

Practical No-8

- **Subqueries :**
 - **Subqueries with the SELECT Statement.**

```
CREATE TABLE CUSTOMERS (  
    ID INT NOT NULL,  
    NAME VARCHAR(20) NOT NULL,  
    AGE INT NOT NULL,  
    ADDRESS CHAR (25),  
    SALARY DECIMAL (18, 2),  
    PRIMARY KEY (ID)  
);  
INSERT INTO CUSTOMERS VALUES  
(1, 'Ramesh', 32, 'Ahmedabad', 2000.00),  
(2, 'Khilan', 25, 'Delhi', 1500.00),  
(3, 'Kaushik', 23, 'Kota', 2000.00),  
(4, 'Chaitali', 25, 'Mumbai', 6500.00),  
(5, 'Hardik', 27, 'Bhopal', 8500.00),  
(6, 'Komal', 22, 'Hyderabad', 4500.00),  
(7, 'Muffy', 24, 'Indore', 10000.00);
```

CUSTOMERS

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000
2	Khilan	25	Delhi	1500
3	Kaushik	23	Kota	2000
4	Chaitali	25	Mumbai	6500
5	Hardik	27	Bhopal	8500
6	Komal	22	Hyderabad	4500
7	Muffy	24	Indore	10000

```
SELECT * FROM CUSTOMERS  
WHERE ID IN (SELECT ID FROM CUSTOMERS WHERE SALARY > 4500);
```

ID	NAME	AGE	ADDRESS	SALARY
4	Chaitali	25	Mumbai	6500
5	Hardik	27	Bhopal	8500
7	Muffy	24	Indore	10000

- **Subqueries with INSERT Statement:**

```
CREATE TABLE CUSTOMERS_BKP (  
    ID INT NOT NULL,  
    NAME VARCHAR(20) NOT NULL,  
    AGE INT NOT NULL,  
    ADDRESS CHAR (25),  
    SALARY DECIMAL (18, 2),  
    PRIMARY KEY (ID)
```

```
);
INSERT INTO CUSTOMERS_BKP
SELECT * FROM CUSTOMERS
WHERE ID IN (SELECT ID FROM CUSTOMERS);
```

```
SELECT * FROM CUSTOMERS_BKP;
```

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000
2	Khilan	25	Delhi	1500
3	Kaushik	23	Kota	2000
4	Chaitali	25	Mumbai	6500
5	Hardik	27	Bhopal	8500
6	Komal	22	Hyderabad	4500
7	Muffy	24	Indore	10000

➤ Subquery with UPDATE Statement:

```
UPDATE CUSTOMERS
SET SALARY = SALARY * 0.25
WHERE AGE IN (SELECT AGE FROM CUSTOMERS_BKP WHERE AGE >= 27 );
SELECT * FROM CUSTOMERS;
```

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	500.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	2125.00
6	Komal	22	Hyderabad	4500.00
7	Muffy	24	Indore	10000.00

➤ Subquery with DELETE Statement:

```
DELETE FROM CUSTOMERS
WHERE AGE IN (SELECT AGE FROM CUSTOMERS_BKP WHERE AGE >= 27 );

SELECT * FROM CUSTOMERS;
```

ID	NAME	AGE	ADDRESS	SALARY
2	Khilan	25	Delhi	1500
3	Kaushik	23	Kota	2000
4	Chaitali	25	Mumbai	6500
6	Komal	22	Hyderabad	4500
7	Muffy	24	Indore	10000

- **Views**

- **Create View :**

```
CREATE VIEW CUSTOMERS_VIEW AS
SELECT name, age
FROM CUSTOMERS;
```

```
SELECT * FROM CUSTOMERS_VIEW;
```

NAME	AGE
Khilan	25
Kaushik	23
Chaitali	25
Komal	22
Muffy	24

- **The WITH CHECK Option:**

```
CREATE VIEW CUSTOMERS_VIEW AS
SELECT name, age
FROM CUSTOMERS
WHERE age IS NOT NULL
WITH CHECK OPTION;
```

- **Updating a view:**

```
UPDATE CUSTOMERS_VIEW
SET AGE = 35
WHERE name = 'Ramesh';
```

- **Deleting Rows into a View:**

```
DELETE FROM CUSTOMERS_VIEW
WHERE age = 22;
```

- **Sequences:**

- **Auto Increment:**

```
CREATE TABLE BUYERS (
  ID INT AUTO_INCREMENT,
  NAME VARCHAR(20) NOT NULL,
  AGE INT NOT NULL,
  ADDRESS CHAR (25),
  SALARY DECIMAL (18, 2),
  PRIMARY KEY (ID)
```

```
);
ALTER TABLE BUYERS AUTO_INCREMENT=100;
```

```
INSERT INTO BUYERS VALUES
('Ramesh', 32, 'Ahmedabad', 2000.00),
('Khilan', 25, 'Delhi', 1500.00),
('Kaushik', 23, 'Kota', 2000.00),
('Chaitali', 25, 'Mumbai', 6500.00),
('Hardik', 27, 'Bhopal', 8500.00),
('Komal', 22, 'Hyderabad', 4500.00),
('Muffy', 24, 'Indore', 10000.00);
```

ID	NAME	AGE	ADDRESS	SALARY
100	Ramesh	32	Ahmedabad	2000.00
101	Khilan	25	Delhi	1500.00
102	Kaushik	23	Kota	2000.00
103	Chaitali	25	Mumbai	6500.00
104	Hardik	27	Bhopal	8500.00
105	Komal	22	Hyderabad	4500.00
106	Muffy	24	Indore	10000.00

➤ Create Sequence:

```
CREATE TABLE CUSTOMERS (
  ID INT,
  NAME VARCHAR (20) NOT NULL,
  AGE INT NOT NULL,
  ADDRESS CHAR (25),
  SALARY DECIMAL (18, 2),
);
INSERT INTO CUSTOMERS VALUES
(NULL, 'Ramesh', 32, 'Ahmedabad', 2000.00),
(NULL, 'Khilan', 25, 'Delhi', 1500.00),
(NULL, 'Kaushik', 23, 'Kota', 2000.00),
(NULL, 'Chaitali', 25, 'Mumbai', 6500.00),
(NULL, 'Hardik', 27, 'Bhopal', 8500.00),
(NULL, 'Komal', 22, 'Hyderabad', 4500.00),
(NULL, 'Muffy', 24, 'Indore', 10000.00 );
```

ID	NAME	AGE	ADDRESS	SALARY
NULL	Ramesh	32	Ahmedabad	2000.00
NULL	Khilan	25	Delhi	1500.00
NULL	Kaushik	23	Kota	2000.00
NULL	Chaitali	25	Mumbai	6500.00
NULL	Hardik	27	Bhopal	8500.00
NULL	Komal	22	Hyderabad	4500.00
NULL	Muffy	24	Indore	10000.00

```
CREATE SEQUENCE My_Sequence AS INT  
START WITH 1  
INCREMENT BY 1  
MINVALUE 1  
MAXVALUE 7  
CYCLE;
```

```
UPDATE CUSTOMERS SET ID = NEXT VALUE FOR my_Sequence;
```

```
SELECT * FROM CUSTOMERS;
```

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000
2	Khilan	25	Delhi	1500
3	Kaushik	23	Kota	2000
4	Chaitali	25	Mumbai	6500
5	Hardik	27	Bhopal	8500
6	Komal	22	Hyderabad	4500
7	Muffy	24	Indore	10000