

**COSC 3480: Quiz #3**Name: SOLUTION

D. Mirkovic, Spring 2005

1. Consider the following schema:

Suppliers(sid: integer, *sname*: string, *address*: string)Parts(pid: integer, *pname*: string, *color*: string)Catalog(sid: integer, pid: integer, *cost*: real)

The key fields are underlined, and the domain of each field is listed after the field name.  
Write the following queries in SQL:

- a) Find the
- snames*
- of suppliers who supply a red part.

```
SELECT S.sname
FROM   Suppliers S, Parts P, Catalog C
WHERE  P.color='red' AND C.pid=P.pid AND C.sid=S.sid
```

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(2)

- b) Find the
- snames*
- of suppliers who supply every part.

```
SELECT S.sname
FROM   Catalog C, Suppliers S
WHERE  C.sid = S.sid AND
       NOT EXISTS (SELECT P.pid
                   FROM   Parts P
                   WHERE  NOT EXISTS (SELECT C1.sid
                                     FROM   Catalog C1
                                     WHERE  C1.sid = C.sid AND C1.pid = P.pid))
```

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(4)

- c) Find the
- sids*
- of suppliers who charge more for some part than the average cost of that part (averaged over all the 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 )
```

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(4)