

DATABASE CHANGES

The existing north wind database is modified inorder to resolve the discrepancies.

The following tables have been created to fill the gaps.

Table that holds the delivery details : Table that stores the delivery id and logistic name which is responsible to deliver the order from suppliers. The table is empty with no dummy data. The suppliers can insert the data based on their links with the logistics.

```
CREATE TABLE delivery_details (  
    deliveryID INT auto_increment  
    ,LogisticName VARCHAR(30)  
    ,CONSTRAINT PRIMARY KEY (deliveryID)  
);
```

Table that holds the supplier order details : Table that stores the supplier order details with the tracking id, supplier id , delivery id Order date and arrival date. The tracking id is generated internally whereas the supplier id is fetched from the orderdetails and products tables. The delivery id can be fetched from the delivery details table. The order date is the date when there is issue of reorder and arrival date is updated when the order is received.

```
CREATE TABLE supplier_orders (  
    TrackingID bigint auto_increment  
    ,SupplierID INT (11)  
    ,DeliveryID INT  
    ,OrderDate DATE  
    ,ArrivalDate DATE  
    ,CONSTRAINT PRIMARY KEY (TrackingID)  
    ,CONSTRAINT FOREIGN KEY (SupplierID) REFERENCES suppliers(SupplierID)  
    ,CONSTRAINT FOREIGN KEY (DeliveryID) REFERENCES delivery_details(DeliveryID)  
);
```

Table that holds the product order details : Table that stores the supplier product details with the tracking id, product id , quantity and unit price. The tracking id is fetched from the supplier orders table which is already allocated whereas the product id, quantity and unit price is fetched from the products tables. The quantity is taken double the reorder level and the unit price is taken as the last sale price stored with a 15% of markup.

```
CREATE TABLE supplier_product_details (  
    TrackingID BIGINT  
    ,ProductID INT (11)  
    ,Quantity INT  
    ,UnitPrice DECIMAL(10, 4)  
    ,CONSTRAINT PRIMARY KEY (  
        TrackingID  
        ,ProductID  
    )  
    ,CONSTRAINT FOREIGN KEY (ProductID) REFERENCES products(ProductID)  
    ,CONSTRAINT FOREIGN KEY (TrackingID) REFERENCES supplier_orders(TrackingID)  
);
```

ER diagram of North Wind Database after implementing the required modifications.

The ER diagram for the modified database is directly generated from the database itself.

All the existing tables are joined with the new tables formed with the help of foreign keys created in each of the new table.

The design is created following the normalization. The order status can also be tracked for the orders placed.

MODIFIED ER DIAGRAM FOR NORTHWIND:

