CREATE DATABASE prac\_12;

use prac\_12;

-- Table 1: CLIENT\_MASTER

CREATE TABLE CLIENT\_MASTER (

Client\_No VARCHAR(6) PRIMARY KEY CHECK (Client\_No LIKE 'C%'),

Name VARCHAR(20) NOT NULL,

City VARCHAR(20) CHECK (City IN ('Delhi', 'Mumbai', 'Chennai')),

Pincode INT,

State VARCHAR(20),

BALDUE DECIMAL(10,2),

Email VARCHAR(30) UNIQUE

);

DROP TABLE CLIENT\_MASTER;

-- Insert data into CLIENT\_MASTER table

INSERT INTO CLIENT\_MASTER (Client\_No, Name, City, Pincode, State, BALDUE, Email)

VALUES

('C00001', 'Pankaj Sharma', 'Delhi', 400054, 'Delhi', 15000, 'pk@gmail.com'),

('C00002', 'Yogesh Sharma', 'Delhi', 780001, 'Delhi', 0, 'ys@gmail.com'),

('C00003', 'Aditya Singh', 'Mumbai', 400057, 'Maharashtra', 5000, 'as@gmail.com'),

('C00004', 'Ashwini Joshi', 'Chennai', 560001, 'Tamil Nadu', 0, 'aj@gmail.com'),

('C00005', 'Neha Sharma', 'Mumbai', 400060, 'Maharashtra', 2000, 'ns@gmail.com'),

('C00006', 'Divya Gupta', 'Chennai', 560050, 'Tamil Nadu', 0, '');

SELECT \* FROM CLIENT\_MASTER;

-- Table 2: PRODUCT\_MASTER

CREATE TABLE PRODUCT\_MASTER (

Product\_No VARCHAR(6) PRIMARY KEY CHECK (Product\_No LIKE 'P%'),

Name VARCHAR(20) NOT NULL,

UnitMeasure VARCHAR(10) NOT NULL,

QtyOnHand INT NOT NULL,

ReorderLevel INT NOT NULL,

SellPrice DECIMAL NOT NULL CHECK (SellPrice > 0),

CostPrice DECIMAL NOT NULL CHECK (CostPrice > 0)

);

-- Insert data into PRODUCT\_MASTER table

INSERT INTO PRODUCT\_MASTER (Product\_No, Name, UnitMeasure, QtyOnHand, ReorderLevel, SellPrice, CostPrice)

VALUES

('P00001', 'T-Shirt', 'Piece', 200, 50, 350, 250),

('P03453', 'Shirt', 'Piece', 150, 50, 500, 350),

('P06734', 'Cotton Jeans', 'Piece', 100, 20, 600, 450),

('P07865', 'Jeans', 'Piece', 100, 20, 750, 500),

('P07868', 'Trouser', 'Piece', 150, 50, 850, 550),

('P07885', 'Pull Over', 'Piece', 80, 30, 700, 450),

('P07965', 'Denim Shirts', 'Piece', 100, 40, 350, 250),

('P07975', 'Lycra Tops', 'Piece', 70, 30, 300, 175),

('P08865', 'Skirts', 'Piece', 75, 30, 450, 300);

-- Table 3: SALESMAN\_MASTER

CREATE TABLE SALESMAN\_MASTER (

Salesman\_No VARCHAR(6) PRIMARY KEY CHECK (Salesman\_No LIKE 'S%'),

Sal\_name VARCHAR(20) NOT NULL,

Address VARCHAR(40) NOT NULL,

City VARCHAR(20),

Pincode INT,

State VARCHAR(20),

Sal\_Amount DECIMAL NOT NULL CHECK (Sal\_Amount > 0),

Tgt\_to\_get DECIMAL NOT NULL CHECK (Tgt\_to\_get > 0),

Ytd\_Sales DECIMAL NOT NULL CHECK (Ytd\_Sales > 0),

Remarks VARCHAR(30)

);

-- Insert data into SALESMAN\_MASTER table

INSERT INTO SALESMAN\_MASTER (Salesman\_No, Sal\_name, Address, City, Pincode, State, Sal\_Amount, Tgt\_to\_get, Ytd\_Sales, Remarks)

VALUES

('S00001', 'Kiran', 'A/14 worli', 'Mumbai', 400002, 'Mah', 3000, 100, 50, 'Good'),

('S00002', 'Manish', '65,nariman', 'Mumbai', 400001, 'Mah', 3000, 200, 100, 'Good'),

('S00003', 'Ravi', 'P-7 Bandra', 'Mumbai', 400032, 'Mah', 3000, 200, 100, 'Good'),

('S00004', 'Ashish', 'A/5 Juhu Bombay', 'Mumbai', 400044, 'Mah', 3500, 200, 150, 'Good');

-- Table 4: SALES\_ORDER

CREATE TABLE SALES\_ORDER (

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

Order\_Date DATE NOT NULL,

Client\_No VARCHAR(6),

Dely\_add VARCHAR(25),

Salesman\_No VARCHAR(6),

Dely\_type CHAR(1) DEFAULT 'F' CHECK (Dely\_type IN ('P', 'F')),

Billed\_yn CHAR(1) CHECK (Billed\_yn IN ('Y', 'N')),

Dely\_Date DATE,

Order\_Status VARCHAR(10) CHECK (Order\_Status IN ('In Process', 'Fulfilled', 'Canceled')),

FOREIGN KEY (Client\_No) REFERENCES CLIENT\_MASTER(Client\_No),

FOREIGN KEY (Salesman\_No) REFERENCES SALESMAN\_MASTER(Salesman\_No),

CHECK (Dely\_Date >= Order\_Date)

);

INSERT INTO SALES\_ORDER (Order\_No, Order\_Date, Client\_No, Salesman\_No, Dely\_type, Billed\_yn, Dely\_Date, Order\_Status)

VALUES

('O19001', '2021-01-12', 'C00001', 'S00001', 'F', 'N', '2021-01-20', 'In Process'),

('O19002', '2021-01-25', 'C00002', 'S00002', 'P', 'N', '2021-01-27', 'Canceled'),

('O16865', '2021-02-18', 'C00003', 'S00003', 'F', 'Y', '2021-02-20', 'Fulfilled'),

('O19003', '2021-04-03', 'C00001', 'S00001', 'F', 'Y', '2021-04-07', 'Fulfilled'),

('O46866', '2021-05-20', 'C00004', 'S00002', 'P', 'N', '2021-05-22', 'Canceled'),

('O10008', '2021-05-24', 'C00005', 'S00004', 'F', 'N', '2021-05-26', 'In Process');

SELECT \* FROM SALES\_ORDER;

CREATE TABLE SALES\_ORDER\_DETAILS (

Order\_No VARCHAR(6),

Product\_No VARCHAR(6),

Qty\_Order INT CHECK (Qty\_Order > 0),

Qty\_disp INT CHECK (Qty\_disp >= 0),

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

FOREIGN KEY (Order\_No) REFERENCES SALES\_ORDER(Order\_No),

FOREIGN KEY (Product\_No) REFERENCES PRODUCT\_MASTER(Product\_No),

constraint check (Qty\_disp <= Qty\_Order)

);

SELECT \* FROM SALES\_ORDER\_DETAILS;

DROP TABLE SALES\_ORDER\_DETAILS;

INSERT INTO SALES\_ORDER\_DETAILS (Order\_No, Product\_No, Qty\_Order, Qty\_disp)

VALUES

('O19001', 'P07965', 2, 1),

('O19001', 'P07885', 2, 1),

('O19002', 'P00001', 10, 0),

('O46866', 'P07868', 3, 3),

('O46866', 'P07885', 10, 10),

('O19003', 'P00001', 4, 4),

('O19003', 'P03453', 2, 2),

('O46866', 'P06734', 1, 1),

('O46866', 'P07965', 1, 0),

('O10008', 'P07975', 1, 0),

('O10008', 'P00001', 10, 5);

-- 1st Set

-- 1

select Name from CLIENT\_MASTER where Name like '\_a%';

-- 2

select Name , City from CLIENT\_MASTER where City like 'M%';

-- 3

select Name , BALDUE from CLIENT\_MASTER where BALDUE > 10000;

-- 4

select \* from SALES\_ORDER where Month(Dely\_Date)=5;

-- 5

select \* from SALES\_ORDER where Client\_No='C00001' or Client\_No='C00002';

-- 6

select Name , SellPrice from PRODUCT\_MASTER where SellPrice between 500 and 1000;

-- 7

select Name , SellPrice\*15 as Original\_Selling\_price from PRODUCT\_MASTER where SellPrice> 500;

-- 8

select Name, City, State from CLIENT\_MASTER where State not in ('Maharashtra');

-- 9

select count(Order\_No) from SALES\_ORDER;

-- 10

select max(SellPrice) as max\_price , min(SellPrice) as min\_price from PRODUCT\_MASTER;

-- 11

select avg(SellPrice) from PRODUCT\_MASTER;

-- 12

select \* from PRODUCT\_MASTER where QtyOnHand>ReorderLevel;

-- Data manipulation

-- 1

SELECT Order\_No, DAY(Order\_Date) AS Order\_Day

FROM SALES\_ORDER;

-- 2

SELECT Order\_No, DAY(Order\_Date) AS Order\_Day

FROM SALES\_ORDER;

-- 3

SELECT Order\_No, TO\_CHAR(Order\_Date, 'DD-Month-YY') AS Formatted\_Order\_Date

FROM SALES\_ORDER;

-- 4

SELECT CURRENT\_DATE + INTERVAL '15' DAY AS Date\_15\_Days\_After\_Today;

-- group by

-- 1

SELECT PM.Name AS Product\_Name, SUM(SOD.Qty\_disp) AS Total\_Qty\_Sold

FROM PRODUCT\_MASTER PM

JOIN SALES\_ORDER\_DETAILS SOD ON PM.Product\_No = SOD.Product\_No

GROUP BY PM.Name;

-- 2

SELECT PM.Name AS Product\_Name, SUM(SOD.Qty\_disp \* PM.SellPrice) AS Total\_Value\_Sold

FROM PRODUCT\_MASTER PM

JOIN SALES\_ORDER\_DETAILS SOD ON PM.Product\_No = SOD.Product\_No

GROUP BY PM.Name;

-- 3

SELECT CM.Name AS Client\_Name, AVG(SOD.Qty\_disp) AS Avg\_Qty\_Sold

FROM CLIENT\_MASTER CM

JOIN SALES\_ORDER SO ON CM.Client\_No = SO.Client\_No

JOIN SALES\_ORDER\_DETAILS SOD ON SO.Order\_No = SOD.Order\_No

GROUP BY CM.Name

HAVING MAX(SOD.Qty\_disp \* PM.SellPrice) <= 15000.00;

-- 4

SELECT SUM(SOD.Qty\_disp \* PM.SellPrice) AS Total\_Billed\_Value

FROM SALES\_ORDER SO

JOIN SALES\_ORDER\_DETAILS SOD ON SO.Order\_No = SOD.Order\_No

JOIN PRODUCT\_MASTER PM ON SOD.Product\_No = PM.Product\_No

WHERE SO.Billed\_yn = 'Y' AND MONTH(SO.Order\_Date) = 5 AND YEAR(SO.Order\_Date) = 2021;

-- joins

-- 1

SELECT DISTINCT PM.Product\_No, PM.Name

FROM PRODUCT\_MASTER PM

JOIN SALES\_ORDER\_DETAILS SOD ON PM.Product\_No = SOD.Product\_No

JOIN SALES\_ORDER SO ON SOD.Order\_No = SO.Order\_No

JOIN CLIENT\_MASTER CM ON SO.Client\_No = CM.Client\_No

WHERE CM.Name = 'Ashwini Joshi';

-- 2

SELECT PM.Product\_No, PM.Name, SOD.Qty\_disp

FROM PRODUCT\_MASTER PM

JOIN SALES\_ORDER\_DETAILS SOD ON PM.Product\_No = SOD.Product\_No

JOIN SALES\_ORDER SO ON SOD.Order\_No = SO.Order\_No

WHERE MONTH(SO.Dely\_Date) = MONTH(CURRENT\_DATE) AND YEAR(SO.Dely\_Date) = YEAR(CURRENT\_DATE);

-- 3

SELECT PM.Product\_No, PM.Name

FROM PRODUCT\_MASTER PM

JOIN SALES\_ORDER\_DETAILS SOD ON PM.Product\_No = SOD.Product\_No

GROUP BY PM.Product\_No, PM.Name

HAVING COUNT(SOD.Order\_No) > 1;

-- 4

SELECT DISTINCT CM.Name

FROM CLIENT\_MASTER CM

JOIN SALES\_ORDER SO ON CM.Client\_No = SO.Client\_No

JOIN SALES\_ORDER\_DETAILS SOD ON SO.Order\_No = SOD.Order\_No

JOIN PRODUCT\_MASTER PM ON SOD.Product\_No = PM.Product\_No

WHERE PM.Name = 'Trouser';

-- 5

SELECT SO.Order\_No, PM.Product\_No, PM.Name, SOD.Qty\_Order

FROM PRODUCT\_MASTER PM

JOIN SALES\_ORDER\_DETAILS SOD ON PM.Product\_No = SOD.Product\_No

JOIN SALES\_ORDER SO ON SOD.Order\_No = SO.Order\_No

WHERE PM.Name = 'Pull Over' AND SOD.Qty\_Order < 5;

-- 6

SELECT CM.Client\_No, CM.Name, PM.Product\_No, PM.Name AS Product\_Name, SOD.Qty\_Order

FROM CLIENT\_MASTER CM

JOIN SALES\_ORDER SO ON CM.Client\_No = SO.Client\_No

JOIN SALES\_ORDER\_DETAILS SOD ON SO.Order\_No = SOD.Order\_No

JOIN PRODUCT\_MASTER PM ON SOD.Product\_No = PM.Product\_No

WHERE CM.Client\_No IN ('C00001', 'C00002');

-- sub-queries

-- 1

SELECT Product\_No, Name

FROM PRODUCT\_MASTER

WHERE Product\_No NOT IN (

SELECT DISTINCT Product\_No

FROM SALES\_ORDER\_DETAILS

);

-- 2

SELECT Name, City, Pincode

FROM CLIENT\_MASTER

WHERE Client\_No = (

SELECT Client\_No

FROM SALES\_ORDER

WHERE Order\_No = 'O19001'

);

-- 3

SELECT DISTINCT c.Name

FROM CLIENT\_MASTER c

WHERE c.Client\_No IN (

SELECT s.Client\_No

FROM SALES\_ORDER s

WHERE s.Order\_Date < '2021-05-21'

);

-- 4

SELECT Client\_No, Name

FROM CLIENT\_MASTER

WHERE Client\_No IN (

SELECT DISTINCT SO.Client\_No

FROM SALES\_ORDER SO

JOIN SALES\_ORDER\_DETAILS SOD ON SO.Order\_No = SOD.Order\_No

WHERE SOD.Product\_No = (

SELECT Product\_No

FROM PRODUCT\_MASTER

WHERE Name = 'Denim Shirts'

)

);