**Experiment 4**:

**Title:  To understand and apply the concept of Constraints.**

**Objective:** To understand the concept of data constraints that is enforced on data being stored in the table. Focus on Primary Key and the Foreign Key.

**1. Create the tables described below:**

**Table name:   CLIENT\_MASTER**

**Description:** used to store client information.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **data type** | **Size** | **Constraints** |
| CLIENTNO | Varchar | 6 | Primary key / first letter must start with ‘C’ |
| NAME | Varchar | 20 | Not Null |
| ADDRESS 1 | Varchar | 30 |  |
| ADDRESS 2 | Varchar | 30 |  |
| CITY | Varchar | 15 |  |
| PINCODE | Integer | 8 |  |
| STATE | Varchar | 15 |  |
| BALDUE | Decimal | 10,2 |  |

**Table Name:   PRODUCT\_MASTER                                                                                                                                                                     Description:** used to store product information

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **data type** | **Size** | **Attributes** |
| PRODUCTNO | Varchar | 6 | Primary Key/ first letter must start with ‘P’ |
| DESCRIPTION | Varchar | 15 | Not Null |
| PROFITPERCENT | Decimal | 4,2 | Not Null |
| UNIT MEASURE | Varchar | 10 | Not Null |
| QTYONHAND | Integer | 8 | Not Null |
| REORDERL VL | Integer | 8 | Not Null |
| SELLPRICE | Decimal | 8,2 | Not Null |
| COSTPRICE | Decimal | 8,2 | Not Null |

**Table Name:    SALESMAN\_MASTER**

**Description:** used to store salesman information working for the company.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **data type** | **Size** | **Attributes** |
| SALESMANNO | Varchar | 6 | Primary Key/ first letter must start with ‘S’ |
| SALESMANNAME | Varchar | 20 | Not Null |
| ADDRESS 1 | Varchar | 30 | Not Null |
| ADDRESS 2 | Varchar | 30 |  |
| CITY | Varchar | 20 |  |
| PINCODE | Integer | 8 |  |
| STATE | Varchar | 20 |  |
| SALAMT | Real | 8,2 | Not Null , Cannot be 0 |
| TGTTOGET | Decimal | 6,2 | Not Null , Cannot be 0 |
| YTDSALES | Double | 6,2 | Not Null |
| REMARKS | Varchar | 60 |  |

1. **Insert the following data into their respective tables:**
2. Data for **CLIENT\_MASTER**  table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Client no | Name | City | Pincode | State | BalDue |
| C00001 | Ivan bayross | Mumbai | 400054 | Maharashtra | 15000 |
| C00002 | Mamta muzumdar | Madras | 780001 | Tamil nadu | 0 |
| C00003 | Chhaya bankar | Mumbai | 400057 | Maharashtra | 5000 |
| C00004 | Ashwini  joshi | Bangalore | 560001 | Karnataka | 0 |
| C00005 | Hansel colaco | Mumbai | 400060 | Maharashtra | 2000 |
| C00006 | Deepak sharma | Mangalore | 560050 | Karnataka | 0 |

1. Data for  **PRODUCT**\_**MASTER** table:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Product  No | Description | Profit percent | Unit measure | Quantity  On  hand | Recorder  Level | Sell  Price | Cost  Price |
| P00001 | T-Shirt | 5 | Piece | 200 | 50 | 350 | 250 |
| P0345 | Shirts | 6 | Piece | 150 | 50 | 500 | 350 |
| P06734 | Cotton jeans | 5 | Piece | 100 | 20 | 600 | 450 |
| P07865 | Jeans | 5 | Piece | 100 | 20 | 750 | 500 |
| P07868 | Trousers | 2 | Piece | 150 | 50 | 850 | 550 |
| P07885 | Pull Overs | 2.5 | Piece | 80 | 30 | 700 | 450 |
| P07965 | Denim jeans | 4 | Piece | 100 | 40 | 350 | 250 |
| P07975 | Lycra tops | 5 | Piece | 70 | 30 | 300 | 175 |
| P08865 | Skirts | 5 | Piece | 75 | 30 | 450 | 300 |

1. Data for **SALESMAN\_MASTER** table:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Salesman No** | **Name** | **Address1** | **Address2** | **City** | **Pin Code** | **State** |
| S00001 | Aman | A/14 | Worli | Mumbai | 400002 | Maharashtra |
| S00002 | Omkar | 65 | Nariman | Mumbai | 400001 | Maharashtra |
| S00003 | Raj | P-7 | Bandra | Mumbai | 400032 | Maharashtra |
| S00004 | Ashish | A/5 | Juhu | Mumbai | 400044 | Maharashtr(a |

1. **Exercise on retrieving records from a table.**   
   a.    Find out the names of all the clients.   
   b.    Retrieve the entire contents of the Client\_Master table.   
   c.    Retrieve the list of names, city and the state of all the clients.   
   d.    List the various products available from the Product\_Master table.   
   e.    List all the clients who are located in Mumbai.   
   f.     Find the names of salesman who have a salary equal to Rs.3000.
2. **Exercise on updating records in a table**   
   a.     Change the city of ClientNo ‘C00005’ to ‘Bangalore’.   
   b.     Change the BalDue of ClientNo ‘C00001’ to Rs.1000.   
   c.     Change the cost price of ‘Trousers’ to rs.950.00.   
   d.     Change the city of the salesman to Pune.
3. **Exercise on deleting records in a table**   
   a.     Delete all salesman from the Salesman\_Master whose salaries are equal to Rs.3500.

b.     Delete all products from Product\_Master where the quantity on hand is equal to 100.   
c.     Delete from Client\_Master where the column state holds the value ‘Tamil Nadu’.

1. **Exercise on altering the table structure**   
   a.     Add a column called ‘Telephone’ of data type integer to the Client\_Master table.   
   b.    Change the size off SellPrice column in Product \_Master to 10, 2.
2. **Exercise on deleting the table structure along with the data**   
   a.    Destroy the table Client\_Master along with its data.