Company Database Schema

Here is the schema of a company database, please implement it on any RDBMS you like and then try to create the following requests (queries):

**Employee**:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fname** | **Lname** | **SSN** | **BDATE** | **Address** | **Sex** | **Salary** | **Superssn** | **Dno** |
| Ahmed | Ali | 112233 | 1/1/1965 | 15 Ali Fahmy St. Giza | M | 1300 | 223344 | 10 |
| Kamel | Mohamed | 223344 | 15/10/1970 | 38 Mohy el dien abo el Ezz  St.Cairo | M | 1800 | 321654 | 10 |
| Hanaa | Sobhy | 123456 | 18/3/1973 | 38 Abdel Khalik Tharwat St. Downtown.Cairo | F | 800 | 223344 | 10 |
| Amr | Omran | 321654 | 14/9/1963 | 44 Hilopolis.Cairo | M | 2500 | null | null |
| Noha | Mohamed | 968574 | 1/2/1975 | 55 Orabi St. El Mohandiseen .Cairo | F | 1600 | 321654 | 20 |
| Edward | Hanna | 512463 | 19/8/1972 | 18 Abaas El 3akaad St. Nasr City.Cairo | M | 1500 | 321654 | 30 |
| Mariam | Adel | 669955 | 12/6/1982 | 269 El-Haram st. Giza | F | 750 | 512463 | 20 |
| Maged | Raoof | 521634 | 6/4/1980 | 18 Kholosi st.Shobra.Cairo | M | 1000 | 968574 | 30 |

## **Department**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dname** | **DNum** | **MGRSSN** | **MGRStart Date** |
| DP1 | 10 | 223344 | 1/1/2005 |
| DP2 | 20 | 968574 | 1/3/2006 |
| DP3 | 30 | 512463 | 1/6/2006 |

## **Works\_for**

|  |  |  |
| --- | --- | --- |
| **ESSN** | **Pno** | **Hours** |
| 223344 | 100 | 10 |
| 223344 | 200 | 10 |
| 223344 | 300 | 10 |
| 112233 | 100 | 40 |
| 968574 | 400 | 15 |
| 968574 | 700 | 15 |
| 968574 | 300 | 10 |
| 669955 | 400 | 20 |
| 223344 | 500 | 10 |
| 669955 | 700 | 7 |
| 669955 | 300 | 10 |
| 512463 | 500 | 10 |
| 512463 | 600 | 25 |
| 521634 | 500 | 10 |
| 521634 | 600 | 20 |
| 521634 | 300 | 6 |
| 521634 | 400 | 4 |

## **Project**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pname** | **Pnumber** | **Plocation** | **City** | **Dnum** |
| AL Solimaniah | 100 | Cairo\_Alex Road | Alex | 10 |
| Al Rabwah | 200 | 6th of October City | Giza | 10 |
| Al Rawdah | 300 | Zaied City | Giza | 10 |
| Al Rowad | 400 | Cairo\_Faiyom Road | Giza | 20 |
| Al Rehab | 500 | Nasr City | Cairo | 30 |
| Pitcho american | 600 | Maady | Cairo | 30 |
| Ebad El Rahman | 700 | Ring Road | Cairo | 20 |

## **Dependent**

|  |  |  |  |
| --- | --- | --- | --- |
| **ESSN** | **Dependent\_name** | **Sex** | **Bdate** |
| 112233 | Hala Saied Ali | F | 18/10/1970 |
| 223344 | Ahmed Kamel Shawki | M | 27/3/1998 |
| 223344 | Mona Adel Mohamed | F | 25/4/1975 |
| 321654 | Ramy Amr Omran | M | 26/1/1990 |
| 321654 | Omar Amr Omran | M | 30/3/1993 |
| 321654 | Sanaa Gawish | F | 16/5/1973 |
| 512463 | Sara Edward | F | 15/9/2001 |
| 512463 | Nora Ghaly | F | 22/6/1976 |

# Answer The following questions!

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

**2. Display the name of the departments and the name of the projects under its**

**control.**

**3. Display the full data about all the dependence associated with the name of the**

**employee they depend on him/her.**

**4. Display (Using Union Function)**

**a. The name and the gender of the dependence that's gender is Female and**

**depending on Female Employee.**

**b. And the male dependence that depends on Male Employee.**

**5. Display the Id, name and location of the projects in Cairo or Alex city.**

**6. Display the Projects full data of the projects with a name starts with "a" letter.**

**7. display all the employees in department 30 whose salary from 1000 to 2000 LE**

**monthly**

**8. Retrieve the names of all employees in department 10 who works more than or**

**equal10 hours per week on "AL Rabwah" project.**

**9. Find the names of the employees who directly supervised Kamel Mohamed.**

**10. For each project, list the project name and the total hours per week (for all**

**employees) spent on that project.**

**11. Retrieve the names of all employees and the names of the projects they are**

**working on, sorted by the project name.**

**12. Display the data of the department which has the smallest employee ID over all**

**employees' ID.**

**13. For each department, retrieve the department name and the maximum, minimum**

**and the average salary of its employees.**

**14. List the last name of all managers who have no dependents.**

**15. For each department-- if its average salary is less than the average salary of all**

**employees-- display its number, name and number of its employees.**

**16. Retrieve a list of employees and the projects they are working on ordered by**

**department and within each department, ordered alphabetically by last name, first.**

**name.**

**17. For each project located in Cairo City, find the project number, the controlling**

**department name, the department manager’s last name, address** **and birthdate.**