT VALUES (10000000, 100000000, '01/06/2006', NULL,
'Warehouse Operator');
INSERT INTO EMPLOYMENT VALUES (10000000, 100000001, '03/22/1998', NULL,
'Sales Executive');
INSERT INTO EMPLOYMENT VALUES (10000000, 100000002, '12/13/2000',
'12/31/2005', 'Sales Representative');
INSERT INTO EMPLOYMENT VALUES (10000001, 100000003, '4/28/1999',
'5/01/2001', 'Sales Representative');
INSERT INTO EMPLOYMENT VALUES (10000002, 100000004, '5/01/2001', NULL,
'Sales Executive');
INSERT INTO EMPLOYMENT VALUES (10000002, 100000005, '10/23/1995',
'11/30/2000', 'Warehouse Operator');
INSERT INTO EMPLOYMENT VALUES (10000003, 100000006, '10/20/2012', NULL,
'Sales Representative');
INSERT INTO EMPLOYMENT VALUES (10000004, 100000007, '06/27/2010',
'07/01/2014', 'Sales Representative');
INSERT INTO EMPLOYMENT VALUES (10000004, 100000008, '12/03/2006', NULL,
'Warehouse Manager');
INSERT INTO EMPLOYMENT VALUES (10000004, 100000009, '04/02/1999',
'12/31/2018', 'Sales Manager');
INSERT INTO EMPLOYMENT VALUES (10000005, 100000010, '03/28/1994',
'12/31/1999', 'Warehouse Operator');
INSERT INTO EMPLOYMENT VALUES (10000006, 100000011, '09/11/1996',
'09/01/1997', 'Sales Representative');
INSERT INTO EMPLOYMENT VALUES (10000007, 100000012, '10/24/2015', NULL,
'Warehouse Operator');
INSERT INTO EMPLOYMENT VALUES (10000008, 100000013, '04/07/1999', NULL,
'Sales Manager');
INSERT INTO EMPLOYMENT VALUES (10000009, 100000014, '07/01/2014', NULL,
'Sales Representative');

ALTER TABLE COMPLETION ADD CONSTRAINT CK_CompDate_Date CHECK (Date
<= GETDATE());
INSERT INTO COMPLETION VALUES ('1/1/2019', 100000000,10000000);
INSERT INTO COMPLETION VALUES ('2/1/2018', 100000001,10000001);
INSERT INTO COMPLETION VALUES ('3/1/2017', 100000002,10000002);
INSERT INTO COMPLETION VALUES ('4/1/2016', 100000003,10000003);
INSERT INTO COMPLETION VALUES ('5/1/2015', 100000004,10000003);
INSERT INTO COMPLETION VALUES ('6/1/2014', 100000005,10000005);
INSERT INTO COMPLETION VALUES ('7/1/2013', 100000006,10000007);
INSERT INTO COMPLETION VALUES ('8/1/2012', 100000007,10000007);
INSERT INTO COMPLETION VALUES ('9/1/2011', 100000008,10000005);
INSERT INTO COMPLETION VALUES ('10/1/2010',100000001,10000006);
INSERT INTO COMPLETION VALUES ('11/1/2009',100000002,10000006);
INSERT INTO COMPLETION VALUES ('12/1/2008',100000003,10000006);
```

```
INSERT INTO COMPLETION VALUES ('1/1/2007',100000004,10000006);
INSERT INTO COMPLETION VALUES ('2/1/2006',100000005,10000006);
INSERT INTO COMPLETION VALUES ('3/1/2005',100000006,10000006);

ALTER TABLE SHIPMENT ADD CONSTRAINT CK_ShipDate_Date CHECK
(ShippingDate <= GETDATE());
INSERT INTO SHIPMENT VALUES ('Overnight', 12345678, 'Delivered',
'10/16/2019','10/17/2019',100000002,100008);
INSERT INTO SHIPMENT VALUES ('5-Day', 12345677, 'On Order',
NULL,'12/12/2019',100000006,100005);
INSERT INTO SHIPMENT VALUES ('2-Day', 12345676, 'In Transit',
NULL,'12/5/2019',100000006,100002);
INSERT INTO SHIPMENT VALUES ('Overnight', 12345675, 'Delivered',
'10/15/2019','10/16/2019',100000011,100000);
INSERT INTO SHIPMENT VALUES ('5-Day', 12345674, 'In Transit',
NULL,'12/6/2019',100000012,100004);
INSERT INTO SHIPMENT VALUES ('2-Day', 12345673, 'Out of Stock',
NULL,'12/16/2019',100000012,100003);
INSERT INTO SHIPMENT VALUES ('Overnight', 12345672, 'In Transit',
NULL,'12/4/2019',100000014,100002);
INSERT INTO SHIPMENT VALUES ('5-Day', 12345671, 'Delivered',
'7/10/2019','10/15/2019',100000006,100002);
INSERT INTO SHIPMENT VALUES ('2-Day', 12345670, 'On Order',
NULL,'12/6/2019',100000002,100006);
INSERT INTO SHIPMENT VALUES ('Overnight', 12345679, 'Out of Stock',
NULL,'12/16/2019',100000014,100008);

INSERT INTO STORAGE VALUES (10000,997,0,5000,10000000,10000018);
INSERT INTO STORAGE VALUES (200000,10000,0,5000,10000001,10000016);
INSERT INTO STORAGE VALUES (3000,437,0,500,10000002,10000011);
INSERT INTO STORAGE VALUES (400000,9265,0,5000,10000003,10000015);
INSERT INTO STORAGE VALUES (1000,1234,234,1000,10000004,10000014);
INSERT INTO STORAGE VALUES (20000,785,0,5000,10000005,10000011);
INSERT INTO STORAGE VALUES (30000,209,0,5000,10000006,10000012);
INSERT INTO STORAGE VALUES (500000,9970,0,500,10000007,10000013);
INSERT INTO STORAGE VALUES (600000,9830,0,5000,10000008,10000021);
INSERT INTO STORAGE VALUES (700000,9500000,0,500,10000009,10000019);

INSERT INTO PACKAGE VALUES (1000000000, 10000000);
INSERT INTO PACKAGE VALUES (1000000001, 10000001);
INSERT INTO PACKAGE VALUES (1000000002, 10000002);
INSERT INTO PACKAGE VALUES (1000000003, 10000003);
INSERT INTO PACKAGE VALUES (1000000004, 10000004);
INSERT INTO PACKAGE VALUES (1000000005, 10000005);
INSERT INTO PACKAGE VALUES (1000000006, 10000006);
INSERT INTO PACKAGE VALUES (1000000007, 10000007);
```

```
INSERT INTO PACKAGE VALUES (1000000005, 10000008);
INSERT INTO PACKAGE VALUES (1000000004, 10000009);


ALTER TABLE ORDERS DROP COLUMN ProductInfo;
ALTER TABLE ORDERS ADD CONSTRAINT CK_OrderDate_Date CHECK
(OrderDate <= GETDATE());
INSERT INTO ORDERS VALUES ('7/19/2002', 100000001, 100000);
INSERT INTO ORDERS VALUES ('3/24/2005', 100000000, 100001);
INSERT INTO ORDERS VALUES ('5/9/2016', 100000003, 100002);
INSERT INTO ORDERS VALUES ('11/7/2019', 100000004, 100003);
INSERT INTO ORDERS VALUES ('11/1/2019', 100000005, 100004);
INSERT INTO ORDERS VALUES ('1/24/2000', 100000007, 100005);
INSERT INTO ORDERS VALUES ('2/19/2007', 100000007, 100006);
INSERT INTO ORDERS VALUES ('4/23/2014', 100000008, 100007);
INSERT INTO ORDERS VALUES ('10/10/2019', 100000009, 100008);
INSERT INTO ORDERS VALUES ('1/29/2013', 100000010, 100009);
INSERT INTO ORDERS VALUES ('7/19/2010', 100000018, 100000);
INSERT INTO ORDERS VALUES ('7/19/2011', 100000018, 100001);

INSERT INTO DELIVERY VALUES (19464200, '10/17/2019', 1000000001);
INSERT INTO DELIVERY VALUES (34973097, '10/16/2019', 1000000000);
INSERT INTO DELIVERY VALUES (43295786, '10/17/2019', 1000000001);
INSERT INTO DELIVERY VALUES (81906392, '10/17/2019', 1000000001);
INSERT INTO DELIVERY VALUES (78921693, '10/16/2019', 1000000000);
INSERT INTO DELIVERY VALUES (36354891, '10/16/2019', 1000000000);
INSERT INTO DELIVERY VALUES (00331860, '10/18/2019', 1000000002);
INSERT INTO DELIVERY VALUES (66274373, '10/18/2019', 1000000002);
INSERT INTO DELIVERY VALUES (40629623, '10/16/2019', 1000000000);
INSERT INTO DELIVERY VALUES (52737032, '10/18/2019', 1000000002);

INSERT INTO ORDERLINE VALUES (200, 200, 27, 10000011, 10000000,
1000000002, '60% recycled paper');
INSERT INTO ORDERLINE VALUES (1000, 1000, 30, 10000012, 10000001,
1000000003, '10% recycled paper');
INSERT INTO ORDERLINE VALUES (400, 40, 100, 10000013, 10000002, NULL, '10%
recycled paper');
INSERT INTO ORDERLINE VALUES (100, 100, 105.5, 10000014, 10000003, NULL,
'60% recycled paper');
INSERT INTO ORDERLINE VALUES (300, 300, 102.9, 10000015, 10000004, NULL,
'10% recycled paper');
INSERT INTO ORDERLINE VALUES (70, 700, 75, 10000016, 10000005, NULL, 'extra
soft');
INSERT INTO ORDERLINE VALUES (600, 6000, 13, 10000017, 10000006, NULL,
'extra soft');
```

```sql
INSERT INTO ORDERLINE VALUES (100, 100, 80, 10000018, 10000007, NULL,
'bleached');
INSERT INTO ORDERLINE VALUES (50, 500, 39.5, 10000019, 10000008,
1000000001, 'bleached');
INSERT INTO ORDERLINE VALUES (800, 8000, 8, 10000020, 10000009, NULL, '60%
recycled paper');

ALTER TABLE ORDERSTATUS ADD CONSTRAINT CK_OrderStatus_Date CHECK
(Date <= GETDATE());
INSERT INTO ORDERSTATUS VALUES (10000000, 100, '07/29/2002');
INSERT INTO ORDERSTATUS VALUES (10000001, 109, '03/24/2005');
INSERT INTO ORDERSTATUS VALUES (10000002, 108, '05/09/2016');
INSERT INTO ORDERSTATUS VALUES (10000003, 107, '11/08/2019');
INSERT INTO ORDERSTATUS VALUES (10000004, 102, '11/01/2019');
INSERT INTO ORDERSTATUS VALUES (10000005, 105, '10/10/2019');
INSERT INTO ORDERSTATUS VALUES (10000006, 100, '10/10/2019');
INSERT INTO ORDERSTATUS VALUES (10000007, 106, '10/15/2019');
INSERT INTO ORDERSTATUS VALUES (10000008, 103, '02/15/2019');
INSERT INTO ORDERSTATUS VALUES (10000008, 102, '02/28/2001');
INSERT INTO ORDERSTATUS VALUES (10000008, 101, '05/10/2016');

ALTER TABLE ORDERLINESTATUS ADD CONSTRAINT CK_ItemStatus_Date
CHECK (Date <= GETDATE());
INSERT INTO ORDERLINESTATUS VALUES (1000000001, 100, '10/16/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000004, 104, '11/07/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000002, 101, '10/16/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000002, 102, '11/08/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000005, 103, '11/07/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000008, 107, '11/05/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000004, 105, '11/05/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000008, 104, '11/07/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000001, 103, '11/08/2019');
INSERT INTO ORDERLINESTATUS VALUES (1000000009, 109, '10/15/2019');

INSERT INTO SALES VALUES (100000000);
INSERT INTO SALES VALUES (100000001);
INSERT INTO SALES VALUES (100000003);
INSERT INTO SALES VALUES (100000004);
INSERT INTO SALES VALUES (100000005);
INSERT INTO SALES VALUES (100000007);
INSERT INTO SALES VALUES (100000008);
INSERT INTO SALES VALUES (100000009);
INSERT INTO SALES VALUES (100000010);
INSERT INTO SALES VALUES(100000015);
INSERT INTO SALES VALUES (100000017)
```

```
INSERT INTO SALES VALUES (100000018)

INSERT INTO TRANSPORTATION VALUES (100000002);
INSERT INTO TRANSPORTATION VALUES (100000006);
INSERT INTO TRANSPORTATION VALUES (100000011);
INSERT INTO TRANSPORTATION VALUES (100000012);
INSERT INTO TRANSPORTATION VALUES (100000013);
INSERT INTO TRANSPORTATION VALUES (100000014);
INSERT INTO TRANSPORTATION VALUES(100000016);
```

SQL QUERIES

```
CREATE VIEW v_InventoryReport AS
SELECT
PLANT.PlantID,STORAGE.MaterialID,PRODUCT.Name,STORAGE.QTYONHAND,STORAGE.
QtyOrder,STORAGE.QtyBackOrder,STORAGE.ReorderPoint
FROM STORAGE INNER JOIN PLANT ON STORAGE.PlantID=PLANT.PlantID
              INNER JOIN PRODUCT ON STORAGE.MATERIALID=PRODUCT.MATERIALID


CREATE VIEW v_CustomerOrders AS
SELECT CUSTOMER.CUSTOMERID, CUSTOMER.CusFirst, CUSTOMER.CusLast,
COUNT(ORDERS.OrderID) AS 'Number of Orders', SUM(ORDERLINE.Cost) AS 'TOTAL
COST'
FROM ORDERS RIGHT JOIN CUSTOMER ON
ORDERS.CustomerID=CUSTOMER.CustomerID
              INNER JOIN ORDERLINE ON ORDERLINE.ORDERID=ORDERS.OrderID
GROUP BY CUSTOMER.CustomerID, CUSTOMER.CusFirst, CUSTOMER.CusLast



CREATE VIEW v_EMPLOYEE_RECOGNITION as
SELECT DISTINCT    emp.EmployeeID, emp.EmpFirst, emp.EmpLast, emp.Street, emp.City,
emp.State, emp.Zip, emp.Country, emp.Phone, emp.HireDate, emp.Department,
OrderCountTable.#Orders, ShipmentCountTable.#Shipments
FROM EMPLOYEE as emp LEFT JOIN (SELECT SEmployeeID, count(OrderID) as #Orders
FROM ORDERS
GROUP BY SEmployeeID) OrderCountTable ON OrderCountTable.SEmployeeID =
emp.EmployeeID LEFT JOIN

        (SELECT TEmployeeID, count(ShipmentID) as #Shipments

        FROM SHIPMENT

        GROUP BY TEmployeeID) ShipmentCountTable ON
ShipmentCountTable.TEmployeeID = emp.EmployeeID
WHERE        YEAR(GETDATE()) - YEAR(emp.HireDate) = 5 OR
             YEAR(GETDATE()) - YEAR(emp.HireDate) = 10 OR
             YEAR(GETDATE()) - YEAR(emp.HireDate) = 25



CREATE VIEW v_NONCOMPLIANCE AS
SELECT NONCOMPLIANCE.CARRIERID AS 'Carrier ID', CARRIER.Name,
YEAR(NONCOMPLIANCE.NoncomplianceDate) AS 'YEAR',
NONCOMPLIANCE.DESCRIPTION,
```

```sql
        COUNT(NONCOMPLIANCE.DESCRIPTION) AS 'NUMBER OF VIOLATIONS'
FROM NONCOMPLIANCE INNER JOIN CARRIER ON
NONCOMPLIANCE.CarrierID=CARRIER.CarrierID
GROUP BY NONCOMPLIANCE.CARRIERID, YEAR(NONCOMPLIANCE.NoncomplianceDate),
NONCOMPLIANCE.DESCRIPTION, CARRIER.NAME


CREATE VIEW v_SalesTeam_Performance AS
SELECT ORDERS.SEmployeeID, EMPLOYEE.EmpFirst, EMPLOYEE.EmpLast,
COUNT(ORDERS.ORDERID) AS 'Number of Orders',
SUM(ORDERLINE.Cost) AS 'Total Revenue'
FROM ORDERS INNER JOIN EMPLOYEE ON
ORDERS.SEMPLOYEEID=EMPLOYEE.EmployeeID
                INNER JOIN ORDERLINE ON ORDERS.ORDERID=ORDERLINE.ORDERID
GROUP BY ORDERS.SEmployeeID, EMPLOYEE.EmpFirst, EMPLOYEE.EmpLast



CREATE VIEW v_LowProducts as
SELECT p.MaterialID as 'Material ID', p.Name as 'Product Name', p.MaterialType as 'Material
Type', s.QtyonHand as 'Quantity on Hand', s.QtyOrder as 'Quantity on Order', s.QtyBackOrder
as 'Quantity on Backorder', s.ReorderPoint as 'Reorder Point', s.QtyonHand-s.ReorderPoint as
'Amount until Reorder'
FROM STORAGE as s, PRODUCT as p
WHERE       s.MaterialID = p.MaterialID AND
            s.QtyonHand < 1.5 * s.ReorderPoint

CREATE VIEW v_EmployeeCourseCompletion AS
SELECT EmployeeID, CourseID, Date
FROM COMPLETION
```

DETAILED DESCRIPTIONS

Database Description:
Our database houses information describing the relationship between plants, employees, customers, and the order to cash process.

Form Descriptions:

Order Input Form:
This form allows the user to input orders to the database. Include the ability to search for customer name, employee name, and the product names. It also includes information such as the product information, the quantity, weight and cost for each item.

Inventory Management Form:
This form allows employees to update inventory levels for each plant since it includes the plant number and the product name. The form also have filed such as quantity on hand, quantity on order, quantity backordered and the reorder point.

Non-Compliance Form:
This form allows IP employees to report any incidents of non-compliance with carriers as well as the violation date.

Navigation Form:
This form allows IP to access all the reports and forms within one tab.

Report Descriptions:

Inventory Report:
This creates an inventory report for each plant. It includes relevant information about the product(s) and the plant including all relevant inventory information (QOH, Quantity on Order, Quantity on Backorder, etc.).

Customer Orders:
This report contains the number of orders and the total cost of all orders placed by each customer (be sure to also include customer contact information), including the ability to search by customer and a date range. It identifies the top customers as well as customers who have not placed any orders, within a given date range, to target their marketing efforts.

Employee Recognition:
This report generates a list of employees who have worked for IP for 5, 10, or 25 years. It only includes current employees. It also includes relevant information so each employee can be recognized for his/her years of service. If the employee is a Sales Team Member, it provides information about the number of orders the employee has submitted. If the employee is a Planning Team Member, it provides information about the number of shipments they have managed.

Non-Compliance:
This report creates a list of carriers with code of conduct violations. For each carrier, it specifies which principle(s) was violated and how many times the violation occurred within a given year.

Sales Team Performance:
This report provides the number of orders submitted, and the amount of revenue brought in by each Sales Team Member in the last month. It also identifies the top performers on the Sales Team as well as the Sales Team members who are not meeting expectations/goals.

Low Products:
This report identifies any products that are lower than 1.5 times their reorder point.

Employee Course Completion:
This report identifies all employees and any classes they have completed, as well as the date that they completed said class.

HOW TO MANUAL

How to Add a Sales Order Using the Form

Select sales form from the form panel

Forms

- Customer Info Entry
- Order Form
- ORDERLINE SUBFORM

A blank order form looks like following

INTERNATIONAL PAPER

Order Form   Order Date   12/4/2019

Customer ID   Employee ID

Product ID	ProductInfo	Quantity	Weight	Cost
*				

Record: I◄ ◄ 1 of 1 ► ►I ►▪ ⏚ No Filter Search

Record: I◄ ◄ 16 of 16 ► ►I ►▪ ⏚ No Filter Search

The date is auto-generated to be today's date, but you can also type the date you wanted.

Select customer ID and employee form the drop down box.

Customer ID		
100000	Long	David
100001	Davis	Amelia
100002	Haymaker	Logan
100003	Staten	Wesley
100004	Davis	Amondrea
100005	Porter	Emily
100006	Gibson	Harlan
100007	Drew	Colt
100008	Drew	Danielle
100009	Gibson	Avery
100013	Frye	Irene
100014	Watts	Isabella
100031	Millers	Rachel
100033	Lee	Mike
100035	Lao	Mike

Employee ID		
100000000	Wayne	Smith
100000001	Ross	OBryan
100000002	Jacob	Rodgers
100000003	Sydney	Brown
100000004	Lauren	Wilson
100000005	Nicole	Vargas
100000006	Melissa	Norman
100000007	Brad	Hicks
100000008	Scott	Adams
100000009	Vanessa	Baker
100000010	Ruth	Mang
100000011	Cooper	Lee
100000012	Marabel	Turner
100000013	John	Robinson
100000014	Dominic	Iafelice
100000015	Mana	Merril

If it is a new customer, click the [ ] button to navigate to customer form.

INTERNATIONAL ⊘ PAPER

New Customer Information Entry Form

First Name*		Last Name*		⊗ EXIT FORM
Street*				✎ NEW FORM
City*		State/Province		🖨 PRINT FORM
Country*		Zip		🗔 ORDER FROM
Phone*				
Email				

Enter the customer information, * represents required fields

Once new customer information entered, click 🗔 button to go back to order form.

Select a product ID from the drop down list.

Product ID*	ProductInfo
	⌄
10000011	Accent Opaque
10000012	Springhill Opaq
10000013	Williamsburg O
10000014	HP Everyday
10000015	Tecnis Laser
10000016	Kodak Premium
10000017	Saturating Kraft
10000018	Gypsum Facing
10000019	Bliss Fluff Pulp
10000020	Northern Bleach
10000021	SuperSoft Odor

Enter the quantity, and click next row to add more items in the order

Product ID*	ProductInfo	Quantity	Weight	Cost
10000012		200		
⌄				

How to Generate a Report

Once the order is finished, click ⊗ to close the form.

Click 🖨 to print a paper copy if needed.

How to Add Instances of Carrier Code of Conduct Violations
Select Carrier Non-compliance Form from the form panel

INTERNATIONAL ⒶPAPER Carrier Non-Compliance

Carrier Name*	[⌄]
Noncompliance Date*	12/4/2019
Description*	[⌄]

An empty from looks like this, with the date being automatically set to today's date. This can be edited to reflect past dates, but cannot be any day in the future.

INTERNATIONAL ⒶPAPER Carrier Non-Compliance

Carrier Name*	FedEx [⌄]
Noncompliance Date*	2019-12-04
Description*	Late/Missing Items [⌄]

Using the dropdown boxes, enter the name of the carrier and the type of violation that occurred.

How to Update Inventory Levels
Select Inventory Management Form from the form panel

INTERNATIONAL ⒶPAPER Inventory Management Form

Product Name* [⌄]   Plant ID* [⌄]

Qty on Hand [   ]   Reorder Point [   ]

Qty Order [   ]

Qty Backorder [   ]

An empty Inventory Management Form looks like this.
Using the drop down menus, select the Product Name and Plant ID you wish to create.

INTERNATIONAL ⒶPAPER Inventory Management Form

Product Name* [Williamsburg Opaque Offset PLUS ⌄]   Plant ID* [10000000   ⌄]

Qty on Hand [10,000]   Reorder Point [8,000]

Qty Order [376]

Qty Backorder [0]

If you are updating the inventory amount during an audit, find the record that corresponds to the Product and Plant combination and manually change the records.

How to Check Inventory for a Certain Product

Select 'Inventory Report by Product' from the report panel

Reports ⊼

🖹 Carrier NonCompliance Report

🖹 Customer Order Report

🖹 Employee Recognition Report

🖹 Inventory Report

🖹 Inventory Report by Product

🖹 Low Inventory Level

🖹 Sales Team Performance

Enter the product name

Enter Parameter Va... ? ✕

Please Enter Product Name

| |

OK   Cancel

Sample report looks like following:

Plant ID	Product Name	Quantity on Hand	Quantity on Order	Quantity on Back Order	Reorder Point
10000004	HP Everyday	1,000	1,234	234	1,000
10000009	HP Everyday	20,010	5,000	0	1,000
10000008	HP Everyday	1,534	534	0	1,000
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INTERNATIONAL PAPER — Inventory Report — Wednesday, December 4, 2019 10:53:56 AM

SAMPLE REPORTS

Report 1: Carrier Non-Compliance Report

Carrier Non-Compliance Report

Wednesday, December 4, 2019
8:53:07 AM

Carrier ID	Name	Year	Description	Number of Violations
100001	UPS	2019	Health, Safety and Environment	1
100000	FedEx	2014	Accountability	1
100003	Old Dominion Freight Line	2013	Accountability	1
100002	R+L Carriers	2010	Health, Safety and Environment	1
100005	The Rapid Crew	2009	Accountability	1
100004	DHL	2008	Business Conduct and Ethics	1
100000	FedEx	2004	Accountability	1
100001	UPS	2000	Health, Safety and Environment	1
100002	R+L Carriers	1999	Accountability	1
100001	UPS	1994	Accountability	1

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Page 1 of 1

Report 2: Customer Order Report

INTERNATIONAL PAPER — Customer Order Report

Wednesday, December 4, 2019
8:53:26 AM

Customer ID	First Name	Last Name	Number of Orders	Total Cost
100000	David	Long	2	63.00
100001	Amelia	Davis	1	30.00
100002	Logan	Haymaker	1	100.00
100003	Wesley	Staten	1	105.50
100004	Amondrea	Davis	1	102.90
100005	Emily	Porter	1	75.00
100006	Harlan	Gibson	1	13.00
100007	Colt	Drew	1	80.00
100008	Danielle	Drew	2	39.50
100009	Avery	Gibson	1	8.00

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Page 1 of 1

Report 3: Employee Recognition Report

								Employee Recognition Report		Wednesday, December 4, 2019

INTERNATIONAL PAPER — **Employee Recognition Report** — Wednesday, December 4, 2019 / 8:53:45 AM

Employee ID	First Name	Last Name	Hire Date	Department	# Orders	# Shipments
100000012	Marabel	Turner	1994-03-28	Transportation		2
100000015	Mana	Merril	2009-03-22	Sales	1	
100000016	Jane	Ferril	2009-04-25	Transportation		
100000017	Carol	Dana	2014-01-06	Sales		
100000018	Dana	Himalaya	2014-01-06	Sales	3	

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Report 4: Inventory Report

INTERNATIONAL PAPER — **Inventory Report** — Wednesday, December 4, 2019 / 8:54:01 AM

Plant ID	Product Name	Quantity on Hand	Quantity on Order	Quantity on Back Order	Reorder Point
10000000	Gypsum Facing Paper	10,000	997	0	5,000
10000001	Kodak Premium Inkjet Paper	200,000	10,000	0	5,000
10000002	Accent Opaque Digital RE-30 Text and Cover	3,000	437	0	500
10000003	Tecnis Laser	400,000	9,265	0	5,000
10000004	HP Everyday	1,000	1,234	234	1,000
10000005	Accent Opaque Digital RE-30 Text and Cover	20,000	785	0	5,000
10000006	Springhill Opaque Cover	30,000	209	0	5,000
10000007	Williamsburg Opaque Offset PLUS	500,000	9,970	0	500
10000008	SuperSoft Odor Control	600,000	9,830	0	5,000
10000009	Bliss Fluff Pulp	700,000	95,000	0	500
10000009	Gypsum Facing Paper	52,000	500	0	1,000
10000009	HP Everyday	20,010	5,000	0	1,000
10000008	HP Everyday	1,534	534	0	1,000

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Report 5: Sales Team Performance

INTERNATIONAL ⓐ PAPER		Sales Team Performance		Wednesday, December 4, 2019 8:54:15 AM
Employee ID	First Name	Last Name	Number of Orders	Total Revenue
100000007	Brad	Hicks	2	88.00
100000001	Ross	OBryan	2	63.00
100000015	Mana	Merril	1	
100000010	Ruth	Mang	1	8.00
100000009	Vanessa	Baker	1	39.50
100000008	Scott	Adams	1	80.00
100000005	Nicole	Vargas	1	102.90
100000004	Lauren	Wilson	1	105.50
100000003	Sydney	Brown	1	100.00
100000000	Wayne	Smith	1	30.00

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PHASE ONE UPDATES

ERD

Logical Data Model
PK: Bold and underline; FK: italic; Composite PK: bold, underline and italic

PLANT(**PlantID**, Street, City, State, Zip, Country)
EMPLOYMENT(**EmploymentID**, Status, *PlantID, EmployeeID*)
SMARTWAY(**SmartwayID**, Date, EfficiencyMetric, Notes, EfficiencyRate, *PlantID*)
STORAGE(**StorageID**, QtyonHand, QtyonOrder ,QtyonBackOrder, ReorderPoint, *PlantID, ShipmentID, MaterialID*)
PRODUCT(**MaterialID,** Name**, MaterialType**)
MATERIAL(***MA-MaterialID***, Description, StandardWeight, **Type**)
MTO(***MTO-MaterialID***, ManufactureDate)
MERCHANDISE(***ME-MaterialID***, **Roll#**, Size, Length)
COMPOSITION(**CompositionID**, *MA-MaterialID*, *ME-MaterialID,* Description)
TRAINING(**CourseID**, Name, Description)
COMPLETION(**CompletionID**, Date, *EmployeeID*, *CourseID*)
EMPLOYEE(**EmployeeID**, First, Last, Street, City, State, Zip, Country, Phone, BirthDate, HireDate, Department)
SALES(***S-EmployeeID***)
TRANSPORTATION(***T-EmployeeID***)
SHIPMENT(**ShipmentID**, Type, ContainerID, Status, ShippingDate, PlannedDate, *T-EmployeeID, CarrierID*)
PACKAGE(***ShipmentID, StorageID***)
CARRIER(**CarrierID**, Name, Street, State, Zip, CusRepPhone)
NONPLIANCE(***CarrierID***, NoncomplianceDate, Description)
CUSTOMER(**CustomerID**, First, Last, Street, City, State, Zip, Country, Phone, Email)
ORDER(**OrderID**, OrderDate, ProductInfo, *S-EmployeeID*, *CustomerID*)
ORDERLINE(**OrderlineID**, Quantity, Weight, Cost, *MaterialID*, *OrderID*, *DeliveryID,* ProductInfo)
STATUS(**StatusID**, **Name**, Description)
ORDER/STATUS(***OrderID***, ***StatusID***, Date)
ORDERLINE/STATUS(***OrderlineID***, ***StatusID***, Date)
DELIVERY(**DeliveryID**, ContainerID, ExpectedDelDate, *ShipmentID*)

PLANT

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
PlantID	Decimal	NNNNNNNN	(8,0)	Unique identifier for all plants	12345678	PK		NOT NULL				
Street	Text		40	Plant's street address	1 Lobster Dr							
City	Text		20	Plant's city name	Knoxville							
State	Text		2	Plant's state abbreviation	TN							
Zip	Text		10	Plant's postal code	37931							
Country	Text		20	Plant's country name	England							

EMPLOYMENT

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
EmploymentID	Decimal	NNNNNNN	(8,0)	Unique identifier for every record in the employment table	12345678	PK		NOT NULL				
StartDate	Date	DD/MM/YYYY	10	Date Employee was hired	06/29/2014			CHECK (StartDate <= GETDATE())				
EndDate	Date	DD/MM/YYYY	10	Date Employee stopped working for company	06/29/2013			CHECK (EndDate <= GETDATE())				
Title	Text		20	Employee job title	Sales Represetative							
PlantID	Decimal	NNNNNNN	(8,0)	Unique identifier for all plants	12345678	FK			PLANT (PlantID)	CASCADE	NO ACTION	
EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all employees	123456789	FK			EMPLOYEE (EmployeeID)	CASCADE	NO ACTION	

SMARTWAY

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
SmartwayID	Decimal	NNNNNNN	(8,0)	Unique identifier for every record in the smartway table	12345678	PK		NOT NULL				
Date	Date	DD/MM/YYYY	10	Date of the report	10/15/2019			CHECK (Date <= GETDATE())				
EffeciencyMetric	Text		20	CO_2 Effeciency Metric	Cubic Ft							
Notes	Text		20	Any notes related to the report	Great Job!							
EffeciencyRate	Decimal	NN	(2,0)	Plant's CO_2 efficiency rating (1-10)	10							
PlantID	Decimal	NNNNNNN	(8,0)	Unique identifier for all plants	123456789	FK		NOT NULL	PLANT (PlantID)	CASCADE	NO ACTION	

STORAGE

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
StorageID	Decimal	NNNNNNN	(8,0)	Unique identifier for every record in the storage table	12345678	PK		NOT NULL				
QtyonHand	Decimal	NNNNNNN	(8,0)	Quantity of the item on hand	12345678			CHECK(QtyonHand >= 0)				
QtyonOrder	Decimal	NNNNNNN	(8,0)	Quantity of the item on order	12345678			CHECK(QtyonOrder >= 0)				
QtyonBackOrder	Decimal	NNNNNNN	(8,0)	Quantity of the item on back order	12345678			CHECK(QtyonOrder >= 0)				
ReorderPoint	Decimal	NNNNNNN	(8,0)	The re-order point to maintain the inventory levels efficiently	12345678			CHECK(ReorderPoint >= 0)				
PlantID	Decimal	NNNNNNN	(8,0)	Unique identifier for all plants	12345678	FK			PLANT (PlantID)	CASCADE	NO ACTION	
ShipmentID	Decimal	NNNNNNNNN	(10,0)	Unique identifier for each shipment	1234567899	FK			SHIPMENT (ShipmentID)	CASCADE	NO ACTION	
MaterialID	Decimal	NNNNNNN	(8,0)	Unique identifier for each product type	12345678	FK			PRODUCT (MaterialID)	CASCADE	NO ACTION	

PRODUCT

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
MaterialID	Decimal	NNNNNNN	(8,0)	Unique identifier for each product type	12345678	PK		NOT NULL				
Name	Text		50	Name of the product	Office Paper							
MaterialType	Text		11	Identifies whether the product is a material or merchandise item	Merchandise			NOT NULL CHECK (MaterialType IN ('Material', 'Merchandise'))				

MATERIAL

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
MA-MaterialID	Decimal	NNNNNNN	(8,0)	Unique identifier for each product type	12345678	PK		NOT NULL				
Description	Text		50	Description of the material	12"X12"X12" Cardboard Boxes							
StandardWeight	Decimal	NNNNNN	(6,0)	Standard Weight of the material in "lbs."	123456							1
Type	Text		3	Identifies the type of material	MTS			NOT NULL CHECK (Type IN ('MTO', 'MTS'))				

MTO

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
MTO-MaterialID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each product type	12345678	PK		NOT NULL				
ManufactureDate	Date	DD/MM/YYYY	10	Date the item was manufactured	10/15/2019			CHECK (ManufactureDate <= GETDATE())				

MERCHANDISE

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
ME-MaterialID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each product type	12345678	PK		NOT NULL				
Roll#	Decimal	NNNNNNNN	(8,0)	Unique identifier for each roll of paper	12345678			NOT NULL				
Size	Decimal	NNNNNNN.NN	(7,2)	Size of each roll of paper in "squared ft."	1234567.12							
Length	Decimal	NNNNNNN.NN	(7,2)	Length of each roll of paper in "ft."	1234567.12							

COMPOSITION

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
CompositionID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each record in the composition table	12345678	PK		NOT NULL				
MA-MaterialID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each product type	12345678	FK		NOT NULL	MATERIAL (MA-MaterialID)	CASCADE	NO ACTION	
ME-MaterialID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each product type	12345678	FK		NOT NULL	MERCHANDISE (MaterialID)	CASCADE	NO ACTION	
Description	Text		100	Description of how much material was used	3 rolls of Northern Bleached Hardwood Kraft							

TRAINING

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
CourseID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each type of course	12345678	PK		NOT NULL				
Name	Text		15	Name of the course	SQL 101							
Description	Text		100	Course description	Project-based learning course							

COMPLETION

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
CompletionID	Decimal	NNNNNNNN	(8,0)	Unique identifier for every record of the completion table	12345678	PK		NOT NULL				
Date	Date	DD/MM/YYYY	10	Date the training was completed	10/15/2019			CHECK (Date <= GETDATE())				
EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all employees	123456789	FK			EMPLOYEE (EmployeeID)	CASCADE	NO ACTION	
CourseID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each type of course	12345678	FK			TRAINING (CourseID)	CASCADE	NO ACTION	

EMPLOYEE

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all employees	123456789	PK		NOT NULL				
First	Text		20	Employee's first name	Isaac			NOT NULL				
Last	Text		20	Employee's last name	Sheets			NOT NULL				
Street	Text		40	Employee's street address	1 Lobster Dr			NOT NULL				
City	Text		30	Employee's city name	Knoxville			NOT NULL				
State	Text		2	Employee's state abbreviation	TN							
Zip	Text		10	Employee's postal code	37931							
Country	Text		20	Employee's country name	England			NOT NULL				
Phone	Decimal	NNNNNNNNNN	(10,0)	Employee's phone number	8651234567		(865) 123-4567	NOT NULL				
BirthDate	Date	DD/MM/YYYY	10	Employee's birthdate	10/15/2019							
HireDate	Date	DD/MM/YYYY	10	Date the employee was hired	10/15/2019			NOT NULL				
Department	Text		15	Employee's department	Sales			NOT NULL				

SALES

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
S-EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all sales employees	123456789	PK		NOT NULL		CASCADE	NO ACTION	

TRANSPORTATION

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
T-EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all sales employees	123456789	PK		NOT NULL		CASCADE	NO ACTION	

SHIPMENT

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
ShipmentID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for all shipments	1234567890	PK		NOT NULL				
Type	Text		20	The type of shipment	Overnight							
ContainerID	Decimal	NNNNNNNN	(8,0)	Identifier for the container that holds a shipment	12345678							
Status	Text		20	Status of the shipment	In Transit							
ShippingDate	Date	DD/MM/YYYY	10	Date the package was shipped on	10/15/2019			CHECK (ShippingDate <= GETDATE())				
PlannedDate	Date	DD/MM/YYYY	10	Date the package is expected to be delivered on	10/22/2019							
T-EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all sales employees	123456789	FK		NOT NULL	TRANSPORTATION(T-EmployeeID)	CASCADE	NO ACTION	
CarrierID	Decimal	NNNNNN	(6,0)	Unique identifer for carriers	123456	FK		NOT NULL	CARRIER(CarrierID)	CASCADE	NO ACTION	

PACKAGE

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
ShipmentID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for all shipments	1234567890	FK		NOT NULL		CASCADE	NO ACTION	
StorageID	Decimal	NNNNNNNN	(8,0)	Unique identifier for every record in the storage table	12345678	FK		NOT NULL		CASCADE	NO ACTION	

CARRIER

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
CarrierID	Decimal	NNNNNN	(6,0)	Unique identifier for carriers	123456	PK		NOT NULL				
Name	Text		40	Name of carrier company	Lobsters Transport							
Street	Text		40	Carrier's street address	1 Lobster Dr							
City	Text		30	Carrier's city	Knoxville							
State	Text		2	Carrier's state abbreviation	TN							
Zip	Text		10	Carrier's postal code	37931							
CusRepPhone	Decimal	NNNNNNNNNN	(10,0)	Customer Rep's phone number	8651234567		(865) 123-4567					

NONCOMPLIANCE

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
CarrierID	Decimal	NNNNNN	(6,0)	Unique identifier for carriers	123456	FK		NOT NULL	CARRIER(CarrierID)	CASCADE	NO ACTION	
NoncomplianceDate	Date	DD/MM/YYYY	10	Date noncompliance occurred	10/15/2019			CHECK (NoncomplianceDate <= GETDATE())				
Description	Text		255	Decription of the non-compliance event	Driver demonstrated unethical conduct during loading process							

CUSTOMER

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
CustomerID	Decimal	NNNNNN	(6,0)	Unique identifier for customers	123456	PK		NOT NULL				
First	Text		20	Customer's first name	Bryson							
Last	Text		20	Customer's last name	Lansford							
Street	Text		40	Customer's street address	1 Lobster Lane							
City	Text		30	Customer's city name	Knoxville							
State	Text		20	Customer's state name	TN							
Zip	Texrt		10	Customer's postal code	37931							
Country	Text		20	Customer's country name	England							
Phone	Decimal	NNNNNNNNNN	(10,0)	Customer's phone number	8651234567		(865) 123-4567					
Email	Text	TTTTTTT@TTT.TTT	50	Customer's email	customer@gmail.com							

ORDER

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
OrderID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each order	12345678	PK						
OrderDate	Date	DD/MM/YYYY	10	Date that the order was created	10/15/2019			CHECK (OrderDate <= GETDATE())				
S-EmployeeID	Decimal	NNNNNNNNN	(9,0)	Unique identifier for all sales employees	123456789	FK		NOT NULL	SALES(S-EmployeeID)	CASCADE	NO ACTION	
CustomerID	Decimal	NNNNNN	(6,0)	Unique identifier for customers	123456	FK		NOT NULL	CUSTOMER(CustomerID)	CASCADE	NO ACTION	

ORDERLINE

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
OrderlineID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for the orderline	1234567890	PK						
Quantity	Decimal	NNNNNN	(6,0)	Amount of product sold	123456			CHECK(Quantity > 0)				
Weight	Decimal	NNNNNN.NN	(6,2)	Weight of product sold	123456.12			CHECK(Weight >0)				
Cost	Decimal	NNNNNNNNN.NN	(9,2)	Cost of product sold	123456789.1							
MaterialID	Decimal	NNNNNN	(8,0)	Unique identifier for each product type	12345678	FK		NOT NULL	PRODUCT(MaterialID)	CASCADE	NO ACTION	
OrderID	Decimal	NNNNNN	(8,0)	Unique identifier for each order	12345678	FK		NOT NULL	ORDER(OrderID)	CASCADE	NO ACTION	
DeliveryID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for a delivery	1234567890	PK		NOT NULL	DELIVERY(DeliveryID)	CASCADE	NO ACTION	
ProductInfo	Text		250	Information about product								

STATUS

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
StatusID	Decimal	NNN	(3,0)	Unique identifier of the status	123	PK		NOT NULL				
Name	Text		25	Name of the status type	In Transit			NOT NULL				
Description	Text		255	Description of the status type	Carrier currently holds the package							

ORDER/STATUS

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
OrderID	Decimal	NNNNNNNN	(8,0)	Unique identifier for each order	12345678	FK		NOT NULL	ORDER(OrderID)	CASCADE	NO ACTION	
StatusID	Decimal	NNN	(3,0)	Unique identifier of the status	123	FK		NOT NULL	STATUS(StatusID)	CASCADE	NO ACTION	
Date	Date	DD/MM/YYYY	10	Date of the order/status combination	10/15/2019							

ORDERLINE/STATUS

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
OrderlineID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for the orderline	1234567890	FK		NOT NULL	ORDERLINE(OrderlineID)	CASCADE	NO ACTION	
StatusID	Decimal	NNNN	(3,0)	Unique identifier of the status	123	FK		NOT NULL	STATUS(StatusID)	CASCADE	NO ACTION	
Date	Date	DD/MM/YYYY	10	Date of the orderline/status combination	10/15/2019			CHECK (Date <= GETDATE())				

DELIVERY

Field Name	Type	Data Format	Size	Description	Example	Key	Input Mask	Constraints	Primary Location Must Exist at:	UPDATE	DELETE	DEFAULT
DeliveryID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for a delivery	1234567890	PK		NOT NULL				
ContainerID	Decimal	NNNNNNNN	(8,0)	Identifier for the container that holds a delivery	12345678							
ExpectedDelDate	Date	DD/MM/YYYY	10	Expected delivery date	10/15/2019							
ShipmentID	Decimal	NNNNNNNNNN	(10,0)	Unique identifier for all shipments	1234567890	FK		NOT NULL	SHIPMENT(ShipmentID)	CASCADE	NO ACTION	