

King Fahd University of Petroleum & Minerals

Information and Computer Science Department

ICS 324 – Database Systems

Semester 182

HW 3

GROUP: 18

|  |  |
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**Q1. We have the following Schema:**

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| --- | --- | --- |
| **Supplier** | | |
| sid | sname | address |
| **Part** | | |
| pid | pname | color |
| **Catalog** | | |
| sid | pid | cost |

SELECT C.sid

FROM Catalog C

WHERE NOT EXISTS ( SELECT P.pid

FROM Parts P

WHERE (P.color = ‘red’ OR P.color = ‘green’)

AND (NOT EXISTS ( SELECT C1.sid

FROM Catalog C1

WHERE C1.sid = C.sid AND

C1.pid = P.pid)))

1)

SELECT C1.sid, C2.sid

FROM Catalog C1, Catalog C2

WHERE C1.pid = C2.pid AND C1.sid ≠ C2.sid

AND C1.cost > C2.cost

2)

SELECT C.sid

FROM Catalog C

WHERE EXISTS (SELECT C1.sid

FROM Catalog C1

WHERE C1.pid = C.pid AND C1.sid ≠ C.sid )

3)

SELECT C.pid

FROM Catalog C, Suppliers S

WHERE S.sname = ‘Ahmed’ AND C.sid = S.sid

AND C.cost ≥ ALL (Select C2.cost

FROM Catalog C2, Suppliers S2

WHERE S2.sname = ‘Ahmed’

AND C2.sid = S2.sid)

4)

WITH TMP1 AS

(SELECT pid

FROM Catalog

WHERE cost > 200

TMP2 AS

(SELECT C.pid

FROM Catalog C

WHERE (SELECT C1.sid

FROM Catalog C1

WHERE C1.pid = C.pid)

CONTAINS (SELECT sid FROM Supplier))

SELECT pid

FROM TMP2

WHERE pid NOT IN TMP1

5)

**Q2. We have the following Schema:**

|  |  |  |
| --- | --- | --- |
| **Employee** | | |
| eid | name | Office |
| **Manager** | |
| eid | mid |

SELECT eid, ename

FROM Manager M, Employee E

WHERE M.eid = E.eid

GROUP BY E.eid, E.ename

HAVING COUNT(\*)>2;

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6)

SELECT eid, ename

FROM Employee

WHERE eid NOT IN(

SELECT eid

FROM Manager);

7)

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SELECT office

FROM Manager M, Employee E

WHERE M.mid = E.eid AND name = 'Alice';

8)

SELECT E.eid, E.name, E.office

FROM Manager M, Employee E, Manager M1, Employee E1

WHERE M.mid = E.eid AND M1.mid = E1.eid AND E.office = E1.office;

9)

SELECT E.eid, E.name

FROM Employee E, Manager M, Manager M1

WHERE E.eid = M.eid AND M.mid = M1.eid;

10)