**Company Database Schema**

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| 1. Display the **Department id**, **Department Name** and its **manager id** and the **Manager name.** |
| SELECT Dname, Dnum, MGRSSN, Fname +' '+ Lname as MGRname  FROM Departments as D , Employee as E  WHERE D.MGRSSN = E.ssn   | **Query1** | | | | | --- | --- | --- | --- | | **Dname** | **Dnum** | **MGRSSN** | **MGRname** | | DP1 | 10 | 223344 | Kamel Mohamed | | DP2 | 20 | 968574 | Noha Mohamed | | DP3 | 30 | 512463 | Edward Hanna | |
| 1. Display the **project name** and **departments’ name** that **control them** |
| SELECT Pname , Dname  FROM Project P , Departments D  WHERE P.Dnum = D.Dnum   | **Query1** | | | --- | --- | | **Pname** | **Dname** | | AL Solimaniah | DP1 | | Al Rabwah | DP1 | | Al Rawdah | DP1 | | Al Rowad | DP2 | | Ebad El Rahman | DP2 | | Al Rehab | DP3 | | Pitcho american | DP3 | |
| 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 Emp\_name  FROM Dependent D , Employee E  WHERE D.ESSN = E.SSN   | **Query1** | | | --- | --- | | **Dependent\_name** | **Emp\_name** | | Hala Saied Ali | Hanaa Sobhy | | Ahmed Kamel | Kamel Mohamed | | Mona Adel Mohamed | Kamel Mohamed | | Omar Amr Omran | Amr Omran | | Ramy Amr Omran | Amr Omran | | Sanaa Gawish | Amr Omran | | Nora Ghaly | Edward Hanna | | Sara Edward | Edward Hanna | |
| 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.SSN = W.ESSn  and P.Pnumber = W.Pno  and E.Dno = 10  and W.Hours >= 10  ORDER BY Fname   | **Query1** | | | --- | --- | | **Fname** | **Pname** | | Ahmed | AL Solimaniah | | Kamel | Al Rehab | | Kamel | Al Rawdah | | Kamel | Al Rabwah | | Kamel | AL Solimaniah | |
| 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)   | **Query1** | | --- | | **Lname** | | Mohamed | |
| 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 < =ALL ( SELECT SSN  FROM EMPLOYEE))   | **Query1** | | --- | | **Dname** | | DP1 | |
| 1. For each department >>> display **department name and number of its employees**   -- if its **average salary is less than 1200** |
| SELECT Dname , COUNT(SSN)  FROM Departments D, Employee E  WHERE D.Dnum = E.Dno  GROUP BY Dname  HAVING AVG(Salary) < 1200   | **Query1** | | | --- | --- | | **Dname** | **Expr1001** | | DP2 | 2 | |
| 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")   | **Query1** | | --- | | **Fname** | | Ahmed | | Hanaa | |
| 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 P.Pnumber = W.Pno  ORDER BY E.Dno , Lname , Fname   | **Query1** | | | --- | --- | | **Fname** | **Pname** | | Ahmed | AL Solimaniah | | Kamel | AL Solimaniah | | Kamel | Al Rabwah | | Kamel | Al Rehab | | Kamel | Al Rawdah | | Mariam | Ebad El Rahman | | Mariam | Al Rowad | | Mariam | Al Rawdah | | Noha | Al Rowad | | Noha | Al Rawdah | | Noha | Ebad El Rahman | | Edward | Pitcho american | | Edward | Al Rehab | | Maged | Al Rehab | | Maged | Al Rowad | | Maged | Pitcho american | | Maged | Al Rawdah | |
| 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 Pname , P.Dnum , Lname , Address , Bdate  FROM Project P, Departments D, Employee E  WHERE P.City = “Cairo”  AND P.Dnum = D.Dnum  AND D.MGRSSN = E.SSN   | **Query1** | | | | | | --- | --- | --- | --- | --- | | **Pname** | **Dnum** | **Lname** | **Address** | **Bdate** | | Al Rehab | 30 | Hanna | 18 Abaas El 3akaad St. Nasr City.Cairo | 19/08/1972 | | Pitcho american | 30 | Hanna | 18 Abaas El 3akaad St. Nasr City.Cairo | 19/08/1972 | | Ebad El Rahman | 20 | Mohamed | 55 Orabi St. El Mohandiseen .Cairo | 02/01/1975 | |
| 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 D.Dnum = E.Dno  GROUP BY Dname   | **Query1** | | | | | --- | --- | --- | --- | | **Dname** | **Max\_salary** | **Min\_salary** | **Avg\_salary** | | DP1 | 1800 | 800 | 1300 | | DP2 | 1600 | 750 | 1175 | | DP3 | 1500 | 1000 | 1250 | |