a) Retrieve the name, birth date and address of the employee(s) whose name is "John B.Smith"

```
SELECT Fname, Minit, Lname, Bdate, Address
FROM EMPLOYEE
WHERE Fname = 'John'
    AND Minit = 'B'
    AND Lname = 'Smith';
```

	fname character varying (10)	minit character (1)	lname character varying (20)	bdate date	address character varying (30)
1	John	B	Smith	1965-01-09	731 Fondren, Houston TX

b) Retrieve the names of all employees in the "Administration" department.

```
SELECT E.Fname, E.Minit, E.Lname
FROM EMPLOYEE AS E, DEPARTMENT AS D
WHERE D.Dname = 'Administration'
    AND E.Dno = D.Dnumber;
```

	fname character varying (10)	minit character (1)	lname character varying (20)
1	Alicia	J	Zelaya
2	Jennifer	S	Wallace
3	Ahmad	V	Jabbar

c) Retrieve the names of all employees in department 5 who work more than 10 hours per week on the ProductX project.

```
SELECT E.Fname, E.Minit, E.Lname
FROM EMPLOYEE AS E, WORKS_ON AS W, PROJECT AS P
WHERE E.Ssn = W.Essn
    AND P.Pnumber = W.Pno
    AND E.Dno = 5
    AND W.Hours > 10
    AND P.Pname = 'ProductX';
```

	fname character varying (10)	minit character (1)	lname character varying (20)
1	John	B	Smith
2	Joyce	A	English

d) For each employee, retrieve the employee's first name and last name and the first and last name of his/her immediate supervisor.

```
SELECT e1.Fname, e1.Lname, e2.Fname, e2.Lname
FROM EMPLOYEE AS e1, EMPLOYEE AS e2
WHERE e1.Super_ssn = e2.Ssn;
```

	fname character varying (10)	lname character varying (20)	fname character varying (10)	lname character varying (20)
1	John	Smith	Franklin	Wong
2	Franklin	Wong	James	Borg
3	Alicia	Zelaya	Jennifer	Wallace
4	Jennifer	Wallace	James	Borg
5	Ramesh	Narayan	Franklin	Wong
6	Joyce	English	Franklin	Wong
7	Ahmad	Jabbar	Jennifer	Wallace

e) Retrieve the names of all employees in the departments which are located in Houston

```
SELECT E.Fname, E.Minit, E.Lname
FROM EMPLOYEE AS E, DEPT_LOCATIONS AS DL
WHERE DL.Dlocation = 'Houston'
    AND E.Dno = DL.Dnumber;
```

	fname character varying (10)	minit character (1)	lname character varying (20)
1	John	B	Smith
2	Franklin	T	Wong
3	Ramesh	K	Narayan
4	Joyce	A	English
5	James	E	Borg

f) List the names of all employees who have a dependent with the same first name as themselves

```
SELECT *
FROM EMPLOYEE AS E, DEPENDENT AS D
WHERE E.Fname = D.Dependent_name;
```

	fname character varying (10)	minit character (1)	lname character varying (20)	ssn character (9)	bdate date	address character varying (30)	sex character (1)	salary numeric (5)	super_ssn character (9)	dno integer	essn character

g) 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.

```
SELECT P.Pname, COUNT(*) as Number_of_employees, SUM(W.Hours) as total_number_of_hours
FROM EMPLOYEE AS E, WORKS_ON AS W, PROJECT AS P
WHERE E.Ssn = W.Essn
    AND P.Pnumber = W.Pno
GROUP BY P.Pname;
```

	pname character varying (15)	number_of_employees bigint	total_number_of_hours numeric
1	Computerization	3	55.0
2	ProductZ	2	50.0
3	Newbenefits	3	55.0
4	Reorganization	3	41.0
5	ProductY	3	37.5
6	ProductX	2	52.5

h) Retrieve the average salary of all female employees.

```
SELECT AVG(salary)
FROM EMPLOYEE
WHERE Sex = 'F';
```

	avg numeric
1	31000.000000000000

i) For each department whose average employee salary is more than $30.000, retrieve the department name and the number of employees work for that department.

```
SELECT D.Dname, COUNT(*) as Number_of_employees
FROM EMPLOYEE AS E, DEPARTMENT AS D
WHERE E.Dno = D.Dnumber
GROUP BY D.Dname
HAVING AVG(salary) > 30000;
```

	dname character varying (15)	number_of_employees bigint
1	Headquarters	1
2	Research	4
3	Administration	3