CS 440

Assignment 1

Alvin Johns

Zhixuan Li

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)

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)