

## Company Database Schema

1. Display the **Department id, name** and its **manager id** and the **name of its manager**.

```
SELECT Dname,Dnum,MGRSSN,Fname,Lname
FROM EMPLOYEE , DEPARTMENTS
WHERE Dnum=Dno and MGRSSN = ssn
```

2. Display the **departments' name** and the **project name** of the **under their control**.

```
SELECT distinct Dname,Pname
from departments,project
where departments.Dnum=project.Dnum
;
```

3. Display the **dependent name** for all the dependence and the **name of the employee** they depend on him/her.

```
SELECT Fname+Lname AS [name of the employee] , Dependent_name
FROM EMPLOYEE , DEPENDENT
WHERE ESSN=SSN
```

4. Retrieve the **fname, pname** of all employees work in **department 10** who **works more than or equal 10 hours** per week on '**AL Rabwah**' project.

```
SELECT fname,pname,hours
from project,works_for,employee
where ssn = essn and pno = pnumber and hours >=10 and pname= 'AL
Rabwah'
```

5. Find the <b>fname</b> of the employees who <b>directly supervised</b> with <b>'Kamel Mohamed'</b> .
<pre>SELECT fname from employee where Superssn=(select SSN from employee where Fname='Kamel');</pre>
6. List the <b>last name</b> of all managers who have <b>no dependents</b> .
<pre>SELECT DISTINCT e.lname FROM employee AS e, dependent, employee AS s WHERE e.ssn=s.Superssn and not e.ssn = essn</pre>
7. Display the <b>department name</b> which has the <b>smallest employee ID over all employees' ID</b> .
<pre>select Dname from departments,employee where dno = dnum and ssn= ( SELECT min(ssn) FROM employee )</pre>
8. For each department, retrieve the <b>department name</b> and the <b>maximum, minimum and average salary</b> of its employees.
<pre>select Dname, AVG(Salary) as ['average salary'], MIN(salary) as ['minimum salary'],max(salary) as ['maximum salary'] from departments,employee where dno = dnum group by dname</pre>
9. For each department >>> display <b>department number, department name and number of its employees</b> -- if its <b>average salary is less than 1200</b>

```
select Dnum,avg(salary)
from employee,departments
where dno = dnum
group by dnum
having avg(salary) <1200
```

10. Retrieve a list of employees (**fname**) and the projects (**project name**) they are working on ordered by **department no, last name, first name**.

```
SELECT fname,Pname
FROM employee ,project,works_for

where ssn = essn and pno = pnumber
ORDER BY Dnum , Lname , fname
```

11. Find the **project number**, the **controlling department name**, the **department manager last name**, address and **birthdate**. For each project located in '**Cairo**' City

```
select Pname,Dname,e.lname,e.Address,e.Bdate
from project p , departments d,employee e,employee s
where p.dnum = d.dnum and e.ssn= s.superssn and mgrssn = e.ssn
and City = 'Cairo';
```