CS 440

Assignment 1

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a)
SELECT w.did, d.dname

FROM works w, dept d

WHERE w.pct_time = 50

AND d.did = w.did;

b)
SELECT ename FROM emp WHERE eid IN
(SELECT eid FROM works w LEFT JOIN
 (SELECT * FROM dept WHERE(dname ='Hardware' OR dname = 'Software' OR dname =
'Research'))d
 ON w.did = d.did
 GROUP BY eid
 HAVING COUNT(*)=3)

c)

select d.dname

from dept d

where not exists (select *

        from works w

        where d.did = w.did);

d)
SELECT DISTINCT managerid FROM dept d1 WHERE 1500000 < ALL
(SELECT d2.budget FROM dept d2 WHERE d2.managerid = d1.managerid)

e)

select e.ename

from emp e

where e.salary IN (select MIN(emp.salary)

from emp);

f)
SELECT ename FROM emp WHERE eid IN
(SELECT managerid FROM dept WHERE budget =
 (SELECT MAX(d2.budget) FROM dept d2))

g)

select d.dname, avg(e.salary)

from emp e

inner join works w

on w.eid = e.eid

inner join dept d

on d.did = w.did and d.budget >= 50

group by d.dname;

h)
SELECT managerid FROM dept GROUP BY managerid HAVING sum(budget) =(SELECT
MAX(bud.b) FROM (SELECT sum(budget) b FROM dept GROUP BY managerid) bud)

i)
select e1.ename
from emp e1
where e1.salary <= (select avg(e2.salary)
        from emp e2, works w1, works w2
        where e1.eid = w1.eid
        and w1.did = w2.did
        and e2.eid = w2.eid);

j)

```sql
SELECT ename FROM works LEFT JOIN dept ON works.did = dept.did LEFT JOIN emp ON
works.eid = emp.eid WHERE dept.dname='Hardware' AND emp.eid IN
(SELECT eid FROM works LEFT JOIN dept ON works.did = dept.did GROUP BY eid HAVING
COUNT(works.did)=1)
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