**Company Database Schema**

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| 1. Display the **Department id**, **Department Name** and its **manager id** and the **Manager name.** |
| **SELECT Dnum , Dname , MGRSSN , Fname+' '+Lname as Name**  **FROM Departments d , Employee e**  **WHERE d.MGRSSN = e.SSN** |
| 1. Display the **project name** and **departments’ name** that **control them** |
| **SELECT Pname , Dname**  **FROM PROJECT P , DEPARTMENTS D**  **WHERE P.DNUM = D.DNUM** |
| 1. Display the **dependent name** for all the dependence and the **name of the employee** they depend on him/her. |
| **SELECT Dependent\_name , Fname+' '+Lname as EmpName**  **FROM EMPLOYEE , DEPENDENT**  **WHERE ESSN = SSN** |
| 1. Retrieve the employee **first name, project name** of all employees work in **department 10** who **works more than or equal 10 hours**   ordered by **first name**. |
| **SELECT Fname , Pname**  **FROM Employee e, Works\_for w , Project p**  **WHERE SSN = Essn and Pno = Pnumber**  **and e.Dno = 10**  **AND w.Hours >= 10 order by Fname** |
| 1. List the **last name** of all **managers** who have **no dependents.** |
| **SELECT Lname**  **FROM EMPLOYEE e , DEPARTMENTS d**  **WHERE SSN = MGRSSN**  **AND**  **SSN not in (SELECT ESSN from Dependent)** |
| 1. Display the **department name** which has the **smallest employee ID over all employees' ID.** |
| **SELECT Dname**  **FROM DEPARTMENTS**  **WHERE Dnum = (SELECT Dno**  **FROM EMPLOYEE**  **WHERE SSN = (SELECT min (SSN)**  **FROM EMPLOYEE**  **)**  **)** |
| 1. For each department >>> display **department name and number of its employees**   -- if its **average salary is less than 1200** |
| **SELECT Dname , Count(SSN) as NumOfEmp**  **FROM DEPARTMENTS ,EMPLOYEE**  **Where Dnum = Dno**  **group by Dname**  **having avg(salary) < 1200** |
| 1. Find the **fname** of the employees who **directly supervised** with ‘**Kamel Mohamed’**. |
| **SELECT e.Fname, sup.Fname +' '+sup.Lname as SV**  **FROM Employee e, Employee sup**  **WHERE e.Superssn = sup.SSN**  **And sup.Fname = 'Kamel'** |
| 1. Retrieve a list of employees (**fname**) and the projects (**project name**) they are working on ordered by **department no, last name, first name**. |
| **SELECT d.Dnum, e.Fname , p.Pname**  **FROM Employee e, Project p, Departments d, Works\_for w**  **where w.ESSn = e.SSN**  **AND p.Pnumber = W.Pno**  **order by d.Dnum, e.Lname, e.Fname;** |
| 1. Find the **project number**, the **controlling department name**, the **department manager last name**, address and **birthdate**. For each project located in ‘**Cairo’** City |
| **SELECT p.Pnumber, p.Dnum, d.Dname, e.Lname, e.Address, e.Bdate**  **FROM Employee e, Project p, Departments d**  **where p.City = 'Cairo'**  **AND p.Dnum = d.Dnum**  **AND d.MGRSSN = E.SSN;** |
| 1. For each department, retrieve the **department name** and the **maximum**, **minimum** and **average** **salary** of its employees. |
| **SELECT Dname , max (SALARY) , min (SALARY) , avg(SALARY)**  **from Employee , Departments**  **WHERE Dnum = Dno**  **group by dname** |