ASSIGNMENT 5.1

Create tables for Client, Product, Salesman, Sales__Order, and Sales__Order Details and populate them. Retrieve data by writing queries in SQL using logical operators, aggregate operators, group by, having, order by clauses etc.

1. **List the names of all clients having 'a' as the third letter in their names.**

```
SQL> select name from client_master where name like '__a%';

NAME
--------------------
Kiara Adwani
```

2. **List the clients who stay in a city whose first letter is 'K'.**

```
SQL> select * from client_master where city like 'K%';

CLIENT NAME                 CITY              PINCODE STATE              BALDUE
------ -------------------- --------------- ---------- --------------- ----------
C100   Subhadeep Roy        Kolkata             700091 West Bengal           50.3
C106   Sumit Sharma         Kharagpur            71191 West Bengal           10.3
```

3. **List all the clients who stay in 'Mumbai' or 'Kolkata'.**

```
SQL> select * from client_master where city = 'Mumbai' or city = 'Kolkata';

CLIENT NAME                 CITY              PINCODE STATE              BALDUE
------ -------------------- --------------- ---------- --------------- ----------
C100   Subhadeep Roy        Kolkata             700091 West Bengal           50.3
C103   Dilip Das            Mumbai              147852 Maharastra         1000.62
```

4. **List all the clients whose BalDue is greater than value 1000.**

```
SQL> select * from client_master where baldue > 1000;

CLIENT NAME                 CITY              PINCODE STATE              BALDUE
------ -------------------- --------------- ---------- --------------- ----------
C103   Dilip Das            Mumbai              147852 Maharastra         1000.62
C105   Kiara Adwani         Jamaipur            512091 Chattishgarh        2000.3
```

5. **List all information from the Sales_Order table for orders placed in the month of June.**

```
SQL> select * from sales_order where to_char(order_date, 'MON') = 'JUN';

ORDER_ CLIENT ORDER_DA SALESM D DELY_DAT
------ ------ -------- ------ - --------
O106   C101   27-06-25 S100   P 05-09-25
```

6. **List the order information for Client_no ‘C00001’ and ‘C00003’.**

```
SQL> select * from sales_order where client_no = 'C00001' or client_no = 'C00003';

ORDER_ CLIENT ORDER_DA SALESM D DELY_DAT
------ ------ -------- ------ - --------
O107   C00001 26-03-25 S103   P 05-06-25
O108   C00003 06-02-25 S100   F 14-02-25
```

7. **List products whose selling price is greater than 500 and less than or equal to 750**

```
SQL> select * from product_master where sell_price > 500 and sell_price <= 750;

PRODUC DESCRIPTION     QTY_ON_HAND SELL_PRICE COST_PRICE
------ --------------- ----------- ---------- ----------
P105   Keyboard                560     600.52      400.1
```

8. **Count the total number of order.**

```
SQL> select count(*) as total from sales_order;

     TOTAL
----------
         8
```

9. **Determine the maximum and minimum product prices. Rename the output as max_price and min_price respectively.**

```
SQL> select max(cost_price) as max_price, min(cost_price) as min_price from product_master;

 MAX_PRICE  MIN_PRICE
---------- ----------
     60000      400.1
```

10. **Count the number of client who live in Kolkata.**

```
SQL> select count(*) as total from client_master where city = 'Kolkata';

     TOTAL
----------
         1
```

11. **Count the number of products having price less than or equal to 500.**

```
SQL> select count(*) as total from product_master where cost_price <= 500;

     TOTAL
----------
         1
```

12. List the order number and day on which clients placed their order.

```
SQL> select order_no, to_char(order_date, 'DAY') as day from sales_order;

ORDER_ DAY
------ -----------------------------------
O100   THURSDAY
O101   THURSDAY
O102   TUESDAY
O103   SATURDAY
O104   FRIDAY
O106   FRIDAY
O107   WEDNESDAY
O108   THURSDAY

8 rows selected.
```

13. List the Order_Date in the format 'DD-Month-YY'.

```
SQL> select to_char(order_date, 'DD-Month-YY') as order_date from sales_order;

ORDER_DATE
-----------------------------------------
27-February -25
20-February -25
11-February -25
01-February -25
14-February -25
27-June     -25
26-March    -25
06-February -25

8 rows selected.
```

14. List the date, 20 days after today's date.

```
SQL> select to_char(sysdate + 20, 'DD-MM-YY') as dayslater from dual;

DAYSLATE
--------
01-04-25
```

15. List name of the client who has maximum BalDue.

```
SQL> select name from client_master where baldue = (select max(baldue) from client_master);

NAME
--------------------
Kiara Adwani
```

16. Find the difference between maximum BalDue and minimum BalDue.

```
SQL> select max(baldue) - min(baldue) as difference from client_master;

DIFFERENCE
----------
      1990
```

17. Add Rs.1000/- with the salary amount of every salesmen.

```
SQL> select * from salesman_master;

SALESM SALESMAN_NAME        CITY                    PINCODE STATE                   SAL_AMT
------ -------------------- -------------------- ---------- -------------------- ----------
S100   Ram Kumar            Kolkata                  741258 West Bengal               15000
S101   Das Pal              Chennai                  147852 Tamil Nadu                10000
S102   Ashes Das            Mumbai                   789654 Maharastra                 5000
S103   Atul Becar           Kolkata                  785120 West Bengal               25000
S104   Nigha Das            Kolkata                  784102 West Bengal               12000

SQL> update salesman_master set sal_amt = sal_amt + 1000;

5 rows updated.

SQL> select * from salesman_master;

SALESM SALESMAN_NAME        CITY                    PINCODE STATE                   SAL_AMT
------ -------------------- -------------------- ---------- -------------------- ----------
S100   Ram Kumar            Kolkata                  741258 West Bengal               16000
S101   Das Pal              Chennai                  147852 Tamil Nadu                11000
S102   Ashes Das            Mumbai                   789654 Maharastra                 6000
S103   Atul Becar           Kolkata                  785120 West Bengal               26000
S104   Nigha Das            Kolkata                  784102 West Bengal               13000
```

ASSIGNMENT 5.2

Create tables for Employee, Company and works and populate them. Retrieve data by writing nested queries in SQL using JOIN to combine tables and other operators like IN, BETWEEN, LIKE etc.

Create the following tables and insert the values then do the queries.

employee: emp_no, name, dob, sex, address, salary

company: comp_no, name, address

works: emp_no, comp_no

Creating Tables ->

```
create table employee (
        emp_no varchar(6) primary key,
        name varchar(20) not null,
        dob date,
        sex char(1) default 'M' check (sex='M' or sex='F'),
        address varchar(50),
        salary number(10,2));

    create table company (
        comp_no varchar(6) primary key,
        name varchar(20) not null,
        address varchar(50));

    create table works (
        emp_no varchar(6),
        comp_no varchar(6),
        primary key (emp_no, comp_no),
        foreign key (emp_no) references employee (emp_no),
        foreign key (emp_no) references employee (emp_no));
```

1. List the employees who work for company 'C00002'

```
SQL> select e.* from employee e join works w on e.emp_no = w.emp_no
  2  where w.comp_no = 'C00002';

EMP_NO NAME                 DOB      S ADDRESS                                                SALARY
------ -------------------- -------- - -------------------------------------------------- ----------
E2     Anish Biswas         07-12-03 M Kolkata                                                 40000
E4     Ram  Kumar           01-01-03 M Mumbai                                                  25000
```

2. List the employees who work for company 'C00004'

```
SQL> select e.* from employee e
  2  join works w on w.emp_no = e.emp_no
  3  where w.comp_no = 'C00004';

EMP_NO NAME                 DOB      S ADDRESS                                                SALARY
------ -------------------- -------- - -------------------------------------------------- ----------
E4     Ram  Kumar           01-01-03 M Mumbai                                                  25000
```

3. List the employees who work for Clifford Corp

```
SQL> select e.* from employee e
  2  join works w on w.emp_no = e.emp_no
  3  join company c on c.comp_no = w.comp_no
  4  where c.name = 'Clifford Corp';

EMP_NO NAME                 DOB      S ADDRESS                                                SALARY
------ -------------------- -------- - -------------------------------------------------- ----------
E6     Sumit Sharma         24-03-04 M Kharagpur                                             10000
```

4. List the employees whose name ends with ‘a’

```
SQL> select * from employee where name like '%a';

EMP_NO NAME                 DOB      S ADDRESS                                                SALARY
------ -------------------- -------- - -------------------------------------------------- ----------
E6     Sumit Sharma         24-03-04 M Kharagpur                                             10000
```

5. List the employees born between 1999 and 2011

```
SQL> select * from employee where dob between to_date('01-JAN-1999', 'dd-mon-yyyy') and to_date('31-DEC-2011', 'dd-mon-yyyy');

EMP_NO NAME                 DOB      S ADDRESS                                                SALARY
------ -------------------- -------- - -------------------------------------------------- ----------
E1     Subhadeep Roy        11-09-04 M Kolkata                                               50000
E2     Anish Biswas         07-12-03 M Kolkata                                               40000
E3     Parna Roy Chowdhury  11-02-04 F Behala                                                30000
E4     Ram  Kumar           01-01-03 M Mumbai                                                25000
E6     Sumit Sharma         24-03-04 M Kharagpur                                             10000
```