NAME : NABANKUR PAUL

ROLL : 2151238

DEPARTMENT : CSE

SECTION : A

AUTONOMY ROLL NO : 12622001214

SUBJECT : SQL

PRODUCT TABLE :

```
CREATE TABLE PRODUCT (
PRODUCTNO INT PRIMARY KEY,
PRODUCTDESC VARCHAR(30) NOT NULL,
PRODUCTFINISH CHAR(10),
UNITPRICE DECIMAL(10,2) CHECK (unitprice > 0),
QYTONHAND NUMERIC(3) DEFAULT 0 );
```

```
INSERT INTO PRODUCT VALUES (1, 'End table', 'Cherry', 175.00, 8);
INSERT INTO PRODUCT VALUES (2,'Coffee table', 'Birch', 200.00, 4);
INSERT INTO PRODUCT VALUES (3,'Computer desk', 'Oak', 375.00, 5);
INSERT INTO PRODUCT VALUES (4,'Entertainment Center', 'Maple', 650.00, 3);
INSERT INTO PRODUCT (PRODUCTNO, PRODUCTDESC ,PRODUCTFINISH, UNITPRICE) VALUES (5,'Writer''s
Desk', 'Oak', 325.00);
-- INSERT INTO PRODUCT VALUES (5,'Writer''s Desk', 'Oak', 325.00, 0);
INSERT INTO PRODUCT VALUES (6,'8-Drawer dresser', 'Birch', 750.00, 5);
INSERT INTO PRODUCT VALUES (7,'48" Bookcase', 'Walnut', 150.00, 5);
INSERT INTO PRODUCT VALUES (8,'48" Bookcase', 'Oak', 175.00, 2);
INSERT INTO PRODUCT VALUES (9,'96" Bookcase', 'Walnut', 225.00, 4);
INSERT INTO PRODUCT VALUES (10,'96" Bookcase', 'Oak', 200.00, 4);
INSERT INTO PRODUCT VALUES (11,'4-Drawer dresser', 'Oak', 500.00, 3);
INSERT INTO PRODUCT VALUES (12,'8-Drawer dresser', 'Oak', 800.00, 2);
INSERT INTO PRODUCT VALUES (13,'Nightstand', 'Cherry', 150.00, 5);
INSERT INTO PRODUCT VALUES (14,'Writer''s desk', 'Birch', 300.00, 2);
```

PRODUCTNO	PRODUCTDESC	PRODUCTFINISH	UNITPRICE	QTYONHAND
1	End table	Cherry	175	8
2	Coffee table	Birch	200	4
3	Computer desk	Oak	375	5
4	Entertainment Center	Maple	650	3
5	Writer's Desk	Oak	325	0
6	8-Drawer dresser	Birch	750	5
7	48" Bookcase	Walnut	150	5
8	48" Bookcase	Oak	175	2
9	96" Bookcase	Walnut	225	4
10	96" Bookcase	Oak	200	4
11	4-Drawer dresser	Oak	500	3
12	8-Drawer dresser	Oak	800	2
13	Nightstand	Cherry	150	5
14	Writer's desk	Birch	300	2

CUSTOMER TABLE:

```
CREATE TABLE CUSTOMER (
 customerid int,
 customername varchar(20) NOT NULL,
 caddress varchar(30),
ccity char(15),
 cstate char(2),
 czip char(6) NOT NULL,
 PRIMARY KEY (customerid),
UNIQUE (customername));
```

```
INSERT INTO CUSTOMER VALUES (1, 'Contemporary Casuals' , '1355 S. Avenue' , 'Kolkata' , 'WB' , 700019);
INSERT INTO CUSTOMER VALUES (2, 'Value furniture' , '151 Lake Terrace' , 'Cuttack' , 'OR' , 560002);
INSERT INTO CUSTOMER VALUES (3, 'Home Furnishings' , '1900 Ashram Road', 'Ahmedabad' , 'GU' , 380015);
INSERT INTO CUSTOMER VALUES (4, 'Eastern Furniture' , '1925 Belview Road', 'Bangalore' , 'KA' , 600207);
INSERT INTO CUSTOMER VALUES (5, 'Impressions' , '5585 M. G. Road' , 'Chennai', 'CH' , 300016);
INSERT INTO CUSTOMER VALUES (6, 'Furniture Gallery' , '325 Marine Dr.' , 'Mumbai' , 'MU' , 400004);
```

CUSTOMERID	CUSTOMERNAME	CADDRESS	CCITY	CSTATE	CZIP
1	Contemporary Casuals	1355 S. Avenue	Kolkata	WB	700019
2	Value furniture	151 Lake Terrace	Cuttack	OR	560002
3	Home Furnishings	1900 Ashram Road	Ahmedabad	GU	380015
4	Eastern Furniture	1925 Belview Road	Bangalore	KA	600207
5	Impressions	5585 M. G. Road	Chennai	CH	300016
6	Furniture Gallery	325 Marine Dr.	Mumbai	MU	400004

ORDERS :

```
create table orders(
orderno int,
orderdate date,
customerid int,
CONSTRAINT PKORDERS
PRIMARY KEY (orderno),
CONSTRAINT FKORDERS
FOREIGN KEY(customerid) REFERENCES CUSTOMER(customerid));

INSERT INTO ORDERS VALUES (1, '29-OCT-2021', 2);
INSERT INTO ORDERS VALUES (2, '11-JAN-2021', 3);
INSERT INTO ORDERS VALUES (3, '15-OCT-2021', 1);
INSERT INTO ORDERS VALUES (4, '04-OCT-2021', 6);
INSERT INTO ORDERS VALUES (5, '02-NOV-2021', 4);
```

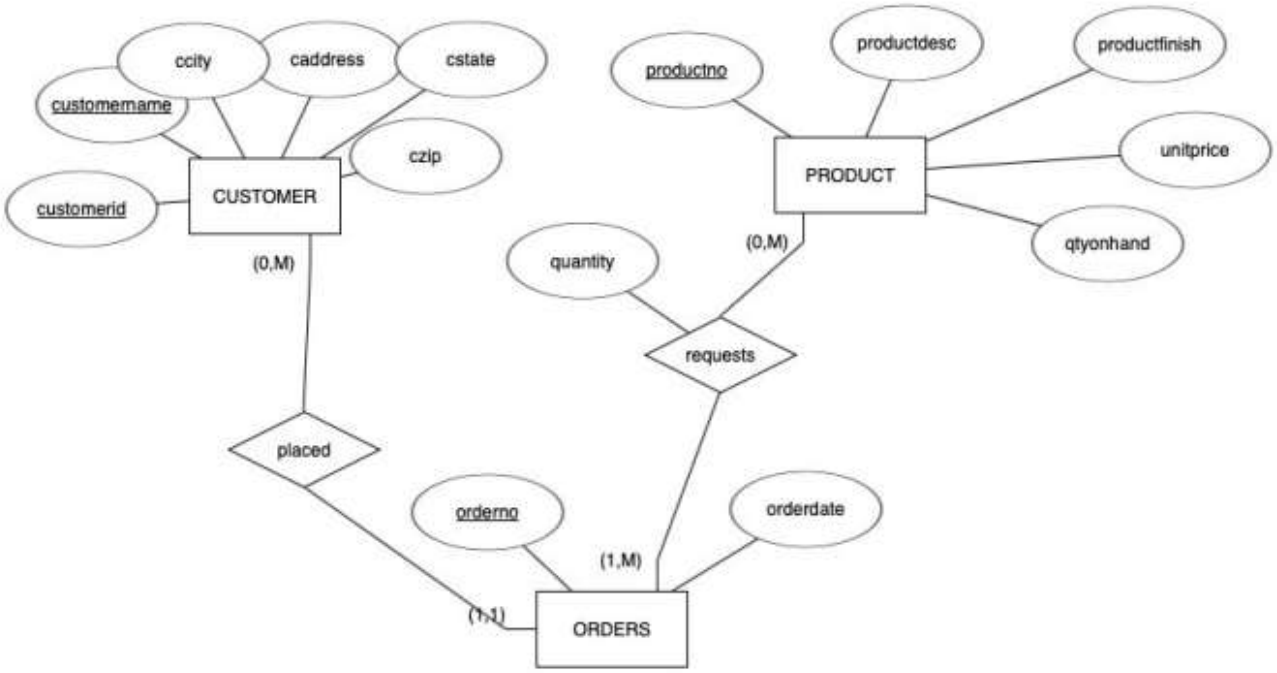
ORDERNO	ORDERDATE	CUSTOMERID
1	29-OCT-21	2
2	11-JAN-21	3
3	15-OCT-21	1
4	04-OCT-21	6
5	02-NOV-21	4

REQUESTS:

```
CREATE TABLE REQUESTS(
   ORDERNO INT,
   PRODUCTNO INT,
   QUANTITY INT NOT NULL,
   FOREIGN KEY(PRODUCTNO) REFERENCES PRODUCT(PRODUCTNO),
   FOREIGN KEY(ORDERNO) REFERENCES
ORDERS(ORDERNO)
)

INSERT INTO REQUESTS VALUES(1, 4, 1);
INSERT INTO REQUESTS VALUES(1, 5, 10);
INSERT INTO REQUESTS VALUES(1, 10, 2);
INSERT INTO REQUESTS VALUES(2, 3, 1);
INSERT INTO REQUESTS VALUES(2, 8, 2);
INSERT INTO REQUESTS VALUES(2, 14, 1);
INSERT INTO REQUESTS VALUES(3, 1, 5);
INSERT INTO REQUESTS VALUES(3, 5, 10);
INSERT INTO REQUESTS VALUES(3, 6, 2);
INSERT INTO REQUESTS VALUES(4, 3, 1);
INSERT INTO REQUESTS VALUES(4, 8, 3);
INSERT INTO REQUESTS VALUES(5, 6, 2);
INSERT INTO REQUESTS VALUES(5, 10, 1);
```

ORDERNO	PRODUCTNO	QUANTITY
1	4	1
1	5	10
1	10	2
2	3	1
2	8	2
2	14	1
3	1	5
3	5	10
3	6	2
4	3	1
4	8	3
5	6	2
5	10	1



C. Answer the queries:

1. List all products

```
SELECT *
FROM PRODUCT;
```

PRODUCTNO	PRODUCTDESC	PRODUCTFINISH	UNITPRICE	QTYONHAND
1	End table	Cherry	175	8
2	Coffee table	Birch	200	4
3	Computer desk	Oak	375	5
4	Entertainment Center	Maple	650	3
5	Writer's Desk	Oak	325	0
6	8-Drawer dresser	Birch	750	5
7	48" Bookcase	Walnut	150	5
8	48" Bookcase	Oak	175	2
9	96" Bookcase	Walnut	225	4
10	96" Bookcase	Oak	200	4
11	4-Drawer dresser	Oak	500	3
12	8-Drawer dresser	Oak	800	2
13	Nightstand	Cherry	150	5
14	Writer's desk	Birch	300	2

2. List all product names and prices (unitprice)

```
SELECT PRODUCTDESC, UNITPRICE
FROM PRODUCT;
```

PRODUCTDESC	UNITPRICE
End table	175
Coffee table	200
Computer desk	375
Entertainment Center	650
Writer's Desk	325
8-Drawer dresser	750
48" Bookcase	150
48" Bookcase	175
96" Bookcase	225
96" Bookcase	200
4-Drawer dresser	500
8-Drawer dresser	800
Nightstand	150
Writer's desk	300

3. List all product names whose product prices > Rs.200

```
SELECT PRODUCTDESC
FROM PRODUCT
WHERE UNITPRICE>200;
```

PRODUCTDESC
Computer desk
Entertainment Center
Writer's Desk
8-Drawer dresser
96" Bookcase
4-Drawer dresser
8-Drawer dresser
Writer's desk

4. List all product names whose product prices > Rs.200 and qty_on_hand > 5

```
SELECT PRODUCTDESC
FROM PRODUCT
WHERE UNITPRICE>200 AND QTYONHAND >5;
```

no data found

5. List all product names whose product prices > Rs.200 and qty_on_hand between 1 and 5

```
SELECT PRODUCTDESC
FROM PRODUCT
WHERE UNITPRICE>200 AND QTYONHAND BETWEEN 1 AND 5;
```

PRODUCTDESC
Computer desk
Entertainment Center
8-Drawer dresser
96" Bookcase
4-Drawer dresser
8-Drawer dresser
Writer's desk

6. List all products with finish = "Oak"

```
SELECT PRODUCTDESC
FROM PRODUCT
WHERE PRODUCTFINISH = 'Oak';
```

PRODUCTDESC
Computer desk
Writer's Desk
48" Bookcase
96" Bookcase
4-Drawer dresser
8-Drawer dresser

7. List all products with finish = "Oak" or "Walnut"

```
SELECT PRODUCTDESC
FROM PRODUCT
WHERE PRODUCTFINISH = 'Oak' OR PRODUCTFINISH = 'Walnut';

SELECT PRODUCTDESC
FROM PRODUCT
WHERE PRODUCTFINISH IN('Oak','Walnut');
```

PRODUCTDESC
Computer desk
Writer's Desk
48" Bookcase
48" Bookcase
96" Bookcase
96" Bookcase
4-Drawer dresser
8-Drawer dresser

8. List all products with finish = "Oak" or unitprice >= 300

```
SELECT PRODUCTDESC
FROM PRODUCT
WHERE PRODUCTFINISH = 'Oak' OR UNITPRICE >= 300;
```

PRODUCTDESC
Computer desk
Entertainment Center
Writer's Desk
8-Drawer dresser
48" Bookcase
96" Bookcase
4-Drawer dresser
8-Drawer dresser
Writer's desk

9. List all product names and prices arranged by prices

```
SELECT PRODUCTDESC, UNITPRICE
FROM PRODUCT
ORDER BY UNITPRICE;
```

PRODUCTDESC	UNITPRICE
48" Bookcase	150
Nightstand	150
48" Bookcase	175
End table	175
96" Bookcase	200
Coffee table	200
96" Bookcase	225
Writer's desk	300
Writer's Desk	325
Computer desk	375
4-Drawer dresser	500
Entertainment Center	650
8-Drawer dresser	750
8-Drawer dresser	800

10. List all product names and prices whose finish is "Oak" arranged by names in reverse order

```
SELECT PRODUCTDESC, UNITPRICE
FROM PRODUCT
WHERE PRODUCTFINISH = 'Oak'
ORDER BY PRODUCTDESC DESC;
```

PRODUCTDESC	UNITPRICE
Writer's Desk	325
Computer desk	375
96" Bookcase	200
8-Drawer dresser	800
48" Bookcase	175
4-Drawer dresser	500

11. List all distinct Bookcases.

```
select distinct productdesc
from product
where productdesc like '%Bookcase';
```

PRODUCTDESC
48" Bookcase
96" Bookcase

12. List the product prices if they are increased by 10%.

```
select unitprice*1.1 as incprice
from product;
```

INCPRICE
192.5
220
412.5
715
357.5
825
165
192.5
247.5
220
550
880
165
330

13. How many products are there?

```
select count(productno)
from product;
```

COUNT(PRODUCTNO)
14

14. For every product finish, find out the total quantity of products

```
select sum(qtyonhand)
from product
group by productfinish;
```

SUM(QTYONHAND)
13
9
11
16
3

15. List every product finish having unit price > 200 and average of qtyonhand greater than 3

```
select productfinish
from product
where unitprice>200
group by productfinish
having  avg(qtyonhand) >3;
```

PRODUCTFINISH
Walnut
Birch

16. List product name(s) having maximum quantity on hand

```
select productdesc
from product
where qtyonhand=any(select max(qtyonhand)
                    from product);
```

PRODUCTDESC
End table

17. Find out value of inventory for every product finish

```
select sum(qtyonhand*unitprice) as inventory
from product
group by productfinish;
```

INVENTORY
2150
1650
5150
6125
1950

18. List all products whose unitprice is same as some made of ‘Oak’

```
select productdesc
from product
where productfinish <> 'Oak' and unitprice = any(
select unitprice
from product
where productfinish='Oak');
```

PRODUCTDESC
End table
Coffee table

19. List product name(s) having qty on hand more than the average qty on hand

```
select productdesc
from product
where qtyonhand > (select avg(qtyonhand)
                   from product);
```

PRODUCTDESC
End table
Coffee table
Computer desk
8-Drawer dresser
48" Bookcase
96" Bookcase
96" Bookcase
Nightstand

20. List products whose unit price is greater than every unitprice of different productfinish

```
SELECT P1.PRODUCTNO, P1.PRODUCTDESC
FROM PRODUCT P1
WHERE P1.UNITPRICE > ALL (
   SELECT P2.UNITPRICE
   FROM PRODUCT P2
   WHERE P2.PRODUCTFINISH <> P1.PRODUCTFINISH
);
```

PRODUCTNO	PRODUCTDESC
12	8-Drawer dresser

21. List all products which are either made of “Oak” or which has qtyonhand > 2

```
select productno,productdesc
from product
where productfinish='Oak' or qtyonhand>2;
```

PRODUCTNO	PRODUCTDESC
1	End table
2	Coffee table
3	Computer desk
4	Entertainment Center
5	Writer's Desk
6	8-Drawer dresser
7	48" Bookcase
8	48" Bookcase
9	96" Bookcase
10	96" Bookcase
11	4-Drawer dresser
12	8-Drawer dresser
13	Nightstand

22. How many products are there whose finish is of "Oak"?

```
select count(productno)
from product
group by productfinish
having productfinish='Oak';
```

COUNT(PRODUCTNO)
6

23. List every productfinish whose total qtyonhand is greater than 3.

```
select productfinish
from product
group by productfinish
having sum(qtyonhand)>3;
```

PRODUCTFINISH
Cherry
Walnut
Birch
Oak

24. List every productfinish having unit price > 200 and average of qtyonhand greater than 3 arranged in reversed order of productfinish.

```
select productfinish
from product
where unitprice>200
group by productfinish
having avg(qtyonhand)>3
order by productfinish desc;
```

PRODUCTFINISH
Walnut
Birch

25. Find out the total value of inventory (unitprice * qtyonhand) summed over all products

```
SELECT SUM(UNITPRICE * QTYONHAND) AS
TOTAL_INVENTORY_VALUE
FROM PRODUCT;
```

TOTAL_INVENTORY_VALUE
17025

26. List all products whose unitprice is more than unitprice of products made of ‘Oak”

```
select productdesc
from product
where unitprice > any(select unitprice
                      from product
                      where productfinish = 'Oak');
```

PRODUCTDESC
8-Drawer dresser
8-Drawer dresser
Entertainment Center
4-Drawer dresser
Computer desk
Writer's Desk
Writer's desk
96" Bookcase
96" Bookcase
Coffee table

27. If the unitprice is increased by 10% for every product, find out the total increase of unitprice for every productfinish (without updating tables)

```
SELECT PRODUCTFINISH, SUM(UNITPRICE * 0.10) AS TOTAL_UNITPRICE_INCREASE
FROM PRODUCT
GROUP BY PRODUCTFINISH;
```

PRODUCTFINISH	TOTAL_UNITPRICE_INCREASE
Cherry	32.5
Walnut	37.5
Birch	125
Oak	237.5
Maple	65

28. List all products whose unitprice is same as some other product.

```
select p.productdesc,p.unitprice
from product p
where p.unitprice =
any(select q.unitprice
   from product q
   where p.productno<>q.productno)
order by 2;
```

PRODUCTDESC	UNITPRICE
Nightstand	150
48" Bookcase	150
End table	175
48" Bookcase	175
Coffee table	200
96" Bookcase	200

29. List the products which are not made of “Oak” or “Walnut”

```
select productdesc
from product
where productfinish not in('Oak','Walnut');
```

PRODUCTDESC
End table
Coffee table
Entertainment Center
8-Drawer dresser
Nightstand
Writer's desk

30. List names of products whose finish is ‘Oak’ and having minimum qtyonhand

```
select productdesc
from product
where productfinish='Oak'
and qtyonhand = (select min(qtyonhand)
                 from product);
```

PRODUCTDESC
Writer's Desk

31.Is the following SQL statement valid? What output will be displayed?

```
SELECT *
FROM CUSTOMER,CUSTOMER;
```

=> not valid

=> column ambiguously defined

32. What will be the output for

```
SELECT *
FROM CUSTOMER, CUSTOMER;
```

=> column ambiguously defined

33. What will be the output for

```
SELECT *
FROM CUSTOMER C1, CUSTOMER C2;
```

=>cardesion product

34. What will be the output for

```
SELECT *
FROM CUSTOMER C1, CUSTOMER C2
WHERE C1.CUSTOMERID=C2.CUSTOMERID;
```

CUSTOMERID	CUSTOMERNAME	CADDRESS	CCITY	CSTATE	CZIP	CUSTOMERID	CUSTOMERNAME	CADDRESS	CCITY	CSTATE	CZIP
1	Contemporary Casuals	1355 S. Avenue	Kolkata	WB	700019	1	Contemporary Casuals	1355 S. Avenue	Kolkata	WB	700019
2	Value furniture	151 Lake Terrace	Cuttack	OR	560002	2	Value furniture	151 Lake Terrace	Cuttack	OR	560002
3	Home Furnishings	1900 Ashram Road	Ahmedabad	GU	380015	3	Home Furnishings	1900 Ashram Road	Ahmedabad	GU	380015
4	Eastern Furniture	1925 Belview Road	Bangalore	KA	600207	4	Eastern Furniture	1925 Belview Road	Bangalore	KA	600207
5	Impressions	5585 M. G. Road	Chennai	CH	300016	5	Impressions	5585 M. G. Road	Chennai	CH	300016
6	Furniture Gallery	325 Marine Dr.	Mumbai	MU	400004	6	Furniture Gallery	325 Marine Dr.	Mumbai	MU	400004

35. What will be the output for

```
SELECT *
FROM CUSTOMER C, ORDERS O
WHERE C.CUSTOMERID = O.CUSTOMERID;
```

CUSTOMERID	CUSTOMERNAME	CADDRESS	CCITY	CSTATE	CZIP	ORDERNO	ORDERDATE	CUSTOMERID
1	Contemporary Casuals	1355 S. Avenue	Kolkata	WB	700019	3	15-OCT-21	1
2	Value furniture	151 Lake Terrace	Cuttack	OR	560002	1	29-OCT-21	2
3	Home Furnishings	1900 Ashram Road	Ahmedabad	GU	380015	2	11-JAN-21	3
4	Eastern Furniture	1925 Belview Road	Bangalore	KA	600207	5	02-NOV-21	4
6	Furniture Gallery	325 Marine Dr.	Mumbai	MU	400004	4	04-OCT-21	6

=> customers who have placed order

36.List all product descriptions ordered in orderno1

```
SELECT PRODUCTDESC
FROM PRODUCT NATURAL JOIN REQUESTS
WHERE ORDERNO = 1;
```

PRODUCTDESC
Entertainment Center
Writer's Desk
96" Bookcase

37.List every request where qty ordered is more than the average quantity ordered for the product

```
SELECT r.ORDERNO, r.PRODUCTNO, r.QUANTITY
FROM REQUESTS r
WHERE r.QUANTITY > (
   SELECT AVG(QUANTITY)
   FROM REQUESTS
   WHERE PRODUCTNO = r.PRODUCTNO
);
```

ORDERNO	PRODUCTNO	QUANTITY
1	10	2
4	8	3

38.List the names of all customers who have placed an order

```
select c.customername,c.customerid
from customer c right join orders o
on c.customerid=o.customerid;
```

CUSTOMERNAME	CUSTOMERID
Contemporary Casuals	1
Value furniture	2
Home Furnishings	3
Eastern Furniture	4
Furniture Gallery	6

39.List the product descriptions which are ordered by customer named "Contemporary Casuals"

```
select p.productdesc
from product p,customer c,requests r,orders o
where p.productno=r.productno
and c.customerid=o.customerid
and r.orderno=o.orderno
and c.customername='Contemporary Casuals';
```

PRODUCTDESC
End table
Writer's Desk
8-Drawer dresser

40.List the order dates for every order made by customer "Value Furniture"

```
select o.orderdate
from orders o inner join customer c
on      c.customerid=o.customerid
and c.customername='Value Furniture';
```

41.List every order which includes a request for a product made of "Oak"

```
SELECT DISTINCT o.orderno
FROM ORDERS o
INNER JOIN REQUESTS r ON o.orderno = r.orderno
INNER JOIN PRODUCT p ON r.PRODUCTNO = p.PRODUCTNO
WHERE p.PRODUCTFINISH = 'Oak';
```

ORDERNO
1
2
4
5
3

42.List every order which includes request only for products made of “Oak”

ORDERNO
4

```
SELECT DISTINCT o.orderno
FROM ORDERS o
JOIN REQUESTS r ON o.orderno = r.orderno
JOIN PRODUCT p ON r.productno = p.productno
WHERE p.productfinish = 'Oak'
AND NOT EXISTS (
   SELECT 1
   FROM REQUESTS r2
   JOIN PRODUCT p2 ON r2.productno = p2.productno
   WHERE r2.orderno = o.orderno
   AND p2.productfinish != 'Oak'
);
```

43.List the names of customers who have ordered a product of “Birch” finish

CUSTOMERNAME
Contemporary Casuals
Home Furnishings
Eastern Furniture

```
SELECT DISTINCT c.customername
FROM CUSTOMER c
INNER JOIN ORDERS o ON c.customerid = o.customerid
INNER JOIN REQUESTS r ON o.orderno = r.orderno
INNER JOIN PRODUCT p ON r.PRODUCTNO = p.PRODUCTNO
WHERE p.PRODUCTFINISH = 'Birch';
```

44.List the names of customers who have not ordered any product of “Maple” finish

CUSTOMERNAME
Contemporary Casuals
Home Furnishings
Eastern Furniture
Impressions
Furniture Gallery

```
SELECT DISTINCT c.customername
FROM CUSTOMER c
LEFT JOIN ORDERS o ON c.customerid = o.customerid
LEFT JOIN REQUESTS r ON o.orderno = r.orderno
LEFT JOIN PRODUCT p ON r.PRODUCTNO = p.PRODUCTNO
AND p.PRODUCTFINISH = 'Maple'
WHERE p.PRODUCTNO IS NULL;
```

45.List the total quantity ordered of every product finish

SUM(R.QUANTITY)
5
-
30
4
1

```
select sum(r.quantity)
from product p
```

left join requests r
on r.productno=p.productno
group by productfinish;

46.List the customers who have not ordered products made of “Birch”

```
SELECT DISTINCT c.customerid, c.customername
FROM CUSTOMER c
WHERE NOT EXISTS (
   SELECT 1
   FROM ORDERS o
   JOIN REQUESTS r ON o.orderno = r.orderno
   JOIN PRODUCT p ON r.productno = p.productno
   WHERE o.customerid = c.customerid
   AND p.productfinish = 'Birch'
);
```

CUSTOMERID	CUSTOMERNAME
2	Value furniture
5	Impressions
6	Furniture Gallery

47.List quantity on hand and quantity ordered for every product

```
select
p.productno,p.QYTONHAND,sum(r.quantity)
from product p
left join requests r on p.productno=r.productno
left join orders o on o.orderno=r.orderno
group by p.productno,p.qytonhand
order by 1;
```

PRODUCTNO	QYTONHAND	SUM(R.QUANTITY)
1	8	5
2	4	-
3	5	2
4	3	1
5	0	20
6	5	4
7	5	-
8	2	5
9	4	-
10	4	3
11	3	-
12	2	-
13	5	-
14	2	-

48.List the products which have not been ordered

```
select  p.productno
from product p
left join requests r on r.productno=p.productno
where r.productno is null;
```

PRODUCTNO
14
7
11
2
12
9
13

49.List the customers who have not placed any order

```
select c.customername,c.customerid
from customer c
left join orders o
on c.customerid=o.customerid
where o.customerid is null;
```

CUSTOMERNAME	CUSTOMERID
Impressions	5

50.List the products whose total ordered quantity is more than qtyonhand.

```
SELECT p.PRODUCTNO, p.PRODUCTDESC, p.QYTONHAND, SUM(r.QUANTITY) AS TotalOrderedQuantity
FROM PRODUCT p
LEFT JOIN REQUESTS r ON p.PRODUCTNO = r.PRODUCTNO
GROUP BY p.PRODUCTNO, p.PRODUCTDESC, p.QYTONHAND
HAVING SUM(r.QUANTITY) > p.QYTONHAND;
```

PRODUCTNO	PRODUCTDESC	QYTONHAND	TOTALORDEREDQUANTITY
8	48" Bookcase	2	5
5	Writer's Desk	0	20