

# 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.

Table : CLIENT\_MASTER

```
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--SAP ID - 500119362

CREATE TABLE CLIENT_MASTER (
  CLIENTNO VARCHAR(6) PRIMARY KEY CHECK (CLIENTNO LIKE 'C%'),
  NAME VARCHAR(20) NOT NULL,
  CITY VARCHAR(15),
  PINCODE INTEGER CHECK (PINCODE BETWEEN 100000 AND 999999),
  STATE VARCHAR(15),
  BALDUE DECIMAL(10,2)
);

INSERT INTO CLIENT_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES
('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);
```

TABLE : PRODUCT\_MASTER

```
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CREATE TABLE PRODUCT_MASTER (
  PRODUCTNO VARCHAR(6) PRIMARY KEY CHECK (PRODUCTNO LIKE 'P%'),
  DESCRIPTION VARCHAR(15) NOT NULL,
  PROFITPERCENT DECIMAL(4,2) NOT NULL,
  UNIT_MEASURE VARCHAR(10) NOT NULL,
  QTYONHAND INTEGER(8) NOT NULL,
  RECORDERLEVEL INTEGER(8) NOT NULL,
  SELLPRICE DECIMAL(8,2) NOT NULL,
  COSTPRICE DECIMAL(8,2) NOT NULL
);

INSERT INTO PRODUCT_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT_MEASURE, QTYONHAND,
RECORDERLEVEL, SELLPRICE, COSTPRICE) VALUES
('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),
```

## TABLE : SALES\_MASTER

```
--Vinayak Srivastava
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CREATE TABLE SALESMAN_MASTER (
    SALESMANNO VARCHAR(6) PRIMARY KEY CHECK (SALESMANNO LIKE 'S%'),
    NAME VARCHAR(20) NOT NULL,
    ADDRESS1 VARCHAR(30) NOT NULL,
    ADDRESS2 VARCHAR(30),
    CITY VARCHAR(20),
    PINCODE INTEGER CHECK (PINCODE BETWEEN 100000 AND 999999),
    STATE VARCHAR(20)
);

INSERT INTO SALESMAN_MASTER (SALESMANNO, NAME, ADDRESS1, ADDRESS2, CITY, PINCODE, STATE) VALUES
('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, 'Maharashtra');
```

### Output

2.

```
--2 (a)

SELECT NAME
FROM CLIENT_MASTER;

--2 (b)

SELECT *
FROM CLIENT_MASTER;

--2 (c)

SELECT NAME, CITY, STATE
FROM CLIENT_MASTER;

--2 (d)

SELECT DESCRIPTION
FROM PRODUCT_MASTER;
```

```
--2 (e)

SELECT *
FROM CLIENT_MASTER
WHERE CITY = 'Mumbai';

--2 (f)

SELECT SALESMANNAME
FROM SALESMAN_MASTER
WHERE SALAMT = 3000;
|
```

3.

```
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-- a. Change the city of ClientNo 'C00005' to 'Bangalore'
UPDATE CLIENT_MASTER
SET CITY = 'Bangalore'
WHERE CLIENTNO = 'C00005';

-- b. Change the BalDue of ClientNo 'C00001' to Rs.1000
UPDATE CLIENT_MASTER
SET BALDUE = 1000
WHERE CLIENTNO = 'C00001';

-- c. Change the cost price of 'Trousers' to Rs.950.00
UPDATE PRODUCT_MASTER
SET COSTPRICE = 950.00
WHERE DESCRIPTION = 'Trousers';

-- d. Change the city of all salesmen to 'Pune'
UPDATE SALESMAN_MASTER
SET CITY = 'Pune';
```

4.

```
--Vinayak Srivastava
--SAP ID - 500119362

-- a. Delete all salesmen from Salesman_Master whose salaries are equal to Rs.3500
DELETE FROM SALESMAN_MASTER
WHERE SALAMT = 3500;

-- b. Delete all products from Product_Master where the quantity on hand is equal to 100
DELETE FROM PRODUCT_MASTER
WHERE QTYONHAND = 100;

-- c. Delete from Client_Master where the column state holds the value 'Tamil Nadu'
DELETE FROM CLIENT_MASTER
WHERE STATE = 'Tamil Nadu';
|
```

5.

```
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-- a. Add a column called 'Telephone' of data type INTEGER to the Client_Master table
ALTER TABLE CLIENT_MASTER
ADD TELEPHONE INTEGER;

-- b. Change the size of SellPrice column in Product_Master to 10,2
ALTER TABLE PRODUCT_MASTER
MODIFY SELLPRICE DECIMAL(10,2);
```

6.

```
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DROP TABLE CLIENT_MASTER;
```