**Approach Document for Order Management System**

**Step1:** Designed the below tables

* 1. DBO.PRODUCT – This table will store all the product information
  2. DBO.USER\_ROLES – It will have user roles like Admin, Customer, Devops. We can create a SQL View base on the userid the records will be displayed from the orders and order items.
  3. DBO.CUSTOMER - It will have Customer information.
  4. DBO.CUSTOMER\_ADDRESS – This will store single or multiple customer address.
  5. DBO.ORDERSTATUS – This will have status like ‘Shipped’ , ‘Cancelled’, ‘Ordered’, etc.
  6. DBO.ORDERS – This will store only order information
  7. DBO.ORDER\_ITEMS -It will have multiple rows for one order.
  8. DBO.PRODUCT\_LOG – This will be used for Audit train of Products
  9. DBO.CUSTOMER\_LOG – This will be used for Audit train of Customer.
  10. DBO.ORDERS\_LOG – This will be used for Audit train of Orders.

**Database Diagram:**

Graphical user interface, diagram, application

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**Step 2:** To capture the Audit we can either use SQL Triggers or OUTPUT Clause inside the MERGE Syntax which I have used for BULK UPSERT.

**Problems Faced:**

1. For this requirement*,**Create different user roles for application, administrator, devops*.

We can create the roles in Security

**A picture containing table

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We can create specific roles and these can be used to restrict the users from viewing the data. We can program it in the application level by getting the userid and the application role they are assigned into and then display the information based on the roles defined.

1. OUTPUT CLAUSE inside the stored procedure.
   1. In this stored procedure DBO.usp\_bulkupsertOrders, I have used the MERGE with OUTPUT clause to insert the deleted and updated records into a log table. I get the error while inserting into log table, will be looking into it for a fix.