**Project 1: Database Management – SQL Server 2016**

Duration: 8-10 Days Audience: Experience

Scope: After Training Contents: SQL, TSQL, SSIS

**Synopsis**

* Apple Inc has a Global Presence and has multiple products been produced and supplied across the world.
* You are a Chief Database Architect, Designer and Developer for maintaining the data for organization and making sure every aspect of business is recorded well and can be tracked at any given point of time.

**Key Aspects**

* Company Produces various products under its Brand, find out the list of Products and record them.
* Company Has multiple Production houses across the globe, consider having at least 3 Production houses in every continent. All this production houses produces all the products.
* Production houses supplies the products to the countries in their continent. Every country has 4 Warehouse which keeps the Pile of stocks of products
* Eg. Asia has a Production house in India, and it supplies the products to countries in Asia like India, China, Sri Lanka, Nepal etc.
* Every country has a Distributor, who is a receiving point of products from Production house, and is responsible to distribute this products to sub distributors in their own country.
* Sub Distributors passes the products to Channel Partners under them
* Channel Partners will supply the Products to Apple Authorised Stores and Sellers, where ever they are located under their Zone.
* Stores will sell the products to Final Customer.
* When stores sell the Product to customer, they collect customer information with unique identity like SSN no or Passport no which identifies that customer uniquely in that country.
* These details are captured in the central database, where the customer gets linked to Store 🡪 Zone 🡪 Channel Partner 🡪 Distributor 🡪 Warehouse 🡪 Production House 🡪 Country 🡪 Continent 🡪 Apple Inc.
* Thus, from the Global HQ of Apple Inc. if given a Product Serial Number (Unique) they can exactly track the whole history of the product. (Do capture data and time for every action)
* Every product has a Cost of Manufacture which is different at every production house as the taxes varies in all countries.
* When a Company Releases the product from Production house, you can fix a Dummy price for the product.
* At each level when the product passes, e.g. Production house to Distributor, the cost increases by 8% as a Profit share to distributor, then again by 8% from Distributor to Sub-distributor. And the final selling price is what customer pays.

Customers can return the Faulty products and that gets reflected at the HQ, where a Quality Manager would be able to track the products info, reason and links about the product like, Distributor / Production house.

Product is returned back to the production house through the same channels like it was received and at every stage the date and time are mentioned.

**Requirement**

You are supposed to design this Database System, present the ER diagram for the same, Normalize the table and make It productive.

Remember any data can be tracked at any point of time.

Recommend and Design appropriate below objects.

* Tables
* Views
* Procedures
* Functions
* Triggers
* Indexes

Create a list of queries in a separate table which you can be fired by channel partners, distributors, production houses, Zone manager etc.

All the best