Retrieve first name and last name of all male employees with salary more than 30000.

1. SELECT from EMPLOYEE where Salary > 30000. Store as EMP_SAL

EMP_SAL C OSalary > 30000 (EMPLOYEF)

EMP SAL

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno	
Franklin	T	Wong	333445555	1955-12-0	638 Voss,	ŀΜ	40000	888665555		5
Jennifer	S	Wallace	987654321	1941-06-2	(291 Berry,	F	43000	888665555		4
Ramesh	K	Narayan	666884444	1962-09-1	975 Fire O	ŧΜ	38000	333445555		5
James	E	Borg	888665555	1937-11-1	(450 Stone	, M	55000	NULL		1

2. SELECT from EMP_SAL where Sex = M. Store as M_EMP_SAL

M_EMP_SAL

Sex = 'M' (EMP_SAL)

M_EMP_SAL

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno	
Franklin	T	Wong	333445555	1955-12-0	18 638 Voss,	ŀΜ	40000	888665555		5
Ramesh	K	Narayan	666884444	1962-09-1	.! 975 Fire C	iΜ	38000	333445555		5
James	E	Borg	888665555	1937-11-1	.(450 Stone	, M	55000	NULL		1

3. PROJECT from M_EMP_SAL with columns Fname and Lname. Store as RESULT

RESULT - IT Frame, Lname (M-EMP-SAL)

Fname	Lname
Franklin	Wong
Ramesh	Narayan
James	Borg

Josh Coriell Assignment #3 CSC 530

Could combine with and I suppose

Part B

Retrieve locations of projects that belong to the Research department.

1. SELECT from DEPARTMENT where Dname = "Research". Store result as RESEARCH_DPT

Dname	Dnumber	Mgr_ssn	Mgr_start_date
Research	5	5 333445555	1988-05-22

2. EQUIJOIN the tables RESEARCH_DPT and PROJECT where Dnumber from RESEARCH_DPT = Dnum from PROJECT. Store the result as RESEARCH_PROJECT_LOCATIONS

RESEARCH_PROJECT_LOCATIONS

Dname	Dnumber	Mgr_ssn	Mgr_start_date	Pname	Pnumber	Plocation	Dnum
Research		5 333445555	1988-05-22	ProductX	1	Bellaire	5
Research		5 333445555	1988-05-22	ProductY	2	Sugarland	5
Research		5 333445555	1988-05-22	ProductZ	3	Houston	5

RESULT Plocation Bellaire Sugarland Houston

Pact C

Retrieve first name, last name, and SSN of all employees who work more than 9 hours on project 2.

1. SELECT from WORKS_ON the tuples where Pno = 2 and Hours > 9. Store the result as PROJ_TWO_NINE

PROJ_TWO_NINE

Essn	Pno	Ηοι	ırs
45345	3453	2	20.0
33344	5555	2	10.0

2. EQUIJOIN the relations PROJ_TWO_NINE and EMPLOYEE where Essn from PROJ_TWO_NINE = Ssn from EMPLOYEE. Store the result as PROJ_EMPLOYEES

Essn	Pno	Hours	Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno	
	333445555	2	20.0 Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555		5
	453453453	2	10.0 Joyce	Α	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555		5

3. PROJECT the attributes Fname, Lname, and SSN from PROJ_EMPLOYEES. Store the result as RESULT

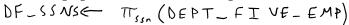
Fname	Lname	Ssn
Franklin	Wong	333445555
Joyce	English	453453453

Retrieve name, date of birth and relationship of all female dependents of employees who work for department 5.

1. SELECT from EMPLOYEES the tuples where Dno = 5. Store as DEPT_FIVE_EMP

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno	
John	В	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555		5
Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555		5
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555		5
Joyce	Α	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555		5

2. PROJECT from DEPT_FIVE_EMP the Ssn attribute. Store the result as DF_SSNS



Ssn	
	123456789
	333445555
	666884444
	453453453

3. JOIN the relation DF_SSNS with the relation DEPENDENT where SSN in DFSSNS is equal to ESSN in DEPENDENT. Store the result as DF_DEPENDENTS

DF_ DEPENDENTS <	(DF-SSNS	Mssn = Essn DEPENDENT))
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DF_DEPENDENTS

Ssn	Ess	n Depende	nt_name Sex	Bdate	Relationship
	123456789	123456789 Michael	M	1988-01-04	Son
	123456789	123456789 Alice	F	1988-12-30	Daughter
	123456789	123456789 Elizabeth	F	1967-05-05	Spouse
	333445555	333445555 Alice	F	1989-04-05	Daughter
	333445555	333445555 Theodore	M	1983-10-25	Son
	333445555	333445555 Joy	F	1958-05-03	Spouse

Ssn	Es	ssn	Dependent_name	Sex	Bdate	Relationship
	123456789	123456789	Alice	F	1988-12-30	Daughter
	123456789	123456789	Elizabeth	F	1967-05-05	Spouse
	333445555	333445555	Alice	F	1989-04-05	Daughter
	333445555	333445555	lov	F	1958-05-03	Spouse

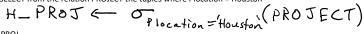
5. PROJECT the attributes Dependent_name, Bdate, and Relationship and store the table as RESULT.

Dependent_name	Bdate	Relationship
Alice	1988-12-30	Daughter
Elizabeth	1967-05-05	Spouse
Alice	1989-04-05	Daughter
Jov	1958-05-03	Spouse

Part E

Retrieve first name, last name and salary of employees who manage departments with projects located in Houston.

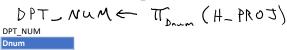
1. SELECT from the relation PROJECT the tuples where Plocation = Houston



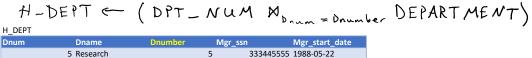
H PROJ

Pname	Pnumber	Plocation	Dnum	
ProductZ		3 Houston		5
Reorganization		20 Houston		1

2. PROJECT the attrbute Dnum from H_PROJ



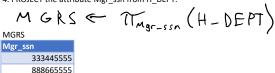
3. EQUIJOIN the relation DPT_NUM with the relation DEPARTMENT where Dnum in DPT_NUM = Dnumber in DEPARTMENT



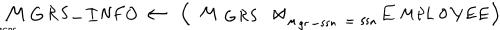
888665555 1981-06-19

4. PROJECT the attribute Mgr_ssn from H_DEPT.

1 Headquarters



5. EQUIJOIN the relation MGRS with the relation EMPLOYEE where Mgr_ssn in MGRS is equal to Ssn in EMPLOYEE



 MGRS
 Mgr_ssn
 Fname
 Minit
 Lname
 Ssn
 Bdate
 Address
 Sex
 Salary
 Super_ssn
 Dno

 333445555
 Franklin
 T
 Wong
 333445555
 1955-12-0(638 Voss, Houston, TX
 M
 40000
 888665555
 5

 888665555
 James
 E
 Borg
 888665555
 1937-11-1(450 Stone, Houston, TX
 M
 55000
 NULL
 1

6. PROJECT Fname, Lname, and Salary.

FnameLnameSalaryFranklinWong40000JamesBorg55000



Instructions: Using relational algebra operations, construct queries that satisfy provided descriptions. Provide resulting relation (table with tuples) for each query. Database schema and state are provided for your reference.

EMPLOYEE

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno	
John	В	Smith		123456789 1965-01-09	731 Fondren, Houston, TX	M	30000	333445555		5
Franklin	T	Wong		333445555 1955-12-08	638 Voss, Houston, TX	M	40000	888665555		5
Alicia	J	Zelaya		999887777 1968-01-19	3321 Castle, Spring, TX	F	25000	987654321		4
Jennifer	S	Wallace		987654321 1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555		4
Ramesh	K	Narayan		666884444 1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555		5
Joyce	Α	English		453453453 1972-07-31	5631 Rice, Houston, TX	F	25000	333445555		5
Ahmad	V	Jabbar		987987987 1969-03-29	980 Dallas, Houston, TX	M	25000	987654321		4
James	E	Borg		888665555 1937-11-10	450 Stone, Houston, TX	M	55000	NULL		1

DEPARTMENT

Dname	Dnumber	IV	lgr_ssn	Mgr_start_date	
Research		5	333445555	1988-05-22	
Administration		4	987654321	1995-01-01	
Headquarters		1	888665555	1981-06-19	

DEPT_LOCATIONS

Dnumber	Diocation
	1 Houston
	4 Stafford
	5 Bellaire
	5 Sugarland
	5 Houston

WORKS_ON

Essn	Pno		Hours
1234	156789	1	32.5
1234	156789	2	7.5
6668	384444	3	40.0
4534	153453	1	20.0
4534	153453	2	20.0
3334	145555	2	10.0
3334	145555	3	10.0
3334	145555	10	10.0
3334	145555	20	10.0
9998	387777	30	30.0
9998	387777	10	10.0
9879	987987	10	35.0
9879	987987	30	5.0
9876	554321	30	20.0
9876	554321	20	15.0
8886	65555	20	NULL

PROJECT

INOJECI				
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

DEPENDENT

Essn	Dependent_name	Sex	Bdate	Relationship
333445555	Alice	F	1989-04-05	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

EMPLOYEE Fname Minit Lname Ssn Bdate Address Sex Salary Super_ssn Dno DEPARTMENT Dname Dnumber Mgr_ssn Mgr_start_date DEPT_LOCATIONS Dnumber Dlocation PROJECT Pname Pnumber Plocation Dnum WORKS_ON Essn Pno Hours DEPENDENT Essn Dependent_name Sex Bdate Relationship