1. **Retrieve the names of all employees in the department whose name is Administrator**

EMP\_W\_D ← (s DNAME='Administrationr' (DEPARTMENT)) J (DNO),(DNUMBER) (EMPLOYEE)

RESULT ← P Fname, Mname, Lname (EMP\_W\_D)

Result:

Fname, Minit, Lname

'Alicia','J','Zelaya'

'Jennifer','S','Wallace'

1. **Retrieve the names of all employees in the departments which are located in Houston**

Dept\_LOCATION ← DEPARTMENT J (Dnumber)(Dnumber)(DEPT\_LOCATIONS)

EMP\_W\_D ← (s Dlocation='Houston' (Dept\_LOCATION )) J (Dno),(Dnumber) (EMPLOYEE)

RESULT ← P Fname, Mname, Lname (EMP\_W\_D)

Result:

Fname, Minit, Lname

'John','B','Smith'

'Franklin','T','Wong'

'Ramesh','K','Narayan'

'Joyce','A','English'

'James','E','Borg'

1. **List the names of all employees who have a dependent with the same first name as themselves**

E\_AND\_DEPENDENT<-- (EMPLOYEE) J (Ssn,Fname),(Essn,Dependent\_name) (DEPENDENT)

RESULT <-- P Fname, Minit, Lname (E\_AND\_DEPENDENT)

Fname, Minit, Lname(empty)

1. **For each project, calculate the total number of employees who work for it, and the total number of hours that these employees work for the project.**

RESULT(Pno, num\_of\_emp, total\_hours)← (Pno f COUNT Essn, COUNT Hours(WORKS\_ON))

Pno num\_of\_emp total\_hours

|  |  |  |
| --- | --- | --- |
| Pno | num\_of\_emp | total\_hours |
| 1 | 3 | 52.5 |
| 2 | 3 | 37.5 |
| 3 | 2 | 50 |
| 10 | 3 | 55 |
| 20 | 3 | 41 |
| 30 | 3 | 55 |

*the symbol s for SELECT, P for PROJECT, J for EQUIJOIN, \* for NATURAL JOIN, and f for FUNCTION.*