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CS353 – Section 2

Homework

Q1)

a)

SELECT Product.model, Printer.price

FROM Product

INNER JOIN Printer

ON Product.model = Printer.model

WHERE Printer.color = true;

b)

SELECT Product.maker

FROM Product

Where type = 'PC' OR type = 'Laptop'

AND Product.maker NOT IN

(SELECT Product.maker

FROM Product

Where type = 'Printer');

c)

SELECT Product.model, Laptop.price

FROM Product

INNER JOIN Laptop

ON Product.model = Laptop.model

WHERE Laptop.hd > 120 AND Laptop.ram >= 1024 AND Laptop.screen >= 17.0;

d)

SELECT A.maker

FROM Product A, Product B

WHERE A.model IN (SELECT model FROM PC

WHERE speed >= 2.5)

AND A.maker <> B.maker

AND A.model = B.model

AND A.maker < B.maker;

e)

i.

SELECT DISTINCT A.model

FROM Product A, Product B, Product C

WHERE A.type = 'PC'

AND B.type = 'PC'

AND C.type = 'PC'

AND A.model = B.model

AND B.model = C.model

AND A.model = C.model

AND A.maker <> B.maker

AND B.maker <> C.maker

AND A.maker <> C.maker;

ii.

SELECT model

FROM Product

WHERE type = 'PC'

GROUP BY model

HAVING COUNT(DISTINCT maker) > 2;

f)

SELECT DISTINCT maker

FROM Product A

WHERE (

SELECT COUNT(\*)

FROM Laptop L

INNER JOIN Product P

ON P.model = L.model

WHERE P.maker = A.maker

AND speed >= 2.50

) = (

SELECT COUNT(\*)

FROM Product

WHERE maker = A.maker

AND type = 'Laptop'

) AND (

SELECT COUNT(\*)

FROM PC L

INNER JOIN Product P

ON P.model = L.model

WHERE P.maker = A.maker

AND speed >= 2.50

) = (

SELECT COUNT(\*)

FROM Product

WHERE maker = A.maker

AND type = 'PC'

) AND (

SELECT COUNT(\*)

FROM Product

WHERE maker = A.maker

AND type = 'Printer'

) <> (

SELECT COUNT(\*)

FROM Product

WHERE maker = A.maker

);

g)

i.

SELECT DISTINCT A.maker

FROM Product A, Product B, Product C, Product D

WHERE (A.maker = B.maker

AND A.maker = C.maker)

AND NOT A.maker = D.maker

AND A.type = 'Laptop'

AND B.type = 'PC'

AND C.type = 'Printer';

ii.

SELECT DISTINCT A.maker

FROM Product A, Product B, Product C

WHERE A.maker = B.maker

AND A.maker = C.maker

AND A.type = 'Laptop'

AND B.type = 'PC'

AND C.type = 'Printer'

AND (( SELECT COUNT(\*)

FROM Product

WHERE maker = A.maker) = 3);

h)

i.

SELECT maker

FROM Product

INNER JOIN Laptop

ON Laptop.model = Product.model

WHERE Laptop.speed = (SELECT MAX(speed)

FROM Laptop);

ii.

SELECT maker

FROM Product

INNER JOIN Laptop

ON Laptop.model = Product.model

WHERE Laptop.speed = (SELECT MAX(speed)

FROM Laptop);

i)

SELECT A.model, B.model

FROM Laptop A, Laptop B

WHERE A.model <> B.model

AND A.model < B.model

AND A.speed = B.speed

AND A.ram = B.ram

AND A.screen = B.screen;

Q2)

1. This query is used to query a list of ships that were damaged or sunk, the respective battle they were damaged in and the battle result and the country of battle.
2. SELECT O.ship, O.battle, O.result, C.country

FROM OUTCOMES O, SHIPS S, CLASSES C

WHERE O.ship = S.name AND S.class = C.class

AND (

O.RESULT = “sunk” OR

O.RESULT = “damaged”

);

1. This query is used to find the country, name, type and name of the ships that had participated in a battle provided
2. CREATE TABLE result

SELECT O.ship as name

From Outcomes O

WHERE O.battle NOT IN(

(

SELECT O1.battle from Outcomes O1)

) EXCEPT (

SELECT O2.battle FROM Outcomes O2

WHERE O2.ship = O.ship

)

);

SELECT S.name, C.country, C.type

FROM Result R, Ship S, Classes C

WHERE R.name = S.name;

Q3)

* 1. DELETE FROM Laptop

WHERE ram <= 1024;

* 1. Assuming that we have to delete the manufacturers that produce Printers only, the query would be:

DELETE FROM Printer

WHERE Model IN (

(

SELECT Model

FROM Product

WHERE maker NOT IN (

SELECT maker

FROM Product

WHERE Product.type = “PC” OR

Product.type = ‘Laptop’

)

)

);

* 1. UPDATE Laptop

SET ram = 2 \* ram, price = price – 100, hd = 2 \* hd

WHERE model IN

(SELECT model

FROM Product

WHERE maker = “IMB” );

* 1. DELETE FROM SHIPS

WHERE name IN

(SELECT ship

FROM Outcome

WHERE result= ‘sunk’);