**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** [Manager 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** [Employee Name]  **FROM** Dependent d, Employee e  **WHERE** d.ESSN = e.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, Project p, Works\_for w  **WHERE** e.Dno = 10  **AND** w.ESSn = e.SSN  **AND** w.Pno = p.Pnumber  **ORDER** **BY** Fname; |
| 1. List the **last name** of all **managers** who have **no dependents.** |
| **SELECT** lName  **FROM** Employee e  **WHERE** e.SSN **IN** (  **SELECT** MGRSSN  **FROM** Departments  )  **AND** e.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** [Employees **Count**]  **FROM** Departments d, Employee e  **WHERE** e.Dno = d.Dnum  **GROUP** **BY** Dname  **HAVING** **AVG**(e.Salary) < 1200; |
| 1. Find the **fname** of the employees who **directly supervised** with ‘**Kamel Mohamed’**. |
| **SELECT** Fname  **FROM** Employee  **WHERE** Superssn = (  **SELECT** SSN  **FROM** Employee  **WHERE** Fname = 'Kamel'  **AND** Lname = 'Mohamed'  ); |
| 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** Fname, Pname  **FROM** Employee e, Project p, Works\_for w  **WHERE** e.SSN = w.ESSn  **AND** w.Pno = p.Pnumber  **ORDER** **BY** e.Dno, 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, d.Dname, e.Lname, e.Address, e.Bdate  **FROM** Project p, Departments d, Employee e  **WHERE** p.Dnum = d.Dnum  **AND** d.MGRSSN = e.SSN  **AND** p.City = 'Cairo'; |
| 1. For each department, retrieve the **department name** and the **maximum**, **minimum** and **average** **salary** of its employees. |
| **SELECT** Dname, **MAX**(Salary) **AS** [**Max** Salary], **MIN**(Salary) **AS** [**Min** Salary], **AVG**(Salary) **AS** [**Avg** Salary]  **FROM** Departments d, Employee e  **WHERE** e.Dno = d.Dnum  **GROUP** **BY** Dname; |