**Ganpat University**

**Faculty of Engineering & Technology**

**Computer Science & Engineering**

**Practical\_4**

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***Sem:- 3***

***Sub: - DBMS­­***

***Enrollment No.:- 23162121027***

1. **Table Name: Client\_master**

Description: Used to store information about clients.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Size** | **Attributes** |
| Client\_no | Varchar | 6 | Primary key/ first letter  must start with ‘C’ |
| Name | Varchar | 15 | Not Null |
| City | Varchar | 15 |  |
| Pincode | Numeric | 8 |  |
| State | Varchar | 15 |  |
| Bal\_due | Numeric | 10,2 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Client\_no** | **Name** | **City** | **Pincode** | **State** | **Bal\_due** |
| C001 | Ivan | Bombay | 400054 | Maharashtra | 15000 |
| C002 | Vandana | Madras | 780001 | Tamil Nadu | 0 |
| C003 | Pramada | Bombay | 400057 | Maharashtra | 5000 |
| C004 | Basu | Bombay | 400056 | Maharashtra | 0 |
| C005 | Ravi | Delhi | 100001 | Gujarat | 2000 |
| C006 | Rukmani | Bombay | 400050 | Maharashtra | 0 |

1. **Table Name: Product\_master**

Description: Used to store information about products.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Size** | **Attributes** |
| Product\_no | Varchar | 6 | Primary key/ first letter  must start with ‘P’ |
| Description | Varchar | 15 | Not Null |
| P\_percent | Numeric | 4,2 | Not Null |
| U\_measure | Varchar | 10 | Not Null |
| Qty\_on\_hand | Numeric | 8 | Not Null |
| Reorder\_lvl | Numeric | 8 | Not Null |
| Sell\_price | Numeric | 8,2 | Not Null, cannot be 0 |
| Cost\_price | Numeric | 8,2 | Not Null, cannot be 0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Product\_  No | Description | P\_  Percent | U\_  Measure | Qty\_on\_  hand | Reorder\_  Lvl | sell\_  price | Cost\_  Price |
| P001 | Floppies | 5 | Piece | 100 | 20 | 525 | 500 |
| P002 | Monitor | 6 | Piece | 10 | 3 | 12000 | 11280 |
| P003 | Mouse | 5 | Piece | 20 | 5 | 1050 | 1000 |
| P004 | Floppies | 5 | Piece | 100 | 20 | 525 | 500 |
| P005 | Keyboards | 2 | Piece | 10 | 3 | 3150 | 3050 |
| P006 | Cd Drive | 2.5 | Piece | 10 | 3 | 5250 | 5100 |
| P007 | 1.44 Drive | 4 | Piece | 10 | 3 | 8400 | 8000 |

1. **Table Name: Salesman\_master**

Description: Used to store information about salesman working in the company.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Size** | **Attributes** |
| S\_no | Varchar | 6 | Primary key/ first letter  must start with ‘S’ |
| S\_name | Varchar | 15 | Not Null |
| City | Varchar | 10 |  |
| Pincode | Numeric | 8 |  |
| State | Varchar | 12 |  |
| Sal\_amt | Numeric | 8,2 | Not Null, cannot be 0 |
| Tgt\_to\_get | Numeric | 6,2 | Not Null, cannot be 0 |
| Ytd\_sales | Numeric | 6,2 | Not Null |
| Remarks | Varchar | 20 |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S\_no | S\_name | City | Pincode | State | Sal\_ Amt | Tgt\_ to  get | Ytd\_ Sales | remarks |
| S001 | Kiran | Bombay | 400002 | Maharashtar | 3000 | 100 | 50 | Excellent |
| S002 | Manish | Bombay | 400001 | Maharashta | 3000 | 200 | 100 | Good |
| S003 | Ravi | Bombay | 400032 | Maharashta | 3000 | 200 | 100 | Average |
| S004 | Ashish | Bombay | 400044 | Maharashta | 3500 | 200 | 150 | Good |

1. **Table Name: Sales\_order**

Description: Used to store client’s orders.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data**  **Type** | **Size** | **Attributes** |
| Order\_no | Varchar | 6 | Primary key/ first letter must start with ‘O’ |
| Order\_date | Date |  |  |
| Client\_no | Varchar | 6 | Foreign key references client\_no of client\_master  table. |
| S\_no | Varchar | 6 | Foreign key references s\_no of salesman\_master  table. |
| Dely\_type | Char | 1 | Delivery: part(P) / full (F) Default ‘F’ |
| Billed\_yn | Char | 1 |  |
| Dely\_date | Date |  | Cannot be less than order\_date |
| Order\_status | Varchar | 10 | Values(‘inprocess’,’fullfiled’,’backorder’,’cancelled’) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Order\_no | Order\_date | Client\_no | S\_no | Dely\_ type | Billed\_yn | Dely\_date | Order\_status |
| O1901 | 12-Jan-06 | C001 | S001 | F | N | 20-Jan-06 | In Process |
| O1902 | 25-Jan-06 | C002 | S002 | P | N | 27-Jan-06 | Cancelled |
| O4665 | 18-feb-06 | C003 | S003 | F | Y | 20-Feb-06 | Fullfilled |
| O1903 | 03-Apr-06 | C001 | S001 | F | Y | 07-Apr-06 | Fullfield |
| O4666 | 20-May-06 | C004 | S002 | P | N | 22-May-06 | Cancelled |
| O1908 | 24-May-06 | C005 | S003 | F | N | 26-May-06 | In Process |

1. **Table Name: Sales\_order\_details**

Description: Used to store client’s orders with details of each product ordered.

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Size** | **Attributes** |
| Order\_no | Varchar | 6 | Primary Key/ Foreign Key  references order\_no of the sales\_order table. |
| Product\_no | Varchar | 6 | Primary Key/ Foreign Key references product\_no of the  Product\_master table. |
| Qty\_ordered | Numeric | 8 |  |
| Qty\_disp | Numeric | 8 |  |
| Product\_rate | Numeric | 10,2 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Order\_no** | **Product\_no** | **Qty\_ordered** | **Qty\_disp** | **Product\_rate** |
| O1901 | P001 | 4 | 4 | 525 |
| O1901 | P002 | 2 | 1 | 8400 |
| O1901 | P003 | 2 | 1 | 5250 |
| O1902 | P001 | 10 | 0 | 525 |
| O4665 | P002 | 3 | 3 | 3150 |
| O4665 | P004 | 3 | 1 | 5250 |
| O4665 | P005 | 10 | 10 | 525 |
| O4665 | P003 | 4 | 4 | 1050 |
| O1903 | P006 | 2 | 2 | 1050 |
| O1903 | P004 | 1 | 1 | 12000 |
| O1908 | P005 | 1 | 0 | 8400 |
| O1908 | P007 | 10 | 0 | 1050 |

**Exercise:**

Create Above tables with given constraints and insert data in it.

# Solution Query:

1. **Table Created: Client\_master**
   * + CREATE TABLE Client\_master (

Client\_no VARCHAR(6) NOT NULL PRIMARY KEY CHECK

(Client\_no LIKE 'C%'),

Name VARCHAR(15) NOT NULL, City VARCHAR(15),

Pincode NUMERIC(8), State VARCHAR(15), Bal\_due NUMERIC(10,2)

);

* + - INSERT INTO Client\_master (Client\_no, Name, City, Pincode, State, Bal\_due)

VALUES

('C001', 'Ivan', 'Bombay', 400054, 'Maharashtra', 15000),

('C002', 'Vandana', 'Madras', 780001, 'Tamil Nadu', 0), ('C003', 'Pramada', 'Bombay', 400057, 'Maharashtra', 5000),

('C004', 'Basu', 'Bombay', 400056, 'Maharashtra', 0),

('C005', 'Ravi', 'Delhi', 100001, 'Gujarat', 2000),

('C006', 'Rukmani', 'Bombay', 400050, 'Maharashtra', 0);

* + - SELECT \* FROM Client\_master;

# Image:

# 

1. **Table Created: Product\_master**
   * 1. CREATE TABLE Product\_master (

Product\_no VARCHAR(6) NOT NULL PRIMARY KEY

CHECK(Product\_no LIKE 'P%'), Description VARCHAR(15) NOT NULL, P\_percent NUMERIC(4,2) NOT NULL,

U\_measure VARCHAR(10) NOT NULL,

Qty\_on\_hand NUMERIC(8) NOT NULL, Reorder\_lvl NUMERIC(8) NOT NULL,

Sell\_price NUMERIC(8,2) NOT NULL CHECK (Sell\_price != 0), Cost\_price NUMERIC(8,2) NOT NULL CHECK (Cost\_price != 0)

);

* + 1. INSERT INTO Product\_master (Product\_no, Description, P\_percent, U\_measure, Qty\_on\_hand, Reorder\_lvl, Sell\_price, Cost\_price) VALUES

('P001', 'Floppies', 5, 'Piece', 100, 20, 525, 500),

('P002', 'Monitor', 6, 'Piece', 10, 3, 12000, 11280),

('P003', 'Mouse', 5, 'Piece', 20, 5, 1050, 1000),

('P004', 'Floppies', 5, 'Piece', 100, 20, 525, 500),

('P005', 'Keyboards', 2, 'Piece', 10, 3, 3150, 3050),

('P006', 'Cd Drive', 2.5, 'Piece', 10, 3, 5250, 5100),

('P007', '1.44 Drive', 4, 'Piece', 10, 3, 8400, 8000);

* + 1. SELECT \* FROM Product\_master;

# Image:

1. **Table Created: Salesman\_master**

CREATE TABLE Salesman\_master (

S\_no VARCHAR(6) NOT NULL PRIMARY KEY CHECK (S\_no LIKE 'S%'),

S\_name VARCHAR(15) NOT NULL,

City VARCHAR(10),

Pincode NUMERIC(8),

State VARCHAR(12),

Sal\_amt NUMERIC(8,2) NOT NULL CHECK (Sal\_amt != 0),

Tgt\_to\_get NUMERIC(6,2) NOT NULL CHECK (Tgt\_to\_get != 0),

Ytd\_sales NUMERIC(6,2) NOT NULL,

Remarks VARCHAR(20)

);

INSERT INTO Salesman\_master

(S\_no, S\_name, City, Pincode, State, Sal\_amt, Tgt\_to\_get, Ytd\_sales, Remarks)

VALUES

('S001', 'Kiran', 'Bombay', 400002, 'Maharashtra', 3000, 100, 50, 'Excellent'),

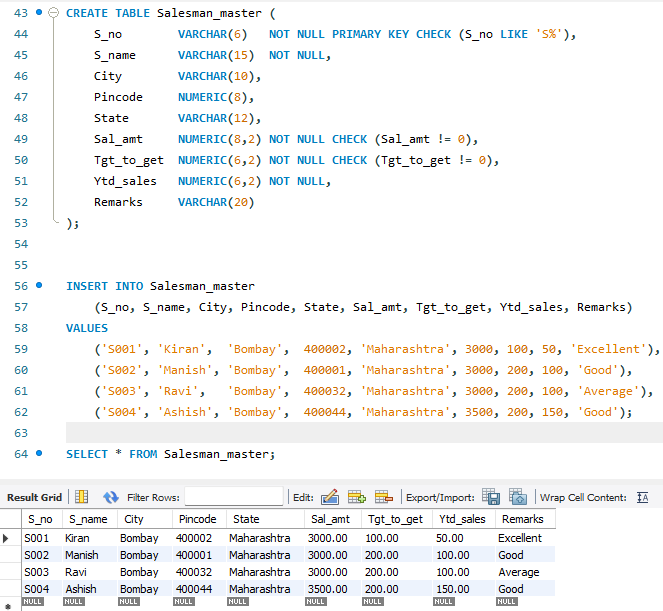
('S002', 'Manish', 'Bombay', 400001, 'Maharashtra', 3000, 200, 100, 'Good'),

('S003', 'Ravi', 'Bombay', 400032, 'Maharashtra', 3000, 200, 100, 'Average'),

('S004', 'Ashish', 'Bombay', 400044, 'Maharashtra', 3500, 200, 150, 'Good');

SELECT \* FROM Salesman\_master;

# Image:



1. **Table Created: Sales\_order**

-- Creating the Sales\_order table

CREATE TABLE Sales\_order (

Order\_no VARCHAR(6) PRIMARY KEY CHECK (Order\_no LIKE 'O%'),

Order\_date DATE,

Client\_no VARCHAR(6),

S\_no VARCHAR(6),

Dely\_type CHAR(1) DEFAULT 'F',

Billed\_yn CHAR(1),

Dely\_date DATE,

Order\_status VARCHAR(10),

FOREIGN KEY (Client\_no) REFERENCES Client\_master(Client\_no),

FOREIGN KEY (S\_no) REFERENCES Salesman\_master(S\_no),

CHECK (Dely\_type IN ('P', 'F')),

CHECK (Dely\_date >= Order\_date),

CHECK (Order\_status IN ('inprocess', 'fullfiled', 'backorder', 'cancelled'))

);

INSERT INTO Sales\_order

(Order\_no, Order\_date, Client\_no, S\_no, Dely\_type, Billed\_yn, Dely\_date, Order\_status)

VALUES

('O1901', '2006-01-12', 'C001', 'S001', 'F', 'N', '2006-01-20', 'inprocess'),

('O1902', '2006-01-25', 'C002', 'S002', 'P', 'N', '2006-01-27', 'cancelled'),

('O4665', '2006-02-18', 'C003', 'S003', 'F', 'Y', '2006-02-20', 'fullfiled'),

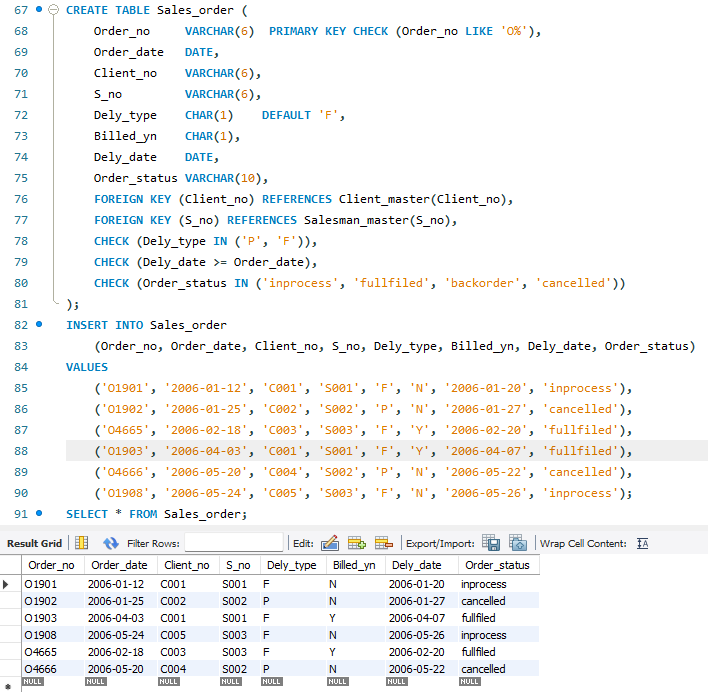
('O1903', '2006-04-03', 'C001', 'S001', 'F', 'Y', '2006-04-07', 'fullfiled'),

('O4666', '2006-05-20', 'C004', 'S002', 'P', 'N', '2006-05-22', 'cancelled'),

('O1908', '2006-05-24', 'C005', 'S003', 'F', 'N', '2006-05-26', 'inprocess');

SELECT \* FROM Sales\_order;

# Image:



1. **Table Created: Sales\_order\_details**

-- Creating the Sales\_order\_details table

CREATE TABLE Sales\_order\_details (

Order\_no VARCHAR(6),

Product\_no VARCHAR(6),

Qty\_ordered NUMERIC(8),

Qty\_disp NUMERIC(8),

Product\_rate NUMERIC(10,2),

PRIMARY KEY (Order\_no, Product\_no),

FOREIGN KEY (Order\_no) REFERENCES Sales\_order(Order\_no),

FOREIGN KEY (Product\_no) REFERENCES Product\_master(Product\_no)

);

INSERT INTO Sales\_order\_details

(Order\_no, Product\_no, Qty\_ordered, Qty\_disp, Product\_rate)

VALUES

('O1901', 'P001', 4, 4, 525),

('O1901', 'P002', 2, 1, 8400),

('O1901', 'P003', 2, 1, 5250),

('O1902', 'P001', 10, 0, 525),

('O4665', 'P002', 3, 3, 3150),

('O4665', 'P004', 3, 1, 5250),

('O4665', 'P005', 10, 10, 525),

('O4665', 'P003', 4, 4, 1050),

('O1903', 'P006', 2, 2, 1050),

('O1903', 'P004', 1, 1, 12000),

('O1908', 'P005', 1, 0, 8400),

('O1908', 'P007', 10, 0, 1050);

SELECT \* FROM Sales\_order\_details;

# Image:

