

Name 1:

Date:

Name 2:

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)

1. Find the average cost of each part.

$\gamma_{avg(cost)} C$ $select\ avg(cost)\ from\ C\ group\ by\ pid;$

2. Find the minimum cost at which each part is being sold. List pid, and cost.

$\gamma_{pid, min(cost)} C$
 $select\ pid, min(cost)\ from\ C\ group\ by\ pid$

3. Find the part name(s) that has the largest number of suppliers. There might be more than one tuple in the result.

$A = \gamma_{pid, count(sid) \rightarrow count} S$

$\pi_{pname} . \left(\left(\gamma_{max(count) \rightarrow count} A \right) \bowtie A \right) \bowtie P$

```
select pname from
(select pid from
  (select max(count) as count from
    (select pid, count(sid) as count from
      S group by pid) as A1
  ) AS B
```

NATURAL JOIN

```
(select pid, count(sid) as count from
  S group by pid) as A
```

NATURAL JOIN P

or

```
WITH A AS (select pid, count(sid) as count
  from S group by pid)
```

```
SELECT pname from
  (SELECT max(count) as count FROM A)
  AS B
```

NATURAL JOIN A

NATURAL JOIN P;