RAMNIKHIL PALASETTY- RP946

Data Management Systems Design Assignment - 3

# Find the SIDs of suppliers who supply a red part and a green part.

SELECT C.SID

FROM PARTS P, CATALOG C WHERE C.PID=P.PID

AND (P. COLOR= ‘RED’ AND P. COLOR= ‘GREEN’)

# Find the SIDs of suppliers who supply a red part or a green part.

SELECT SID

FROM CATALOG C, PARTS P

WHERE (P. COLOR = ‘RED’ OR P. COLOR = ‘GREEN’) AND P.PID = C.PID

# Find the SNAMEs of suppliers who supply every red part and every green part.

SELECT SNAME FROM SUPPLIERS

WHERE EXISTS (WHERE C.SID

FROM CATALOG C, PART P

WHERE C.PID=P.PID AND P. COLOR= ‘RED’) JOIN (WHERE C.SID

FROM CATALOG C, PART P

WHERE C.PID=P.PID AND P. COLOR= ‘GREEN’)

# Find the SNAMEs of suppliers who do not supply every red part.

SELECT SNAME FROM. SUPPLIER

WHERE NOT EXISTS (SELECT C.SID

FROM CATALOG C, PART P

WHERE C.PID=P.PID AND P. COLOR=‘RED’)

# For every supplier that only supplies red parts, print the SID and the name of the supplier and the average cost of parts that she supplies.

SELECT C.SID, C. SNAME, AVG(COST) AS AVERAGE FROM SUPPLIER S, CATALOG C

WHERE C.SID = S.SID

AND C.SID IN (SELECT S.SID

FROM CATALOG C, PARTS P

WHERE C.PID = P.PID AND P. COLOR = ‘red’)

# For each part, find the SNAMEs of the suppliers who do not charge the most for that part. The answer of this query should have two columns PID and SNAME.

SELECT C.PID, S. SNAME

FROM SUPPLIER S, CATALOG C

WHERE S.SID = C.SID AND C. COST < (SELECT MAX(COST)

FROM CATALOG C ,PART P WHERE P.PID = C.PID)

# For every part supplied by a supplier who is at the city of Newark, print the PID and the SID and the name of the suppliers who sell it at the highest price.

SELECT C.PID, S.SID, S. SNAME FROM SUPPLIERS S, CATALOG C

WHERE C.SID = S.SID AND S.PID IN (SELECT PID

FROM CATALOG NATURAL JOIN SUPPLIERS WHERE ADDRESS = ’NEWARK’)

AND C. COST = (SELECT MAX(COST)

FROM CATALOG WHERE PID = S.PID)

# For every part which has at least two suppliers, find its PID, its PNAME and the total number of suppliers who sell it.

SELECT PID, PNAME, COUNT(SID)

FROM PARTS NATURAL JOIN CATALOG HAVING COUNT(SID) > = 2

# Find the PIDs of parts supplied by every supplier who is at the city of Newark or by every supplier who is at the city of Trenton.

SELECT P.PID FROM PARTS P

WHERE EXIST (SELECT C.SID

FROM SUPPLIERS S, CATALOG C WHERE CITY = ’Newark’ AND S.SID=C.SID)

JOIN (SELECT P.PID FROM PARTS P

WHERE EXISTS (SELECT C.SID

FROM SUPPLIERS S, CATALOG C WHERE CITY = ’Trenton’ AND S.SID=C.SID)

# Find the PIDs of parts supplied by every supplier who is at the city of Newark and by every supplier who is at the city of Trenton.

SELECT P.PID FROM PARTS P

WHERE EXIST (SELECT C.SID

FROM SUPPLIERS S, CATALOG C WHERE CITY = ’Newark’ AND S.SID=C.SID)

JOIN (SELECT P.PID FROM PARTS P

WHERE EXISTS (SELECT C.SID

FROM SUPPLIERS S, CATALOG C WHERE CITY = ’Trenton’ AND S.SID=C.SID)

# Find the SIDs of suppliers who supply a red part but do not supply a blue part.

SELECT SID

FROM PARTS NATURAL JOIN CATALOG WHERE COLOR = ’red’

AND SID NOT IN (SELECT SID

FROM. PARTS NATURAL JOIN CATALOG WHERE COLOR =’blue’)

# For every supplier who supplies at least 4 parts, find his SID, SNAME and the PID of the most expensive part(s) that he supplies.

SELECT S.SID, S. SNAME, C.PID FROM SUPPLIERS S, CATALOG C

WHERE S.SID = C.SID AND (SELECT COUNT(PID)

FROM CATALOG WHERE SID = S.SID) >= 4

AND C. COST = (SELECT MAX(COST)

FROM CATALOG WHERE SID = S.SID)

# For every distinct color of the parts, find the total number of suppliers who supply a part of this color.

SELECT COLOR, COUNT(SID) FROM PARTS P, CATALOG C WHERE P.PID=C.PID

GROUP BY COLOR

# Find the SIDs of suppliers who supply at least two parts of different colors.

SELECT SID

FROM PARTS P NATURAL JOIN CATALOG GROUP BY SID

HAVING COUNT (DISTINCT P. COLOR) > 1

# For every part which has a supplier, find its PID, PNAME, its average cost, maximum cost and minimum cost.

SELECT PID, PNAME, AVG(COST), MAX(COST), MIN(COST) FROM PARTS P, CATALOG C

WHERE P.PID=C.PID GROUP BY C.PID, P.PNAME