**Lab 6: Writing SQL Queries For Data Encryption (CLE) & Hashing**

**Case Study: Sales Management System (SMS).**

Sales management system database is used to manage sales of products to registered customers. Given below is the data dictionary for SMS.

**TO DO:**

1. Write SQL Queries to add 2 more columns in the Customer table as defined in the data dictionary below.
2. Write SQL Queries to create encryption keys for CLE.
3. Write SQL queries to update the table with values in the 2 new columns for the existing customers.
4. Write SQL queries to add a few more new customer details which includes the new columns.
5. Update the SP\_ AddPurchaseItem stored procedure to perform some validation.
   1. Validation to be performed 🡺 Add record only if customer provided the correct values for their payment card number and pin code. Otherwise, return appropriate error message. Test your stored procedure.
6. Update the SP\_RemovePurchaseItem stored procedure to perform some validation.
   1. Validation to be performed 🡺 Remove record only if customer provided the correct values for their payment card number and pin code. Otherwise, return appropriate error message. Test your stored procedure.

Table: Customer

|  |  |  |  |
| --- | --- | --- | --- |
| Purpose: Stores all the registered customer details | | | |
| **Column Name** | **Type** | **Default** | **Note** |
| CustID | Varchar(5) |  | Primary key |
| CustName | Varchar(100) |  | Not null |
| Phone | Varchar(20) |  |  |
| Email | Varchar(200) |  |  |
| CardNo | Varbinary(max) |  | Stores encrypted values |
| CardPin | Varbinary(max) |  | Stores hashed values |

Note: *refer to* [*https://www.w3schools.com/sql/*](https://www.w3schools.com/sql/) *for sql syntax.*