**oExample 04:**

**Database Management System**

Consider the following database with four relations.

|  |  |
| --- | --- |
| employee(employee-name, street, city)  works(employee-name, company-name, salary) | company(company-name, city)  manages(employee-name, manager-name) |

1. Insert the following data into those relations

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Employee** | | |  | **company** | |
| employee-name | Street | city |  | compny-name | city |
| Arif | 51 upashahar | Rajshahi |  | Agrani | Rajshahi |
| Sumon | 52 east | Moynamati |  | Sonali | Sylhet |
| Sagor | Neemgachhi | Sirajgong |  | Janata | Dhaka |
| Abdul | Binodpur | Rajshahi |  |  |  |
| Himesh | Nazrul avenue | Dhaka |  |  |  |
| Amirul | Chawk bazar | Sylhet |  |  |  |
| Sajib | 99 north | Chittagong |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Works** | | |  | **Manages** | |
| employee-name | company-name | salary |  | employee-name | manager-name |
| Sumon | Agrani | 12000 |  | Amirul | Amirul |
| Abdul | Sonali | 13000 |  | Abdul | Amirul |
| Himesh | Agrani | 6000 |  | Sagor | Amirul |
| Amirul | Sonali | 20000 |  | Sumon | Sumon |
| Sagor | Sonali | 8000 |  | Himesh | Sumon |
| Arif | Janata | 13000 |  | Arif | Arif |
| Sajib | Janata | 9000 |  | Sajib | Arif |

1. Find the names of all employee who work for “Sonali”.
2. Find the names, streets and cities residence of all employees who work for “Agrani”.
3. Find the names, streets and cities residence of all employees who work for “Sonali” and earn more than 1,20,000 per annum.
4. Find all employees in the database who live in the same cities as the companies for which they work.
5. Find all employees in the database who live in the same cities and on the same streets as do their managers.
6. Find all employees in the database who do not work for “Sonali” Bank.
7. Find all employees in the database who earn more than each employee of “Janata” Bank
8. Find all employees who earn more than the average salary of all employees of their companies.
9. Find the company that has the most employees.
10. Find the company that has the smallest payroll.
11. Find those companies whose employees earn a higher salary, on average, than the average salary at “Agrani” Bank.
12. Modify the database so that “Arif” now lives in Natore.
13. Give all employees of “Agrani” Bank 1 10 percent raise.
14. Give all managers of “Agrani” Bank a 10 percent salary raise.
15. Give all managers a 10 percent salary raise unless salary becomes greater than 19,000; in such cases, give only a 3 percent salary raise.
16. Delete all tuples in the works relation for employees of “Janata” Bank.
17. Define a view consisting of manager-name and average salary of all employees who work for that manager. Now try to modify that view.