

Abdallah Nawras
nawrasa@oregonstate.edu
ID#934069685
01/21/2020
Group#49

a)
select did, dname
from dept inner join works using (did)
where pct_time = 50;

b)
select ename
from emp
where exists (select * from works
 inner join dept using (did)
 where works.eid = emp.eid
 and dept.dname = 'Hardware')
and exists (select * from works
 inner join dept using (did)
 where works.eid = emp.eid
 and dept.dname = 'Software')
and exists (select * from works
 inner join dept using (did)
 where works.eid = emp.eid
 and dept.dname = 'Research');

(c)

```
select dname
from dept
where not exists (select * from works
                  where works.did = dept.did);
```

(d)

```
select managerid
from dept
group by managerid
having min(budget) > 1500000;
```

(e)

```
select ename
from emp
where salary <= (select min(salary) from emp);
```

(f)

```
select ename
from dept inner join emp on managerid = eid
where budget = (select max(budget) from dept);
```

(g)

```
select dname, avg(salary) as `average employee salary`
from dept inner join works using (did)
        inner join emp using (eid)
where budget >= 50
group by did;
```

(h)

```
select managerid
from dept
group by managerid
having sum(budget) =
(select max(s)
from
(select sum(budget) as s from dept group by managerid) q);
```

(i)

```
select distinct ename
from emp inner join works
    using (eid)
    inner join
        (select avg(salary) as avg_salary, did
         from emp inner join works using (eid)
         group by did) q
    using (did)
where salary <= avg_salary;
```

(j)

```
select ename
from emp inner join works using (eid)
    inner join dept using (did)
where dept.dname = 'Hardware'
and ename not in (
    select ename
    from emp inner join works using (eid)
        inner join dept using (did)
    where dept.dname != 'Hardware');
```