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PROGRAM 3: SUPPLIER DATABASE

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 Catalog relation lists the prices charged for parts by Suppliers.
Write the following queries in SQL:

Schema Diagram

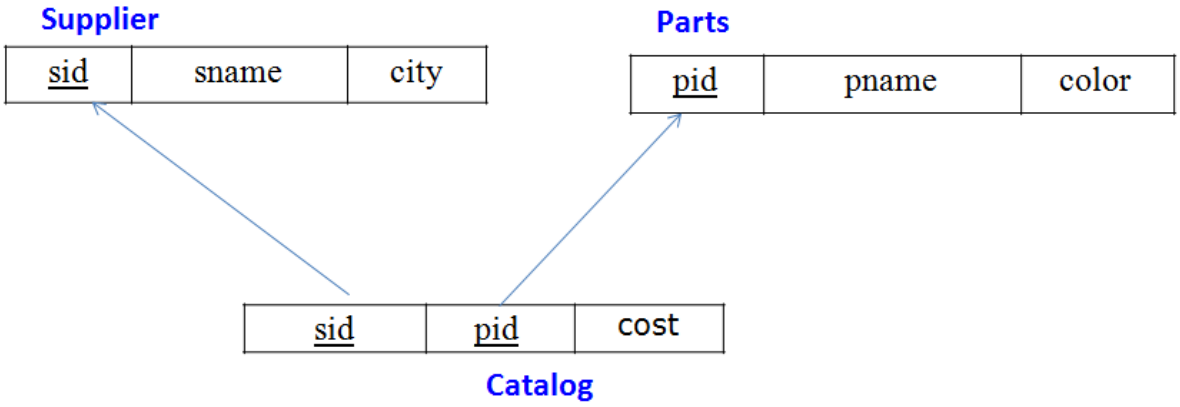


Table Data

SUPPLIERS

SID	SNAME	CITY
10001	Acme Widget	Bangalore
10002	Johns	Kolkata
10003	Vimal	Mumbai
10004	Reliance	Delhi

PARTS

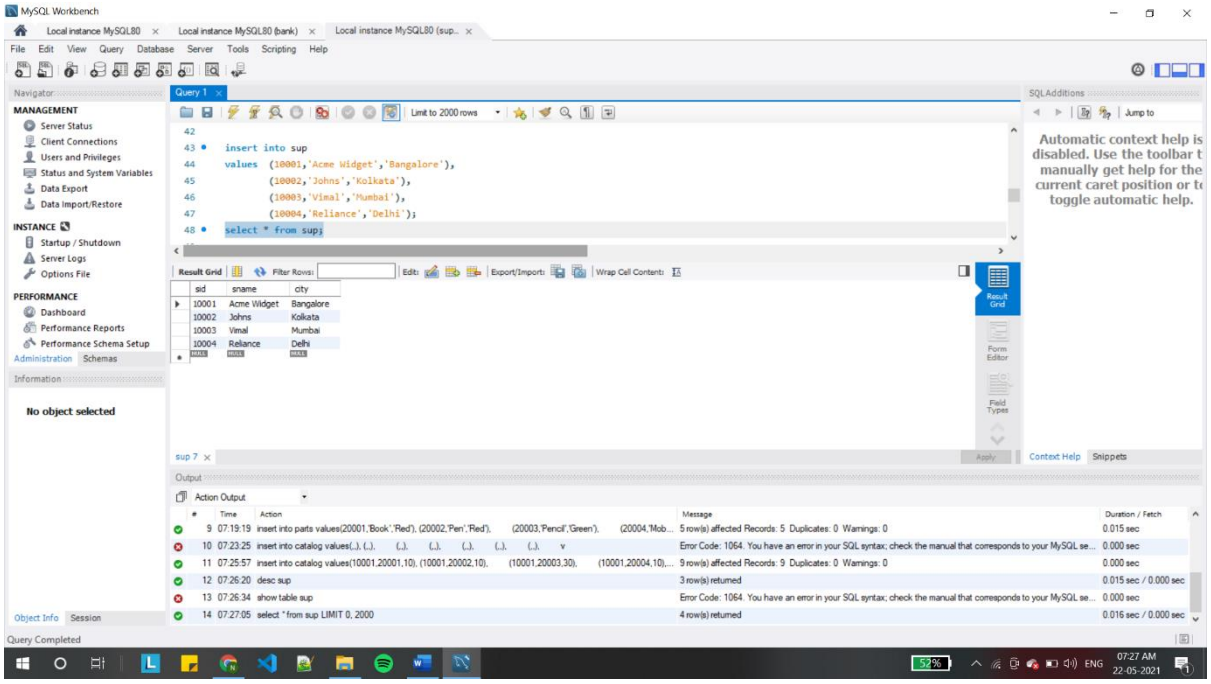
PID	PNAME	COLOR
20001	Book	Red
20002	Pen	Red
20003	Pencil	Green
20004	Mobile	Green
20005	Charger	Black

CATALOG

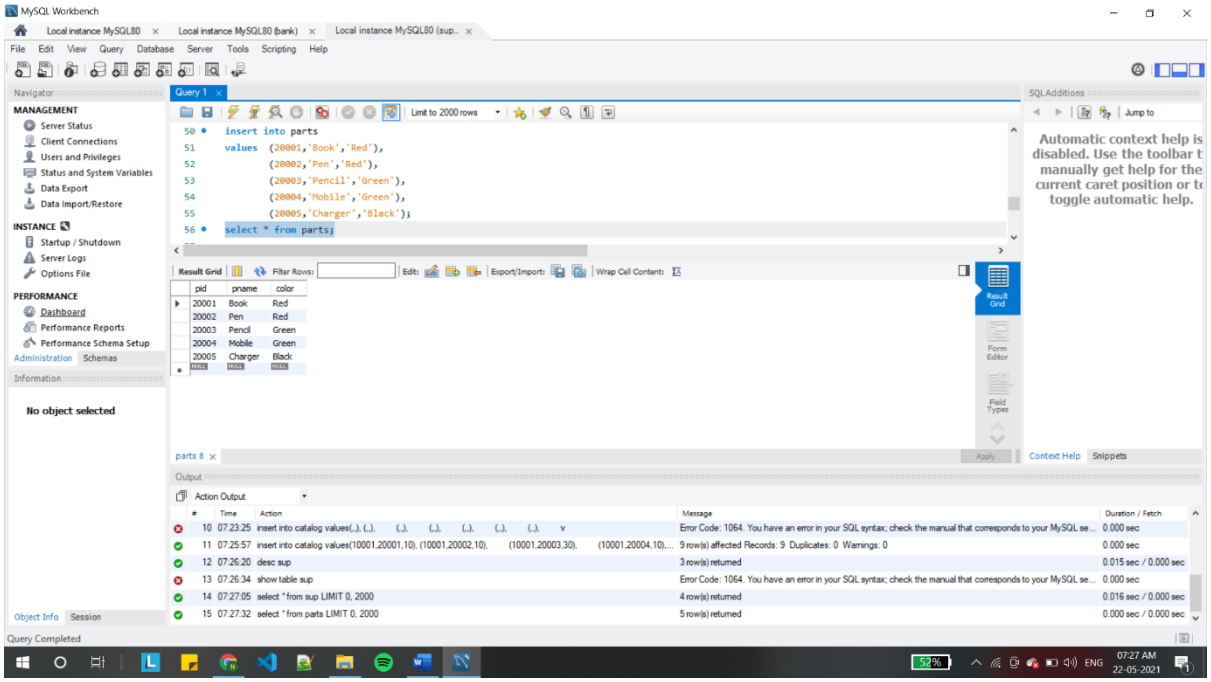
SID	PID	COST
10001	20001	10
10001	20002	10
10001	20003	30
10001	20004	10
10001	20005	10
10002	20001	10
10002	20002	20
10003	20003	30
10004	20003	40

TABLES:

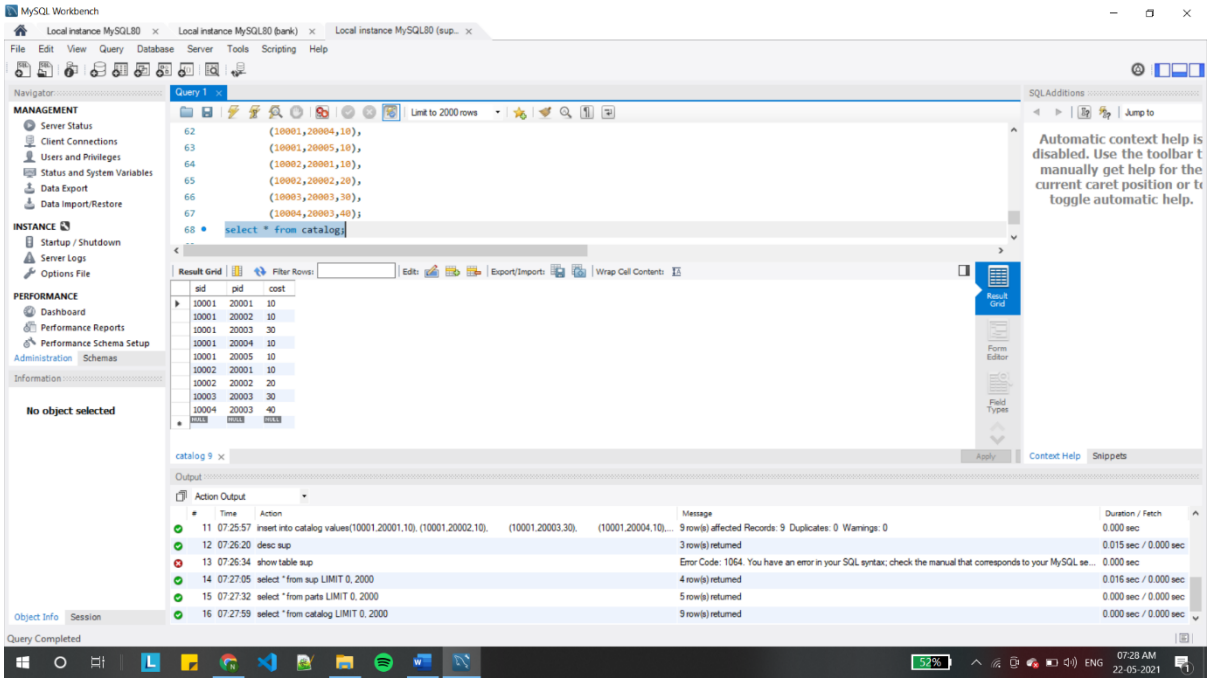
1.supplier



2.parts



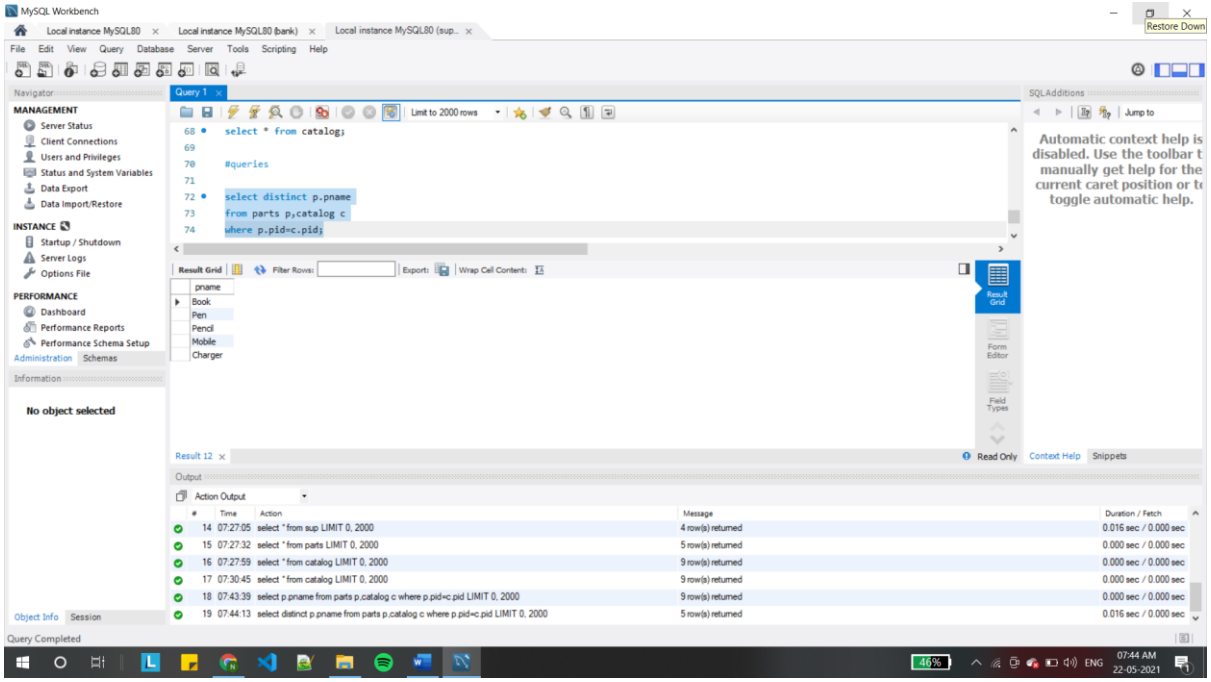
3.catalog



QUERIES:

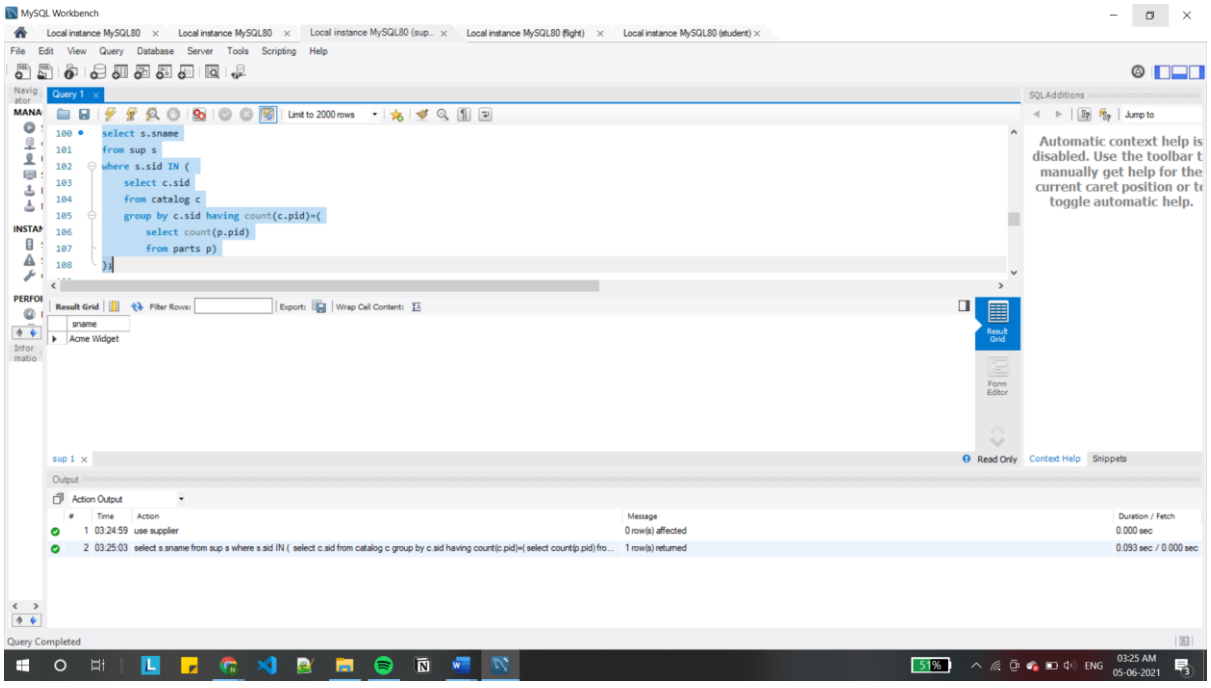
1.Find the pnames of parts for which there is some supplier.

```
select distinct p.pname
from parts p,catalog c
where p.pid=c.pid;
```



2.Find the snames of suppliers who supply every part.

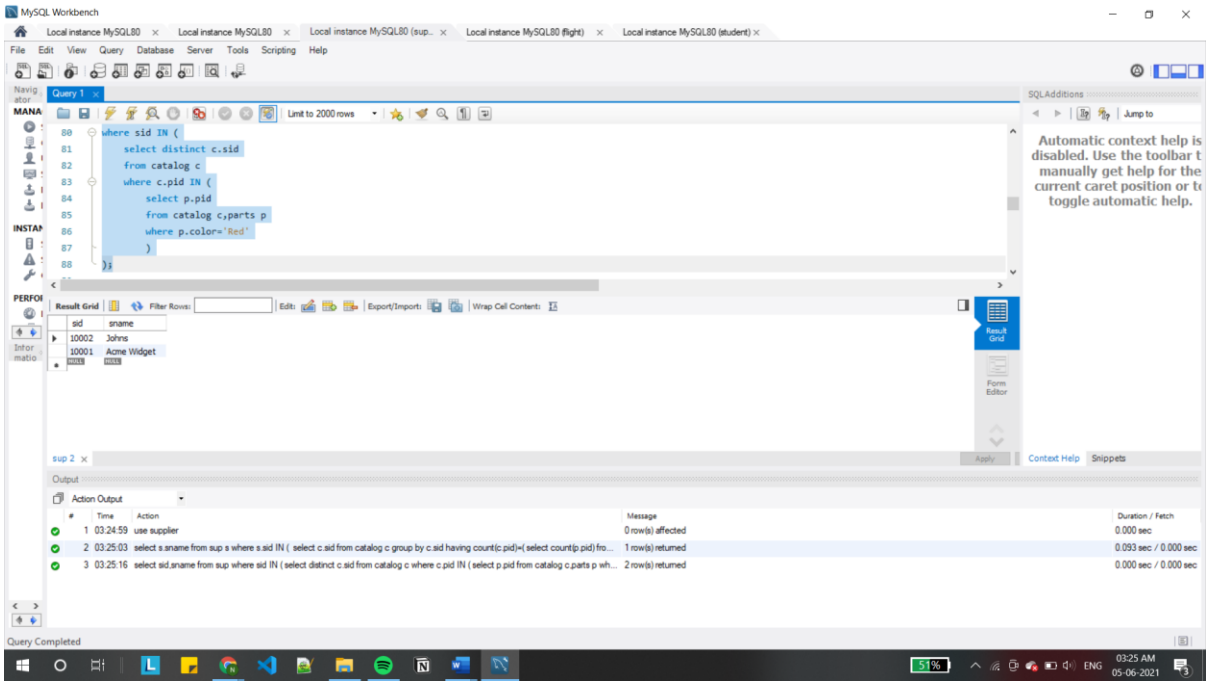
```
select s.sname
from sup s
where s.sid IN (
        select c.sid
        from catalog c
        group by c.sid having count(c.pid)=(
                select count(p.pid)
                from parts p)
);
```



3.Find the snames of suppliers who supply every red part.

```
select sid,sname
from sup
where sid IN (
        select distinct c.sid
```

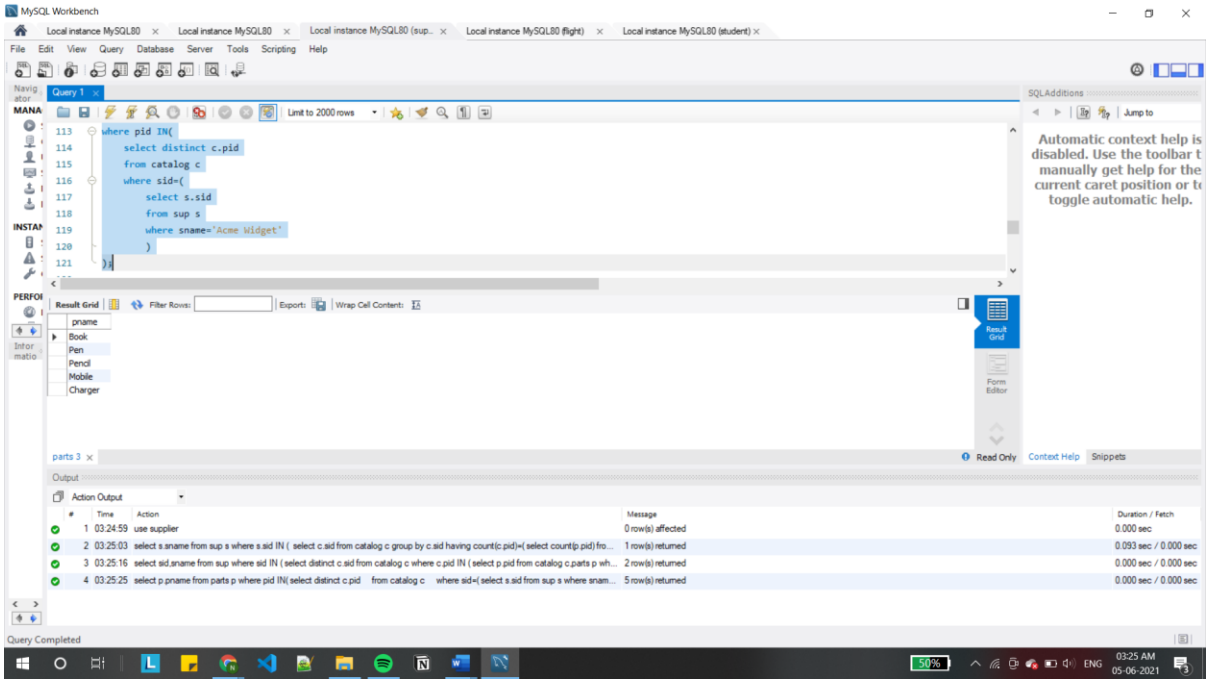
```
        from catalog c
        where c.pid IN (
                select p.pid
                from catalog c,parts p
                where p.color='Red'
                )
);
```



4.Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.

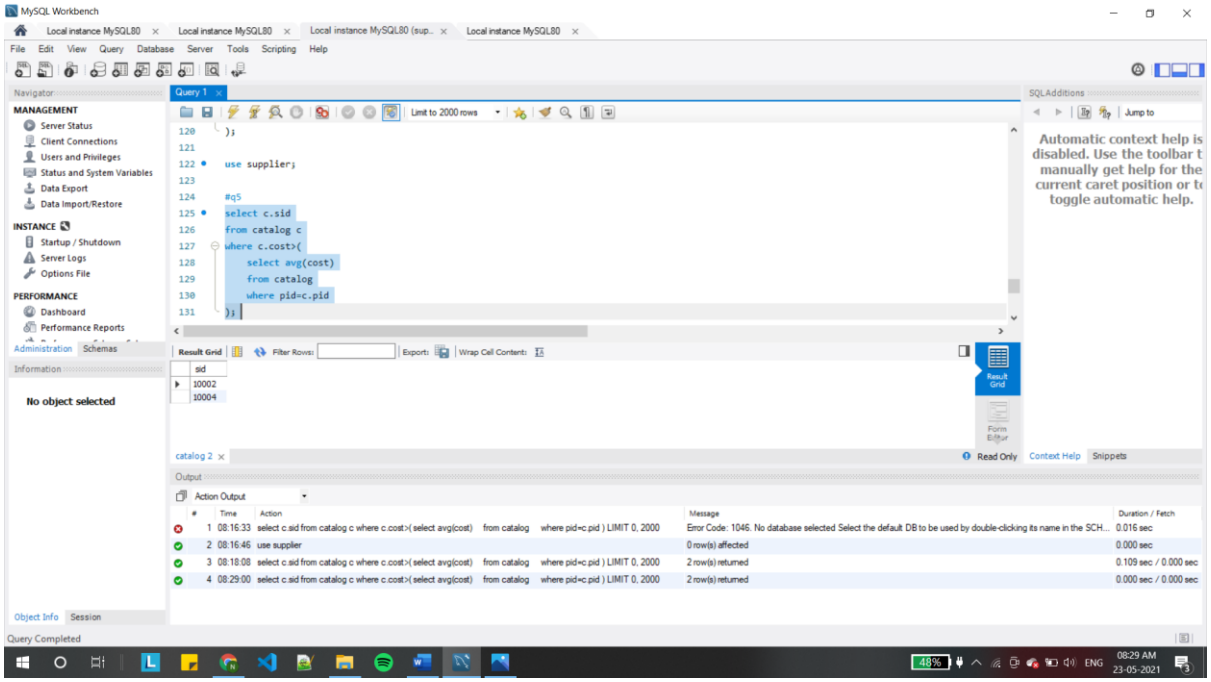
```
select p.pname
from parts p
where pid IN(
        select distinct c.pid
    from catalog c
    where sid=(
                select s.sid
```

```
            from sup s
            where sname='Acme Widget'
        )
);
```



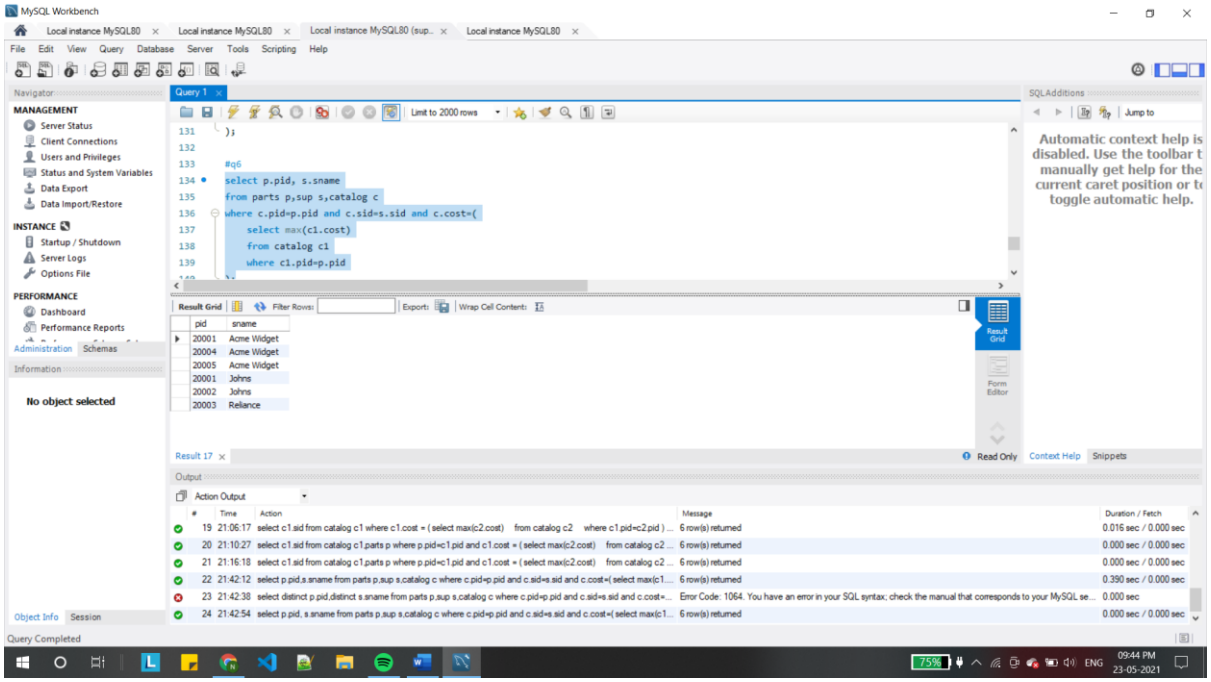
5.Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).

```
select c.sid
from catalog c
where c.cost>(
        select avg(cost)
    from catalog
    where pid=c.pid
);
```



6.For each part, find the sname of the supplier who charges the most for that part.

```
select p.pid, s.sname

from parts p,sup s,catalog c

where c.pid=p.pid and c.sid=s.sid and c.cost=(

        select max(c1.cost)

   from catalog c1

   where c1.pid=p.pid

);
```


MySQL Workbench
Local instance MySQL80
Local instance MySQL80
Local instance MySQL80 (sup..
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
MANAGEMENT
Server Status
Client Connections
Users and Privileges
Status and System Variables
Data Export
Data Import/Restore
INSTANCE
Startup / Shutdown
Server Logs
Options File
PERFORMANCE
Dashboard
Performance Reports
Administration Schemas
Information
No object selected
Object Info Session
Query 1
Limit to 2000 rows
131);
132
133 #q6
134 select p.pid, s.sname
135 from parts p,sup s,catalog c
136 where c.pid=p.pid and c.sid=s.sid and c.cost=(
137 select max(c1.cost)
138 from catalog c1
139 where c1.pid=p.pid
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
pid sname
20001 Acme Widget
20004 Acme Widget
20005 Acme Widget
20001 Johns
20002 Johns
20003 Reliance
Result 17
Read Only
SQLAdditions
Jump to
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
19 21:06:17 select c1.sid from catalog c1 where c1.cost = (select max(c2.cost) from catalog c2 where c1.pid=c2.pid) ... 6 row(s) returned 0.016 sec / 0.000 sec
20 21:10:27 select c1.sid from catalog c1,parts p where p.pid=c1.pid and c1.cost = (select max(c2.cost) from catalog c2 ... 6 row(s) returned 0.000 sec / 0.000 sec
21 21:16:18 select c1.sid from catalog c1,parts p where p.pid=c1.pid and c1.cost = (select max(c2.cost) from catalog c2 ... 6 row(s) returned 0.000 sec / 0.000 sec
22 21:42:12 select p.pid,s.sname from parts p,sup s,catalog c where c.pid=p.pid and c.sid=s.sid and c.cost=(select max(c1.... 6 row(s) returned 0.390 sec / 0.000 sec
23 21:42:38 select distinct p.pid,distinct s.sname from parts p,sup s,catalog c where c.pid=p.pid and c.sid=s.sid and c.cost=... Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
24 21:42:54 select p.pid, s.sname from parts p,sup s,catalog c where c.pid=p.pid and c.sid=s.sid and c.cost=(select max(c1... 6 row(s) returned 0.000 sec / 0.000 sec
Query Completed
75%
ENG
09:44 PM
23-05-2021