CSC 480: Database and File Systems, Spring 2012

SQL Exercises

For each query below, write an SQL select statement. Assume that the following tables have been created (this database is available in the folder `I:\11122-CSC480A\public\CompanyDB`; the code to create it is here):

DEPARTMENT

DNAME	DNUMBER	MGRSSN	MGRSTARTDATE
Research	5	333445555	1988-05-22
Administration	4	987654321	1995-01-01
Headquarters	1	888665555	1981-06-19

EMPLOYEE

FNAME	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
John	Smith	123456789	1965-01-09	731 Fondren, Houston TX	M	30000	333445555	5
Franklin	Wong	333445555	1965-12-08	638 Voss, Houston TX	M	40000	888665555	5
Alicia	Zelaya	999887777	1968-01-19	3321 Castle, Spring TX	F	25000	987654321	4
Jennifer	Wallace	987654321	1941-06-20	291 Berry, Bellaire TX	F	43000	888665555	4
Ramesh	Narayan	666884444	1962-09-15	975 Fire Oak, Humble TX	M	38000	333445555	5
Joyce	English	453453453	1972-07-31	5631 Rice, Houston TX	F	25000	333445555	5
Ahmad	Jabbar	987987987	1969-03-29	980 Dallas, Houston TX	M	25000	987654321	4
James	Borg	888665555	1937-11-10	450 Stone, Houston TX	M	55000	null	1

PROJECT

PNAME	PNUMBER	PLOCATION	DNUM
ProductX	1	Bellaire	5
ProductY	2	Sugarland	5
ProductZ	3	Houston	5
Computerization	10	Stafford	4
Reorganization	20	Houston	1
Newbenefits	30	Stafford	4

WORKS_ON

ESSN	PNO	HOURS
123456789	1	32.5
123456789	2	7.5
666884444	3	40.0
453453453	1	20.0
453453453	2	20.0
333445555	2	10.0
333445555	3	10.0
333445555	10	10.0
333445555	20	10.0
999887777	30	30.0
999887777	10	10.0
987987987	10	35.0

ESSN	PNO	HOURS
987987987	30	5.0
987654321	30	20.0
987654321	20	15.0
888665555	20	null

DEPENDENT

ESSN	DEPENDENT_NAME	SEX	BDATE	RELATIONSHIP
333445555	Alice	F	1986-04-04	Daughter
333445555	Theodore	M	1983-10-25	Son
333445555	Joy	F	1958-05-03	Spouse
987654321	Abner	M	1942-02-28	Spouse
123456789	Michael	M	1988-01-04	Son
123456789	Alice	F	1988-12-30	Daughter
123456789	Elizabeth	F	1967-05-05	Spouse

DEPT_LOCATIONS

DNUMBER	DLOCATION
1	Houston
4	Stafford
5	Bellaire
5	Houston
5	Sugarland

1. Select fname, minit, lname and dname of employees and the department each works in.
2. Produce a list of employees, fname, lname, salary, in order of increasing salary.
3. Produce a list of employees, fname, lname, salary, in order of decreasing salary.
4. Retrieve the names of all employees in department 5 who work more than 10 hours on the "ProductX" project.
5. Retrieve the names of all employees who work on the "ProductX" project less than 20 hours.
6. List the names of all employees who have a dependent with the same first name as themselves.
7. Find the names of all employees who are directly supervised by Franklin Wong (You are NOT to use Franklin's SSN in this query).
8. For each project, list the project name and the total hours per week (by all employees) spent on that project.
9. List the names of employees who work on every project.
10. List the names of all employees who do not work on any project.
11. For each department, retrieve the department name and the average salary of all employees working in the department.
12. Find the names and addresses of all employees who work on at least one project located in Houston but whose department has no location in Houston (This is a tricky one).
13. List the names of all department managers who have no dependents.

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