

ASSIGNMENT : 8

Q-1: Create the following tables:

(Giving names to all the constraints are mandatory)

(a) Table Name : Client-Master

Column Name	Data Type	size	Constraints.
Client-no	Varchar2	5	Primary Key, Should start with C
Name	Varchar2	20	Not Null, Unique key
Address1	Varchar2	30	
State	Varchar2	30	
City	Varchar2	15	Should be within Delhi, Mumbai and Chennai

• Data for Client-Master Table :

Client-no	Name	Address1	State	City.
C01	Ivan	Church Rd	Maharashtra	Mumbai
C02	Vandana	St. Mary Rd	Tamil Nadu	Chennai
C03	Pramada	Mall Rd	Maharashtra	Mumbai
C04	Basu	Church Rd	Maharashtra	Mumbai
C05	Rawi	Chandni	null	Delhi
C06	Rukmini	Mall Rd	Maharashtra	Mumbai

• CREATE TABLE Client-Master (

Client-no VARCHAR(5),
 Name VARCHAR(20),
 Address1 VARCHAR(30),
 State VARCHAR(30),
 City VARCHAR(15),

CONSTRAINT pk_Client-Master PRIMARY KEY (Client-no),
 CONSTRAINT ck-client-no-format CHECK (Client-no
 LIKE 'C%.'))

;

- `INSERT INTO Client-Master (Client-no, Name, Address1, State, City)`
`VALUES`
`(“CO1”, “Gvaan”, “Church Rd”, “Maharashtra”, “Mumbai”),`
`(“CO2”, “Vandana”, “St. Mary Rd”, “Tamil Nadu”, “Chennai”),`
`(“CO3”, “Pramada”, “Mall Rd”, “Maharashtra”, “Mumbai”),`
`(“CO4”, “Basu”, “Church Rd”, “Maharashtra”, “Mumbai”),`
`(“CO5”, “Ravi”, “Chandni”, “null”, “Delhi”),`
`(“CO6”, “Rukmini”, “Mall Rd”, “Maharashtra”, “Mumbai”);`

(b) Table Name : Sales - Order

Column Name	Data Type	Size	Constraints
S-order-no	VARCHAR2	10	Primary Key, Should start with O
S order date	Date		
Client-no	Varchar2	5	Foreign key references Client-no of Client-Master table.
Salesman-no	VARCHAR2	10	Should start with S.
Product-no	VARCHAR2	10	Foreign key references Product-no of Product-Master table.

- `CREATE TABLE Sales - Order (`
`S-order-no VARCHAR(10),`
`S-order-date DATE,`
`Client-no VARCHAR(5),`
`Salesman-no VARCHAR(10),`

Product-no VARCHAR(10),
 CONSTRAINT pk_sales_order PRIMARY KEY (S-order-no),
 CONSTRAINT ck_sorder_format CHECK (S-order-no
 LIKE 'O%.'),
 CONSTRAINT fk_salesorder_client FOREIGN KEY (Client-
 no) REFERENCES Client-Master (client-no),
 CONSTRAINT ck_salesman-format CHECK (Salesman-no
 LIKE 'S%.'),
 CONSTRAINT fk_salesorder_product FOREIGN KEY
 (Product-no) REFERENCES Products-Master (Product-no)
);

- Data for Sales-Order table :

S-order-no	S-order-date	Client-no	Salesman-no	Product-no
019001	12-Jan-96	C01	S01	P01
019002	25-Jan-96	C02	S02	P02
019003	18-Feb-96	C03	S03	P03
019004	03-Apr-96	C04	S01	P04
019005	20-May-96	C05	S02	P05
019006	24-May-96	C06	S04	P06

- INSERT INTO Sales-Order (S-order-no, S-order-date, Client-no, Product-no)

VALUES

```

('019001', TO-DATE ('12-01-1996'), 'C01', 'S01', 'P01'),
('019002', TO-DATE ('25-01-1996'), 'C02', 'S02', 'P02'),
('019003', TO-DATE ('18-02-1996'), 'C03', 'S03', 'P03'),
('019004', TO-DATE ('03-04-1996'), 'C01', 'S01', 'P04'),
('019005', TO-DATE ('20-05-1996'), 'C04', 'S02', 'P05'),
('019006', TO-DATE ('24-05-1996'), 'C05', 'S04', 'P06');
  
```

(C) Table Name : Products-Master

Column Name	Data Type	Size	Constraints
Product-no	VARCHAR2	10	Primary key, should start with P
Description	VARCHAR2	20	Not Null, Unique Key
Qty-on-hand	Number	8	Should be greater than 10
Sell-price	Number	8,2	Not Null
Cost-price	Number	8,2	Not Null

- CREATE TABLE Products_Master (
 Product-no VARCHAR(10),
 Description VARCHAR(20) NOT NULL,
 Qty-on-hand INT (8),
 Sell-price DECIMAL (8,2) NOT NULL,
 Cost-price DECIMAL (8,2) NOT NULL,
 CONSTRAINT pk_products_master PRIMARY KEY (Product-no),
 CONSTRAINT ck_product_no_format CHECK (Product-no LIKE 'P%'),
 CONSTRAINT uq_products_Description UNIQUE (Description),
 CONSTRAINT ck_qty_positive CHECK (Qty-on-hand > 10)
);

- Data for table Products-Master :

Product-no	Description	Qty-on-hand	Sell-price	Cost-price
P01	1.44 Floppies	100	525	500
P02	Monitors	25	12000	11280
P03	Mouse	20	1050	1000
P04	1.22 floppies	100	525	500
P05	Keyboards	15	3150	3050
P06	cd Drive	14	5250	5100

- INSERT INTO Products-Master (Product-no, Description, Qty-on-hand, Sell-price, Cost-price)

VALUES

```
('P01', '1.44 Floppies', 100, 525, 500),
('P02', 'Monitors', 25, 12000, 11280),
('P03', 'Mouse', 20, 1050, 1000),
('P04', '1.22 floppies', 100, 525, 500),
('P05', 'Keyboards', 15, 3150, 3050),
('P06', 'cd Drive', 14, 5250, 5100);
```

- ② Add a Not Null constraint on the Address1 field of Client-Master table and display the structure of the table.

- ALTER TABLE Client-Master
MODIFY ADDRESS1 VARCHAR(30) NOT NULL;
- DESC Client-Master;

Field	Type	NULL	KEY	Default
Client_no	varchar(5)	NO	PRI	NULL
Name	varchar(20)	YES		NULL
Address 1	varchar(30)	NO		NULL
State	varchar(30)	YES		NULL
City	varchar(15)	YES		NULL

③ Calculate the profit (Sell-price - Cost-price) from the Products-Master table. Name the column as 'Profit'.

- SELECT Product_no,
Description,
Sell-price,
Cost-price,
(Sell-price - Cost-price) AS Profit
FROM Products-Master;

Product_no	Description	Sell-price	Cost-price	Profit.
P01	1.44 Floppies	525	500	25
P02	Monitors	12000	11280	720
P03	Mouse	1050	1000	50
P04	1.22 floppies	525	500	25
P05	keyboards	3150	3050	100
P06	Cd Drive	5250	5100	150

④ Calculate and display the total cost price (Qty-on-hand * Cost-price) of the stock present in hand. Name the column accordingly.

- SELECT Product_no,
Description,
Qty-on-hand,

Cost-price,
 $(\text{Qty-on-hand} * \text{Cost-price}) \text{ AS Total-cost-price}$
 FROM Products-Master;

Product-no	Description	Qty-on-hand	Cost-price	Total-cost-price
P01	1.44 Floppies	100	500	50000
P02	Monitors	25	11280	282000
P03	Mouse	20	1000	20000
P04	1.22 floppies	100	500	50000
P05	keyboards	15	3050	45750
P06	cd Drive	14	5100	71400

⑤ Display the client details of all the clients whose name starts with J.

• `SELECT * FROM Client-Master WHERE Name LIKE 'J%';`

Client-no	Name	Address1	State	City
C01	Ivaan	church Rd	Mahanashtra	Mumbai

⑥ Display the client details of all the clients whose name start with R and ends with i.

• `SELECT * FROM Client-Master WHERE Name LIKE 'R%.i';`

Client-no	Name	Address1	State	City
C05	Ravi	Chandni	null	Delhi
C06	Rukmini	Mall Rd	Maharashtra	Mumbai

⑦ Display the client details of all the clients whose name contains a in the third and fifth position.

• `SELECT * FROM Client-Master WHERE Name LIKE '_a_a%';`

Client-no	Name	Address1	State	City
C03	Priyanka	Mall Rd	Maharashtra	Mumbai

⑧ Display the client details of all the clients whose name contains 'aa'.

• SELECT * FROM Client-Master WHERE Name LIKE '%.aa%';

Client-no	Name	Address1	State	City
C01	Ivaan	Church Rd	Maharashtra	Mumbai

⑨ Display the client details of those clients whose name contains exactly four characters.

• SELECT * FROM Client-Master WHERE LENGTH (Name) = 4;

Client-no	Name	Address1	State	City
C04	Basu	Church Rd	Maharashtra	Mumbai
C05	Ravi	Chandni	null	Delhi

⑩ Display the clients details of those clients who have not mentioned state in his/her address.

• SELECT * FROM Client-Master WHERE State IS NULL;

Client-no	Name	Address1	State	City
C05	Ravi	Chandni	NULL	Delhi

⑪ Display the order details placed after january 1996.

• SELECT * FROM Sales-Order

WHERE S-order-date > 1996-01-31;

S-order-no	S-order-date	Client-no	Salesmen-no	Product-no
019001	1996-01-12	C01	S01	P01
019002	1996-01-25	C02	S02	P02
019003	1996-02-18	C03	S03	P03
019004	1996-04-03	C01	S01	P04
019005	1996-05-20	C04	S02	P05
019006	1996-05-24	C05	S04	P06

(12) change the s-order-date of client-no 'C01' to 24/07/96, Product-no to 'P06', Salesman-no to 'S04'.

- UPDATE Sales-Order

```
SET S-order-date = '1996-07-24',
Product-no = 'P06',
Salesman-no = 'S04';
WHERE Client-no = 'C01';
```

- SELECT * FROM Sales-Order WHERE Client-no = 'C01';

S-order-no	S-order-date	Client-no	SALESMAN-NO	Product-no
019001	24-Jul-1996	C01	S04	P06
019004	24-Jul-1996	C01	S04	P06

(13) Change the city of client-no 'C05' to 'Kolkata'?

- UPDATE Client-Master

```
SET City = 'Kolkata'.
```

```
WHERE Client-no = 'C05';
```

- SELECT * FROM Client_Master WHERE Client_no = 'C05';

Client_no	Name	Address1	State	City
C05	Ravi	Chandni	null	Kolkata.

- (14) Change the field size of Client_no to 15 in all the tables where the field Client_no is present.

- ALTER TABLE Client_Master MODIFY Client_no VARCHAR(15);
- ALTER TABLE Sales_Order MODIFY Client_no VARCHAR(15);

- (15) Remove the record for Client_no 'C02' from Client_Master table.

- DELETE FROM Sales_Order WHERE Client_no = 'C02';
- DELETE FROM Client_Master WHERE Client_no = 'C02';

Client_no	Name	Address1	State	City
C01	Girvan	Church Rd	Maharashtra	Mumbai
C03	Pramada	Mall Rd	Maharashtra	Mumbai
C04	Basu	Church Rd	Maharashtra	Mumbai
C05	Ravi	Chandni	NULL	Delhi
C06	Rukmini	Mall Rd	Maharashtra	Mumbai

- (16) Remove those records from Product_Master table for which sellprice is between 1000 and 10,000.

- DELETE FROM Sales_Order WHERE Product_no IN (SELECT Product_no FROM Product_Master WHERE sell_price Between 1000 AND 10000);

- DELETE FROM Products-Master
WHERE Sell-price Between 1000 AND 10000;
- SELECT * FROM Products-Master;

Product-no	Description	Qty-on-hand	Sell-price	Cost-price
P01	1.44 Floppies	100	525	500
P02	Monitors	25	12000	11280
P04	1.22 floppies	100	525	500

(17) Create a table of your own with a composite primary key.

- CREATE TABLE StudentCourse (

Student-id VARCHAR(5),

Course-id VARCHAR(5),

Enrollment-date DATE,

Grade INT,

CONSTRAINT pk_StudentCourse PRIMARY KEY (student-id, course-id)

);
- INSERT INTO StudentCourse (Student-id, Course-id, Enrollment-date, Grade)

VALUES

("S01", "C01", '2023-08-01', "A"),

("S01", "C02", '2023-08-05', "B"),

("S02", "C01", '2023-08-01', "A"),

("S03", "C03", '2023-08-10', "C");

Student -id	Course -id	Enrollment -date	Grade .
S01	C01	2023-Aug-01	A
S01	C02	2023-Aug-05	B
S02	C01	2023-Aug-01	A
S03	C03	2023-Aug-10	C.

- INSERT INTO studentCourse VALUES ("S01", "C01", '2023-08-012', "B");

→ You will get an error .

✓ Adarsh
22/9/25