ROLL NO: 20-PBD-002
Shraddha P Jain
1805-DBMS ESE Practical Exam

Note : Read the Question paper carefully. Scripts for creating tables, inserting data into tables and queries need to be saved. **Referential Integrity** should be given as per requirement. Additional records can be added as per the requirement. Screen shot of the query should be copied in word and uploaded. Additional records can be added as per the requirement.

1. Create the table Sales_Order with data given below:

   Client_Name cannot have NULL values.

Sales_Order_No	Order_Date	Client_Name	Order_Status
1	20/01/01	Ivan Bayross	Fulfilled
2	22/01/01	Pramada Jaguste	In Process
3	02/02/01	Rukmini	In Process
4	06/02/01	Basu Navindgi	Fulfilled
5	07/02/01	Rukmini	Fulfilled
6	25/02/01	Ivan Bayross	In Process

```
SQL> create table Sales_order( Sales_Order_no number(4) primary key, Order_Date date, Client_name varchar(30) NOT NULL, Order_Status varchar(20));

Table created.
```

```
SQL> insert into Sales_order values(1, '20-JAN-2001','Ivan Bayross','Fulfilled');

1 row created.

SQL> insert into Salers_order values(2,'22-JAN-2001','Pramada Jaguste','In Progress');
insert into Salers_order values(2,'22-JAN-2001','Pramada Jaguste','In Progress')
            *
ERROR at line 1:
ORA-00942: table or view does not exist


SQL> insert into Sales_order values(2,'22-JAN-2001','Pramada Jaguste','In Progress');

1 row created.

SQL> insert into Sales_order values(3,'02-FEB-2001','Rukmani','In Progress');

1 row created.

SQL> insert into Sales_order values(4,'06-FEB-2001','Basu Navindgi','Fulfilled');

1 row created.

SQL> insert into Sales_order values(5,'07-FEB-2001','Rukmani,'Fulfilled');
ERROR:
ORA-01756: quoted string not properly terminated


SQL> insert into Sales_order values(6,'25-FEB -2001','Ivan Bayross','In Progress');

1 row created.

SQL> insert into Sales_order values(5,'07-FEB-2001','Rukmani','Fulfilled');

1 row created.

SQL>
```

```
SQL> desc Sales_order;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 SALES_ORDER_NO                            NOT NULL NUMBER(4)
 ORDER_DATE                                         DATE
 CLIENT_NAME                               NOT NULL VARCHAR2(30)
 ORDER_STATUS                                       VARCHAR2(20)

SQL> select * from Sales_order;

SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- --------- ------------------------------ --------------------
             1 20-JAN-01 Ivan Bayross                   Fulfilled
             2 22-JAN-01 Pramada Jaguste                In Progress
             3 02-FEB-01 Rukmani                        In Progress
             4 06-FEB-01 Basu Navindgi                  Fulfilled
             6 25-FEB-01 Ivan Bayross                   In Progress
             5 07-FEB-01 Rukmani                        Fulfilled

6 rows selected.
```

2. Create the table Sales_Order_Details with data given below:

   Quantity must not be greater than 100.

Sales_order_No	Item_Name	Quantity	Rate
1	Rucksacks-Brown	10	450.50
1	Rucksacks-Tan	20	500.25
1	Suitcase 18", Moulded, Ivory	10	1075.00
2	Suitcase 18", Soft, Tan	10	1575.2
2	Suitcase 24", Soft, Dark Brown	15	1575.50
3	Suitcase 28", Soft, Blue	12	1790.75
4	Rucksacks-Brown	10	450.50
5	Rucksacks-Tan	14	500.30

```
SQL> create table Sales_order_details(Sales_order_no number(4),
  2  Item_name varchar(30),
  3  Quantity number(3) check (Quantity<=100),
  4  Rate number(6,2),
  5  Constraint fk_sale_order_no foreign key(Sales_order_no) references Sales_order(Sales_order_no) on delete cascade) ;

Table created.
```

```
SQL> Insert into Sales_order_details values(1,’ Rucksacks-Brown’,10,450.50);

1 row created.

SQL> select * from Sales_order_details;

SALES_ORDER_NO ITEM_NAME                       QUANTITY       RATE
-------------- ------------------------------ ---------- ----------
             1  Rucksacks-Brown                       10      450.5

SQL> Insert into Sales_order_details values(1,’ Rucksacks-Tan’,20,500.25);

1 row created.

SQL> Insert into Sales_order_details values(1,’ Suitcase 18", Moulded, Ivory’,10,1075.00);

1 row created.

SQL> Insert into Sales_order_details values(2,’ Suitcase 18", Soft, Tan’,10,1575.20);

1 row created.

SQL> Insert into Sales_order_details values(2,’ Suitcase 24", Soft, Dark Brown’,15,1790.75);
Insert into Sales_order_details values(2,' Suitcase 24", Soft, Dark Brown',15,1790.75)
                                       *
```

```
SQL> Insert into Sales_order_details values(2,’ Suitcase 18", Soft, Tan’,10,1575.20);

1 row created.

SQL> Insert into Sales_order_details values(2,’ Suitcase 24", Soft, Dark Brown’,15,1790.75);
Insert into Sales_order_details values(2,' Suitcase 24", Soft, Dark Brown',15,1790.75)
                                       *
ERROR at line 1:
ORA-12899: value too large for column
"SYSTEM"."SALES_ORDER_DETAILS"."ITEM_NAME" (actual: 31, maximum: 30)


SQL> Insert into Sales_order_details values(3,’ Suitcase 28", Soft, Blue’,12,450.50);

1 row created.

SQL> Insert into Sales_order_details values(4,’ Rucksacks-Brown’,10,450.50);

1 row created.

SQL> Insert into Sales_order_details values(5,’Rucksacks-Tan’,14,500.30);

1 row created.

SQL> Insert into Sales_order_details values(2,’Suitcase 18", Soft, Tan’,10,1575.20);

1 row created.
```

```
SQL> desc sales_order_details
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 SALES_ORDER_NO                                     NUMBER(4)
 ITEM_NAME                                          VARCHAR2(30)
 QUANTITY                                           NUMBER(3)
 RATE                                               NUMBER(6,2)

SQL> select * from Sales_order_details;

SALES_ORDER_NO ITEM_NAME                       QUANTITY       RATE
-------------- ------------------------------ ---------- ----------
             1  Rucksacks-Brown                        10      450.5
             1  Rucksacks-Tan                          20     500.25
             1  Suitcase 18", Moulded, Ivory           10       1075
             2  Suitcase 18", Soft, Tan                10     1575.2
             3  Suitcase 28", Soft, Blue               12      450.5
             4  Rucksacks-Brown                        10      450.5
             5 Rucksacks-Tan                           14      500.3
             2 Suitcase 18", Soft, Tan                 10     1575.2

8 rows selected.
```

3. Attempt the following Queries:

(i.) Delete the order Placed by client ‘Rukmini’ from Sales_Order table. Ensure that all related records in Sales_Order_Details are deleted as well.

```
SQL> delete from sales_order where client_name='Rukmani';

2 rows deleted.
```

(ii.) Add Client_Address(in capital case) and Client_Contact_No fields in Sales_Order_Table.

```
SQL> alter table sales_order
  2  add (CLIENT_ADDRESS varchar(100),
  3  CLIENT_CONTACT_NO number(10));

Table altered.
```

(iii.) Display details of all orders placed by clients in the month of ‘January’. (Sales_Order_No, Order_date, Client_Nme, Order_status and Item_name).

```
SQL> Select * from Sales_order natural join Sales_order_details where to_char(order_date) like '%JAN%';

SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- -------- ------------------------------ --------------------
CLIENT_ADDRESS
--------------------------------------------------------------------------------
CLIENT_CONTACT_NO ITEM_NAME                         QUANTITY       RATE
----------------- ------------------------------ ---------- ----------
            1 20-JAN-01 Ivan Bayross                    Fulfilled

                 Rucksacks-Brown                         10      450.5

            1 20-JAN-01 Ivan Bayross                    Fulfilled

                 Rucksacks-Tan                           20     500.25

SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- -------- ------------------------------ --------------------
CLIENT_ADDRESS
--------------------------------------------------------------------------------
CLIENT_CONTACT_NO ITEM_NAME                         QUANTITY       RATE
----------------- ------------------------------ ---------- ----------

            1 20-JAN-01 Ivan Bayross                    Fulfilled

                 Suitcase 18", Moulded, Ivory            10       1075

            2 22-JAN-01 Pramada Jaguste                 Fulfilled


SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- -------- ------------------------------ --------------------
CLIENT_ADDRESS
--------------------------------------------------------------------------------
CLIENT_CONTACT_NO ITEM_NAME                         QUANTITY       RATE
----------------- ------------------------------ ---------- ----------
                 Suitcase 18", Soft, Tan                 10     1575.2

            2 22-JAN-01 Pramada Jaguste                 Fulfilled

                Suitcase 18", Soft, Tan                  10     1575.2
```

(iv.) Display the quantity and rate, by rounding the rate to the nearest integer.

```
SQL> Select Sales_order_no, Item_name,round(Quantity),round(Rate) from sales_order_details;

SALES_ORDER_NO ITEM_NAME                    ROUND(QUANTITY) ROUND(RATE)
-------------- ------------------------------ --------------- -----------
             1  Rucksacks-Brown                             10         451
             1  Rucksacks-Tan                               20         500
             1  Suitcase 18", Moulded, Ivory                10        1075
             2  Suitcase 18", Soft, Tan                     10        1575
             4  Rucksacks-Brown                             10         451
             2 Suitcase 18", Soft, Tan                      10        1575

6 rows selected.
```

(v.) List out the names of clients who have placed two or more than two orders.

```
SQL> Select distinct(client_name) from sales_order natural join sales_order_details where
  2  sales_order_no = any(select sales_order_no from sales_order_details group by sales_order_no having count(sales_order_no)>1);

CLIENT_NAME
------------------------------
Ivan Bayross
Pramada Jaguste
```

(vi.) Change the status ‘In process’ to ‘Under process’ using string functions.

select sales_order_no, replace(’in process’,’under_process’) as order_status from sales_order where order_status =’In Progress’;

```
SQL> select sales_order_no, replace('in process','under_process') as order_status from sales_order where order_status ='In Progress';

SALES_ORDER_NO ORDER_STAT
-------------- ---------
             2 in process
             6 in process
```

(vii.) Create a list of all fulfilled orders. (Sales_Order_No, Order_date, Client_Nme, Order_status)

I did this query after the 8th one, so the order 2 is also being shown.

```
SQL> select Sales_Order_No, Order_date, Client_Name, Order_status
  2   from sales_order natural join sales_order_details where order_status =’Fulfilled’;

SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- --------- ------------------------------ --------------------
             1 20-JAN-01 Ivan Bayross                   Fulfilled
             1 20-JAN-01 Ivan Bayross                   Fulfilled
             1 20-JAN-01 Ivan Bayross                   Fulfilled
             2 22-JAN-01 Pramada Jaguste                Fulfilled
             4 06-FEB-01 Basu Navindgi                  Fulfilled
             2 22-JAN-01 Pramada Jaguste                Fulfilled

6 rows selected.
```

(viii.) Update the status of sales order No:2 to ‘Fulfilled’.

```
SQL> Update sales_order set order_status =’Fulfilled’ where sales_order_no = 2;

1 row updated.
```

(ix.) Display the sales order table by sorting them in ascending order of the clients name.

```
SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- --------- ------------------------------ --------------------
CLIENT_ADDRESS
--------------------------------------------------------------------------------
CLIENT_CONTACT_NO
-----------------
             4 06-FEB-01 Basu Navindgi                  Fulfilled



             1 20-JAN-01 Ivan Bayross                   Fulfilled



SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- --------- ------------------------------ --------------------
CLIENT_ADDRESS
--------------------------------------------------------------------------------
CLIENT_CONTACT_NO
-----------------

             6 25-FEB-01 Ivan Bayross                   In Progress



             2 22-JAN-01 Pramada Jaguste                Fulfilled


SALES_ORDER_NO ORDER_DAT CLIENT_NAME                    ORDER_STATUS
-------------- --------- ------------------------------ --------------------
CLIENT_ADDRESS
--------------------------------------------------------------------------------
CLIENT_CONTACT_NO
-----------------
```