HW#1

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1. Find the names of parts for which there is no supplier.

select id from parts

EXCEPT

select distinct pid from catalog

1. Find the names of suppliers who supply every part.

SELECT S.sname

FROM Suppliers S

WHERE NOT EXISTS ((

SELECT P.id

FROM Parts P)

EXCEPT

(SELECT C.pid

FROM Catalog C

WHERE C.sid=S.id));

1. Find the names of suppliers who supply every red part.

create view temp

as

select \*

from catalog join parts

on catalog.pid = parts.id

where parts.color='red'

select distinct sname

from suppliers join temp

on suppliers.id = temp.sid

1. Find the names of parts supplied by Acme Widget Suppliers and no one else.

SELECT P.pname

FROM Parts P, Catalog C, Suppliers S

WHERE P.id = C.pid and C.sid=S.id

AND S.sname = 'Acme Widget Suppliers'

AND NOT EXISTS

(SELECT \* FROM Catalog C1, Suppliers S1

WHERE P.id=C1.pid AND C1.sid=S1.id AND S1.sname<>'Acme Widget Suppliers');

5. Find the IDs of suppliers who charge more for some part then the average cost of that part (average over all suppliers who supply that part).

SELECT DISTINCT c.sid

FROM Catalog C

WHERE C.cost > (select avg(C1.cost)

FROM Catalog C1

WHERE C1.pid=C.pid);

6. For each part, find the name of the supplier who charges the most for that part.

SELECT P.id, S.sname

FROM Parts P, Suppliers S, Catalog C

WHERE C.pid = P.id AND C.sid=S.id AND C.cost =

(SELECT MAX(C1.cost)

FROM Catalog C1

WHERE C1.pid=P.id);

7. Find the IDs of suppliers who do not sell any non-red parts.

SELECT DISTINCT sid

FROM Catalog c, Parts p

WHERE c.pid=p.id AND p.color LIKE 'Red%' AND sid NOT IN (

SELECT sid

FROM Catalog c1, parts p1

WHERE p1.color NOT LIKE 'Red%' AND p1.id = c1.pid);

8. Find the IDs of suppliers who sell a red part and a green part.

SELECT DISTINCT C.sid

FROM Catalog C, Parts P

WHERE C.pid = P.id AND P.color like 'Red%'

INTERSECT

SELECT DISTINCT C1.sid

FROM Catalog C1, Parts P1

WHERE C1.pid=P1.id AND P1.color like 'Green%';

9. Find the IDs of suppliers who sell a red part or a green part.

SELECT Distinct C.sid

FROM Catalog C, Parts P

WHERE C.pid=P.id AND P.color like 'Red%'

UNION

SELECT Distinct C1.sid

FROM Catalog C1, Parts P1

WHERE C1.pid=P1.id AND P1.color like 'Green%';

10. For every supplier that only supplies green parts, print the name of the supplier and the total number of parts that she supplies.

SELECT S.sname, COUNT(\*) as PartCount

FROM Suppliers S, Catalog C, Parts P

WHERE C.sid = S.id and P.id = C.pid and P.color = 'GREEN'

GROUP BY S.sname, S.id

11. For every supplier that supplies a green part and a red part, print both the name and price of the most expensive part that she supplies and the name and price of the least expensive part that she supplies.

create view temp2

as

SELECT DISTINCT C.sid

FROM Catalog C, Parts P

WHERE C.pid = P.id AND P.color like 'Red%'

INTERSECT

SELECT DISTINCT C1.sid

FROM Catalog C1, Parts P1

WHERE C1.pid=P1.id AND P1.color like 'Green%';

SELECT s.sname,Max(c.cost),Min(c.cost)

from temp2,catalog c,suppliers s

where temp2.sid=c.sid and c.sid=s.id

GROUP BY S.sname, S.id