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1.1 - Find the names of all managers who have a salary between 2000 and 3000 (inclusive)

```
select hw_emp.ename
from hw_emp
where (hw_emp.sal BETWEEN 2000 AND 3000) AND hw_emp.job = "Manager"
```

1.2 - Find the names of all salesmen who have an income (= salary plus commission) above 2000

```
select hw_emp.ename
from hw_emp
where (hw_emp.sal + hw_emp.comm) > 2000 AND hw_emp.job = "Salesman"
```

1.3 - Find the average salary by town

```
select hw_dept.loc, AVG(hw_emp.sal)
from hw_dept
inner join hw_emp
on hw_dept.deptno = hw_emp.deptno
GROUP by hw_dept.loc
```

1.4 - Find the names of all employees who earn more than their manager(s)

```
SELECT A.ename AS employee, B.ename as manager
FROM hw_emp A
inner join hw_emp B
on A.mgr = B.empno
WHERE (A.sal + A.comm) > (B.sal + B.comm)
```

1.5 - Find the names of the employees who are managers of at least one salesman

```
SELECT A.ename AS manager, COUNT(A.ename) as employeeCount
FROM hw_emp A
inner join hw_emp B
on A.empno = B.mgr
where B.job = "Salesman"
group by A.ename
having count(A.ename) >= 1
```

1.6 - Find the names of the employees who are managers of at least three people

```
SELECT A.ename AS manager, COUNT(A.ename) as employeeCount
FROM hw_emp A
inner join hw_emp B
on A.empno = B.mgr
group by A.ename
having count(A.ename) >= 3
```

1.7 - Find the names of the employees who are not managing anyone?

```
SELECT B.ename as "employees who dont manage anyone"
FROM hw_emp A
right join hw_emp B
on A.mgr = B.empno
where A.ename is null
```

2.1 - Find the names of all students who have taken at least one Comp. Sci. course; make sure there are no duplicate names in the result.

```
select distinct T1.name
from student as T1
inner join
(select takes.ID, takes.course_id
from takes
inner join course
on takes.course_id = course.course_id
where course.dept_name = "Comp. Sci.") as T2
on T1.ID = T2.ID
```

2.2 - Find the IDs and names of all students who have not taken any course offering before Spring 2009.

```
select student.name, student.ID
from student
where student.name NOT IN (
select student.name
from student
inner join takes
on student.ID = takes.ID
where takes.year < 2009
group by student.name
)
```

2.3 - Find the lowest, across all departments, of the per-department maximum salary. You may assume that every department has at least one instructor.

```
select dept_name, salary
FROM instructor
where salary =(
select MIN(instructorTwo.salary)
from ( select MAX(instructor.salary) as salary, instructor.dept_name
                  from instructor
                  group by instructor.dept_name) as instructorTwo)
```