**SQL Assignment**

**Requirement:**

Consider a business ‘Small Bazar’, which operates in the Retail domain.

Business Details (Use the below details to design your Database)

1. Small Bazar is a multinational company with Branch presence in many cities and towns around the world.

* They even have multiple branches in some cities and towns.
* Based on demand, they keep activating and deactivating the Branches.

1. Every Branch sells a variety of Products.

* Based on demand for a particular product each Branch holds some number of stock of that product in its inventory. The branch manager can also decide to activate or deactivate sales of that product depending on the demand.
* Also what products are to be sold is decided by the branch manager. So different Branches can sell different Products or same products.
* Every product has a Cost Price and Selling Price. Difference between the two prices is thstoree margin (or profit) for that product.
* Different branches can have different Cost Price And Selling Price for the same product. Eg: Nagpur Branch might have lower cost and selling price for Oranges
* but the cost and selling price for Oranges in Mumbai Branch might be higher.

1. Their Customers can walk into any branch and pick various products in various volumes to be billed together as an Order.

* Small Bazar also provides their customers with ‘Home Delivery’ option for an additional charge, otherwise the customer can ‘self pickup’ their Order.
* Being an environmentally conscious firm, Small Bazar does not provide its customers with free plastic bags. However, customers can opt to buy any number of reusable plastic bags while billing. Also, all the money earned from the sale of reusable bags goes to an environmental charity and is not a Profit for Small Bazar.
* Order gets confirmed only after payment is made. Until then it is InProgress.

1. In order to improve the customer experience Small Bazar collects some personal details of its customers

* Since the same customer can go in any branch, Customer Details for any customer are centralized for the whole company.
* Also as the customers share their sensitive personal information,their legal team wants this information to be isolated from the rest of the data in Database.

**Action items ( Database Design) :**

1. Create a new Database and tables with semantically correct Names.
2. Every table should have an auto incrementing Primary Key
3. Create proper relationships between the tables by use of Foreign Key constraints wherever applicable.
4. Insert Dummy Data for testing.

**Action Item ( Programming):**

1. The CEO of ‘Small Bazar’ wants to check the profitability of the Branches. Create a View for his use which will show monthly Profit of all Branches for the current year.
2. Create a stored procedure having countryName, FromDate and ToDate as Parameter, which will return Sitewise, Item Wise and Date Wise the number of items sold in the given Date range as separate resultsets. Create appropriate Indexes on the tables.
3. Create a stored procedure which will calculate the total bill for any order. Bill should have details like:

CustomerName,

orderId,

OrderDate,

Branch,

ProductName,

Price per Unit,

No. Of Units,

Total Cost of that product,

Total Bill Amount,

Additional Charges (0 if none),

Delivery Option(‘Home Delivery' or ‘self Pickup’).

1. Create a (function )Procedure having a parameter as country name ,which displays all the branches available In the country that are active.
2. Write a Trigger which will reduce the stock of some product whenever an order is confirmed by the number of that product in the order. Eg. If an order with 10 Oranges is confirmed from Nagpur branch, Stock of Oranges from Nagpur branch must be reduced by 10.
3. Create a trigger which will be invoked on adding a new item in the Item entity and insert that new item in another table with date and time when the item is added so that we can have date and time when an item was added.

**Feel Free to reach out if you have any questions or doubts.**