CREATE TABLE CLIENT_MASTER(
CLIENT_NO VARCHAR2(6) PRIMARY KEY CHECK(CLIENT_NO LIKE 'C%'),
NAME VARCHAR2(20) NOT NULL,
CITY VARCHAR2(15),
PINCODE NUMBER(8),
STATE VARCHAR2(15),
BAL_DUE NUMBER(10,2)
);

CREATE TABLE PRODUCT_MASTER(
PRODUCT_NO VARCHAR2(6) PRIMARY KEY CHECK(PRODUCT_NO LIKE 'P%'),
DESCRIPTION VARCHAR2(15) NOT NULL

```
QTY_ON_HAND NUMBER(8) NOT NULL,

SELL_PRICE NUMBER(8,2) NOT NULL CHECK(SELL_PRICE>0),

COST_PRICE NUMBER(8,2) NOT NULL CHECK(COST_PRICE>0)

);
```

```
SQL> CREATE TABLE CLIENT_MASTER(
  2 CLIENT_NO VARCHAR2(6) PRIMARY KEY CHECK(CLIENT_NO LIKE 'C%'),
  3 NAME VARCHAR2(20) NOT NULL,
  4 CITY VARCHAR2(15),
  5 PINCODE NUMBER(8)
  6 STATE VARCHAR2(15)
  7 BAL_DUE NUMBER(10,2)
  8);
Table created.
SQL> DESC CLIENT_MASTER
Name
                                          Null?
                                                   Type
                                          NOT NULL VARCHAR2(6)
CLIENT_NO
NAME
                                          NOT NULL VARCHAR2(20)
CITY
                                                    VARCHAR2(15)
PINCODE
                                                    NUMBER(8)
STATE
                                                   VARCHAR2(15)
BAL_DUE
                                                   NUMBER(10,2)
SQL>
SQL> CREATE TABLE PRODUCT_MASTER(
  2 PRODUCT_NO VARCHAR2(6) PRIMARY KEY CHECK(PRODUCT_NO LIKE 'P%'),
  3 DESCRIPTION VARCHAR2(15) NOT NULL,
  4 QTY_ON_HAND NUMBER(8) NOT NULL,
  5 SELL_PRICE NUMBER(8,2) NOT NULL CHECK(SELL_PRICE>0),
  6 COST_PRICE NUMBER(8,2) NOT NULL CHECK(COST_PRICE>0)
  7);
Table created.
SQL> DESC PRODUCT_MASTER
Name
                                           Null?
                                                    Type
PRODUCT_NO
                                           NOT NULL VARCHAR2(6)
                                           NOT NULL VARCHAR2(15)
DESCRIPTION
                                           NOT NULL NUMBER(8)
QTY_ON_HAND
                                           NOT NULL NUMBER(8,2)
SELL_PRICE
COST_PRICE
                                           NOT NULL NUMBER(8,2)
SQL>
```

CREATE TABLE SALESMAN_MASTER(

SALESMAN_NO VARCHAR2(6) PRIMARY KEY CHECK(SALESMAN_NO LIKE'S%'), SALESMAN_NAME VARCHAR2(20) NOT NULL,

CITY VARCHAR2(20) NOT NULL,

PINCODE NUMBER(8) NOT NULL,

STATE VARCHAR2(20) NOT NULL,

SAL_AMT NUMBER(8,2) NOT NULL);

```
SQL> CREATE TABLE SALESMAN_MASTER(
  2 SALESMAN_NO VARCHAR2(6) PRIMARY KEY CHECK(SALESMAN_NO LIKE'S%' ),
  3 SALESMAN_NAME VARCHAR2(20) NOT NULL,
4 CITY VARCHAR2(20) NOT NULL,
  5 PINCODE NUMBER(8) NOT NULL,
  6 STATE VARCHAR2(20) NOT NULL
  7 SAL_AMT NUMBER(8,2) NOT NULL
  8 );
 Table created.
 SQL> DESC SALESMAN_MASTER
 Name
                                           Null?
                                                   Type
 SALESMAN_NO
                                           NOT NULL VARCHAR2(6)
  SALESMAN_NAME
                                           NOT NULL VARCHAR2(20)
                                           NOT NULL VARCHAR2(20)
  CITY
 PINCODE
                                          NOT NULL NUMBER(8)
 STATE
                                          NOT NULL VARCHAR2(20)
                                           NOT NULL NUMBER(8,2)
 SAL_AMT
 SQL>
CREATE TABLE SALES_ORDER(
ORDER_NO VARCHAR2(6) PRIMARY KEY CHECK(ORDER_NO LIKE 'O%'),
CLIENT_NO VARCHAR2(6),
ORDER_DATE DATE,
SALESMAN_NO VARCHAR2(6),
DELY_TYPE CHAR(1) DEFAULT 'F',
DELY DATE DATE,
FOREIGN KEY(CLIENT_NO) REFERENCES CLIENT_MASTER(CLIENT_NO) ON
DELETE CASCADE,
FOREIGN KEY(SALESMAN_NO) REFERENCES SALESMAN_MASTER(SALESMAN_NO)
ON DELETE CASCADE
);
 SQL> CREATE TABLE SALES_ORDER(
  2 ORDER_NO VARCHAR2(6) PRIMARY KEY CHECK(ORDER_NO LIKE '0%'),
  3 CLIENT_NO VARCHAR2(6),
  4 ORDER_DATE DATE,
  5 SALESMAN_NO VARCHAR2(6)
  6 DELY_TYPE CHAR(1) DEFAULT 'F',
  7 DELY_DATE DATE.
  8 FOREIGN KEY(CLIENT_NO) REFERENCES CLIENT_MASTER(CLIENT_NO) ON DELETE CASCADE,
  9 FOREIGN KEY(SALESMAN_NO) REFERENCES SALESMAN_MASTER(SALESMAN_NO) ON DELETE CASCADE
 10 );
 Table created.
 SQL> DESC SALES_ORDER
 Name
                                         Null?
                                                 Type
 ORDER_NO
                                         NOT NULL VARCHAR2(6)
 CLIENT_NO
                                                 VARCHAR2(6)
 ORDER_DATE
                                                 DATE
                                                 VARCHAR2(6)
 SALESMAN_NO
 DELY_TYPE
                                                 CHAR(1)
 DELY_DATE
                                                 DATE
 SQL>
```

CREATE TABLE SALES_ORDER_DETAILS(

ORDER NO VARCHAR2(6),

PRODUCT_NO VARCHAR2(6),

QTY DISP NUMBER(8),

PRODUCT RATE NUMBER(10,2),

FOREIGN KEY(ORDER_NO) REFERENCES SALES_ORDER(ORDER_NO) ON DELETE CASCADE.

FOREIGN KEY(PRODUCT_NO) REFERENCES PRODUCT_MASTER(PRODUCT_NO) ON DELETE CASCADE

);

```
SQL> CREATE TABLE SALES_ORDER_DETAILS(
 2 ORDER_NO VARCHAR2(6)
 3 PRODUCT_NO VARCHAR2(6),
 4 OTY_DISP NUMBER(8).
 5 PRODUCT_RATE NUMBER(10,2),
 6 FOREIGN KEY(ORDER_NO) REFERENCES SALES_ORDER(ORDER_NO),
 7 FOREIGN KEY(PRODUCT_NO) REFERENCES PRODUCT_MASTER(PRODUCT_NO)
 8 );
Table created.
SQL> DESC SALES_ORDER_DETAILS
                                          Null?
Name
                                                  Type
ORDER_NO
                                                   VARCHAR2(6)
PRODUCT_NO
                                                   VARCHAR2(6)
QTY_DISP
                                                   NUMBER(8)
PRODUCT_RATE
                                                   NUMBER(10,2)
SQL>
```

INSERT INTO CLIENT_MASTER VALUES('C1','ARKAPRATIM','KOLKATA',700059,'WEST BENGAL',1000.00);

INSERT INTO CLIENT MASTER

VALUES('C2','SOUMODEEP','MUMBAI',700002,'MAHARASHTRA',2000.00);

INSERT INTO CLIENT_MASTER

VALUES('C3','DEBARGHYA','NOIDA',700078,'UTTARPRADESH',3000.00);

INSERT INTO CLIENT_MASTER VALUES('C4','PRITHWISH','KOLKATA',800059,'WEST BENGAL',4000.00);

INSERT INTO CLIENT MASTER

VALUES('C5','SAGNIK','BENGALURU',900059,'MAHARASHTRA',5000.00);

CLIEN	IT NAME	CITY	PINCODE	STATE	BAL_DUE
 C1	ARKAPRATIM	KOLKATA	700059	WEST BENGAL	1000
C2	SOUMODEEP	MUMBAI	700002	MAHARASHTRA	2000
C3	DEBARGHYA	NOIDA	700078	UTTARPRADESH	3000
C4	PRITHWISH	KOLKATA	800059	WEST BENGAL	4000
C5	SAGNIK	BENGALURU	900059	MAHARASHTRA	5000

INSERT INTO PRODUCT_MASTER VALUES('P1','VEGETABLE',100,100,102);
INSERT INTO PRODUCT_MASTER VALUES('P2','FRUIT',20,20,20.3);
INSERT INTO PRODUCT_MASTER VALUES('P3','ELECTRONICS',200,200,200.1);
INSERT INTO PRODUCT_MASTER VALUES('P4','ELECTRONICS',30,30,30.4);
INSERT INTO PRODUCT_MASTER VALUES('P5','SERVICE',40,40,40.5);

INSERT INTO SALESMAN_MASTER VALUES('S1','RAMU','KOLKATA',700059,'WEST BENGAL',2000.90);

INSERT INTO SALESMAN_MASTER

VALUES('S2', 'UPAL', 'MUMBAI', 700002, 'MAHARASHTRA', 1000.90);

INSERT INTO SALESMAN MASTER

VALUES('S3', 'SHYAM', 'BANGALORE', 900059, 'MAHARASHTRA', 3000.90);

INSERT INTO SALESMAN_MASTER

VALUES('S4', 'JADU', 'NOIDA', 700078, 'UTTARPRADESH', 4000.90);

INSERT INTO SALESMAN_MASTER VALUES('S5','MODHU','KOLKATA',700059,'WEST BENGAL',5000.90);

```
SQL> INSERT INTO SALESMAN_MASTER VALUES('S1', 'RAMU', 'KOLKATA', 700059, 'WEST BENGAL', 2000.90);
1 row created.
SQL> INSERT INTO SALESMAN_MASTER VALUES('S2','UPAL','MUMBAI',700002,'MAHARASHTRA',1000.90);
SQL> INSERT INTO SALESMAN_MASTER VALUES('S3', 'SHYAM', 'BANGALORE', 900059, 'MAHARASHTRA', 3000.90);
1 row created.
SQL> INSERT INTO SALESMAN_MASTER VALUES('S4', 'JADU', 'NOIDA', 700078, 'UTTARPRADESH', 4000.90);
1 row created.
SQL> INSERT INTO SALESMAN_MASTER VALUES('S5','MODHU','KOLKATA',700059,'WEST BENGAL',5000.90);
1 row created.
SOL> SELECT * FROM SALESMAN MASTER:
SALESM SALESMAN NAME
                                                    PINCODE STATE
                                                                                     SAL AMT
       RAMU
                            KOLKATA
                                                      700059 WEST BENGAL
                                                                                      2000.9
S2
      UPAL
                            MUMBAI
                                                      700002 MAHARASHTRA
                                                                                      1000.9
S3
      SHYAM
                            BANGALORE
                                                     900059 MAHARASHTRA
                                                                                      3000.9
       JADU
                            NOIDA
                                                      700078 UTTARPRADESH
                                                                                      4000.9
      MODHU
                            KOLKATA
                                                      700059 WEST BENGAL
SQL>
```

INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO) VALUES ('0001', 'C1', TO_DATE('2024-03-13', 'YYYY-MM-DD'), 'S1'); INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO, DELY_TYPE, DELY_DATE) VALUES ('0002', 'C2', TO_DATE('2024-03-14', 'YYYY-MM-DD'), 'S2', 'E', TO_DATE('2024-03-18', 'YYYY-MM-DD'));

INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO) VALUES ('0003', 'C3', TO_DATE('2024-03-15', 'YYYY-MM-DD'), 'S1'); INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO, DELY_TYPE, DELY_DATE) VALUES ('0004', 'C4', TO_DATE('2024-03-16', 'YYYY-MM-DD'), 'S3', 'E', TO_DATE('2024-03-20', 'YYYY-MM-DD'));

INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE,

```
SQL> INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO) VALUES ('0001', 'C1', T0_DATE('2024-03-13', 'YYYY-MM-DD'), 'S1');
1 row created.
SQL> INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO, DELY_TYPE, DELY_DATE) VALUES ('0002', 'C2', T0_DATE('2024-03-14', 'YYYY-MM-DD'),
  'S2', 'E', T0_DATE('2024-03-18', 'YYYY-MM-DD'));
1 row created.
SQL> INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO) VALUES ('0003', 'C3', T0_DATE('2024-03-15', 'YYYY-MM-DD'), 'S1');
SQL> INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO, DELY_TYPE, DELY_DATE) VALUES ('0004', 'C4', T0_DATE('2024-03-16', 'YYYY-MM-DD'),
  'S3', 'E', TO_DATE('2024-03-20', 'YYYY-MM-DD'));
1 row created.
SQL> INSERT INTO SALES_ORDER (ORDER_NO, CLIENT_NO, ORDER_DATE, SALESMAN_NO) VALUES ('0005', 'C5', T0_DATE('2024-03-17', 'YYYY-MM-DD'), 'S2');
1 row created.
SQL> SELECT * FROM SALES_ORDER;
ORDER_ CLIENT ORDER_DAT SALESM D DELY_DATE
            13-MAR-24 S1
                              E 18-MAR-24
            15-MAR-24 S1
0004
      C4
             16-MAR-24 S3
                             E 20-MAR-24
            17-MAR-24 S2
0005 C5
SOL>
```

INSERT INTO SALES ORDER DETAILS (ORDER NO, PRODUCT NO, OTY DISP, PRODUCT RATE) VALUES ('0001', 'P1', 5, 100.00);

INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT RATE) VALUES ('0002', 'P2', 10, 20.30);

INSERT INTO SALES ORDER DETAILS (ORDER NO, PRODUCT NO, OTY DISP, PRODUCT_RATE) VALUES ('0003', 'P3', 2, 200.10);

INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT_RATE) VALUES ('0004', 'P4', 3, 30.40);

INSERT INTO SALES ORDER DETAILS (ORDER NO, PRODUCT NO, QTY DISP, PRODUCT_RATE) VALUES ('0005', 'P5', 4, 40.50);

```
SQL> INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT_RATE) VALUES ('0001', 'P1', 5, 100.00);
1 row created.
SQL> INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT_RATE) VALUES ('0002', 'P2', 10, 20.30);
1 row created.
SQL> INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT_RATE) VALUES ('0003', 'P3', 2, 200.10);
1 row created.
SQL> INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT_RATE) VALUES ('0004', 'P4', 3, 30.40);
1 row created.
SQL> INSERT INTO SALES_ORDER_DETAILS (ORDER_NO, PRODUCT_NO, QTY_DISP, PRODUCT_RATE) VALUES ('0005', 'P5', 4, 40.50);
SQL> SELECT * FROM SALES_ORDER_DETAILS;
ORDER_ PRODUC QTY_DISP PRODUCT_RATE
                     10
                     2
0003
      P3
                               200.1
```

SELECT NAME FROM CLIENT_MASTER;

0004

SQL>

SELECT NAME, CITY, STATE FROM CLIENT MASTER;

30.4

SELECT DESCRIPTION FROM PRODUCT MASTER;

SELECT * FROM CLIENT MASTER WHERE CITY = 'MUMBAI';

SELECT SALESMAN_NAME FROM SALESMAN_MASTER WHERE SAL_AMT = 3000;

SELECT * FROM PRODUCT MASTER ORDER BY COST PRICE DESC:

SELECT DISTINCT SAL_AMT FROM SALESMAN_MASTER;

SELECT DISTINCT * FROM PRODUCT_MASTER;

UPDATE CLIENT MASTER SET CITY = 'Bangalore' WHERE CLIENT NO = 'C1';

UPDATE CLIENT_MASTER SET BAL_DUE = 1000 WHERE CLIENT_NO = 'C6';

SELECT * FROM CLIENT_MASTER;

UPDATE PRODUCT_MASTER SET DESCRIPTION = 'Trousers' WHERE PRODUCT_NO = 'P1';

UPDATE PRODUCT MASTER SET COST PRICE = 950.00 WHERE DESCRIPTION = 'Trousers';

SELECT * FROM PRODUCT_MASTER;

UPDATE SALESMAN_MASTER SET CITY = 'Pune';

SELECT * FROM SALESMAN_MASTER;

```
SQL> SELECT NAME FROM CLIENT_MASTER;
NAME
ARKAPRATIM
SOUMODEEP
DEBARGHYA
PRITHWISH
SAGNIK
SQL> SELECT NAME, CITY, STATE FROM CLIENT_MASTER;
NAME
                          CITY
                                          STATE
ARKAPRATIM KOLKATA WEST BENGAL
SOUMODEEP MUMBAI MAHARASHTRA
DEBARGHYA NOIDA UTTARPRADESH
PRITHWISH KOLKATA WEST BENGAL
SAGNIK BENGALURU MAHARASHTRA
SQL> SELECT DESCRIPTION FROM PRODUCT_MASTER;
DESCRIPTION
VEGETABLE
FRUIT
ELECTRONICS
ELECTRONICS
SERVICE
SQL> SELECT * FROM CLIENT_MASTER WHERE CITY = 'MUMBAI';
                               CITY
                                                      PINCODE STATE BAL_DUE
CLIENT NAME
C2 SOUMODEEP
                              MUMBAI
                                                           700002 MAHARASHTRA
                                                                                                            2000
SQL>
SQL> UPDATE CLIENT_MASTER SET CITY = 'Bangalore' WHERE CLIENT_NO = 'C1';
1 row updated.
SQL> UPDATE CLIENT_MASTER SET BAL_DUE = 1000 WHERE CLIENT_NO = 'C6';
0 rows updated.
SQL> SELECT * FROM CLIENT_MASTER;
                                                    PINCODE STATE BAL_DUE
                                   CITY
CLIENT NAME

        ARKAPRATIM
        Bangalore
        700059
        WEST BENGAL
        1000

        SOUMODEEP
        MUMBAI
        700002
        MAHARASHTRA
        2000

        DEBARGHYA
        NOIDA
        700078
        UTTARPRADESH
        3000

        PRITHWISH
        KOLKATA
        800059
        WEST BENGAL
        4000

        SAGNIK
        BENGALURU
        900059
        MAHARASHTRA
        5000

C1
C2
C3
C4 PRITHWISH
C5 SAGNIK
SQL>
```

SQL> SELECT SALESMAN_NAME FROM SALESMAN_MASTER WHERE SAL_AMT = 3000; no rows selected SQL> SELECT * FROM PRODUCT_MASTER ORDER BY COST_PRICE DESC; PRODUC DESCRIPTION QTY_ON_HAND SELL_PRICE COST_PRICE 200.1 P3 200 200 ELECTRONICS P1 VEGETABLE 100 100 102 40.5 P5 SERVICE 40 40 P4 30 30.4 ELECTRONICS 30 P2 FRUIT 20 20 20.3 SQL> SELECT DISTINCT SAL_AMT FROM SALESMAN_MASTER; SAL_AMT 2000.9 3000.9 5000.9 4000.9 1000.9 SQL> SELECT DISTINCT * FROM PRODUCT_MASTER;

PRODUC	DESCRIPTION	QTY_ON_HAND	SELL_PRICE	COST_PRICE
P1	VEGETABLE	100	100	102
P2	FRUIT	20	20	20.3
P3	ELECTRONICS	200	200	200.1
P4	ELECTRONICS	30	30	30.4
P5	SERVICE	40	40	40.5
SQL>				

200

30

40

SQL> UPDATE PRODUCT_MASTER SET DESCRIPTION = 'Trousers' WHERE PRODUCT_NO = 'P1'; 1 row updated. SQL> UPDATE PRODUCT_MASTER SET COST_PRICE = 950.00 WHERE DESCRIPTION = 'Trousers'; 1 row updated. SQL> SELECT * FROM PRODUCT_MASTER; PRODUC DESCRIPTION QTY_ON_HAND SELL_PRICE COST_PRICE P1 Trousers 100 100 950 P2 FRUIT 20 20 20.3

200

30

40

200.1

30.4

40.5

SQL>

P3

P5

ELECTRONICS

ELECTRONICS

SERVICE

```
SQL> UPDATE SALESMAN_MASTER SET CITY = 'Pune';
5 rows updated.
SQL> SELECT * FROM SALESMAN_MASTER;
SALESM SALESMAN_NAME
                            CITY
                                                     PINCODE STATE
                                                                                      SAL_AMT
S1
       RAMU
                            Pune
                                                      700059 WEST BENGAL
                                                                                      2000.9
S2
       UPAL
                            Pune
                                                      700002 MAHARASHTRA
                                                                                      1000.9
      SHYAM
                                                      900059 MAHARASHTRA
S3
                            Pune
                                                                                      3000.9
S4
       JADU
                            Pune
                                                     700078 UTTARPRADESH
                                                                                      4000.9
S5
       MODHU
                                                      700059 WEST BENGAL
                                                                                      5000.9
                            Pune
SQL>
```

ALTER TABLE CLIENT_MASTER ADD Telephone NUMBER(10);
ALTER TABLE PRODUCT_MASTER MODIFY Sell_Price NUMBER(10,2);
ALTER TABLE PRODUCT_MASTER DROP COLUMN Cost_Price;
DELETE FROM SALESMAN_MASTER WHERE SAL_AMT = 3500;
DELETE FROM PRODUCT_MASTER WHERE QTY_ON_HAND = 100;
DELETE FROM CLIENT_MASTER WHERE state = 'Tamil Nadu';
ALTER TABLE SALESMAN_MASTER RENAME TO Sman_Mast;
SELECT CONSTRAINT_NAME FROM USER_CONSTRAINTS WHERE TABLE_NAME = 'SALES_ORDER' AND (R_CONSTRAINT_NAME IN (SELECT CONSTRAINT_NAME FROM USER_CONSTRAINT_NAME FROM USER_CONSTRAINT_NAME = 'CLIENT_MASTER'));
DROP TABLE CLIENT_MASTER;

```
SQL> ALTER TABLE CLIENT_MASTER ADD Telephone NUMBER(10);
Table altered.

SQL> ALTER TABLE PRODUCT_MASTER MODIFY Sell_Price NUMBER(10,2);
Table altered.

SQL> ALTER TABLE PRODUCT_MASTER DROP COLUMN Cost_Price;
Table altered.

SQL> DELETE FROM CLIENT_MASTER WHERE state = 'Tamil Nadu';
0 rows deleted.

SQL> ALTER TABLE SALESMAN_MASTER RENAME TO Sman_Mast;
Table altered.

SQL> 
SQL> DROP TABLE CLIENT_MASTER;
Table dropped.

SQL>
```