Q 0. Retrieve the birth date and address of the employee(s) whose name is: 'John B. Smith'.

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

BDATE	ADDRESS
09/01/1965	731 Fondren, Houston, TX

-

Q 1. Retrieve the birth date and address of the employee(s) who work for the: 'Research' department

- SELECT Bdate, Address
  FROM employee
  JOIN department
  ON employee.Dno=department.Dnumber
  WHERE Dname = 'Research';

BDATE	ADDRESS
09/01/1965	731 Fondren, Houston, TX
09/15/1962	975 Fire Oak, Humble, TX
07/31/1972	5631 rice, Houston, TX
12/08/1955	638 Voss, Houston, TX

-

Q 2. For every project located in 'Stafford', list the project number, the controlling department number and the department manager's last name, address, and birth date

- SELECT project.Pnumber, project.Dnum, employee.Lname, employee.Address, employee.Bdate
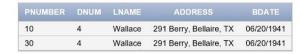 FROM project
  JOIN department
  ON project.Dnum = department.Dnumber
  Join employee
  ON department.Mgr_ssn = employee.Ssn
  WHERE project.Plocation = 'Stafford';

PNUMBER	DNUM	LNAME	ADDRESS	BDATE
10	4	Wallace	291 Berry, Bellaire, TX	06/20/1941
30	4	Wallace	291 Berry, Bellaire, TX	06/20/1941

-

Q 3. Retrieve all employees whose address is in Houston, Texas.

- SELECT *
  FROM employee
  WHERE Address LIKE '%Houston%';

FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPER_SSN	DNO
John	B	Smith	123456789	09/01/1965	731 Fondren, Houston, TX	M	30000	333445555	5
Joyce	A	English	453453453	07/31/1972	5631 rice, Houston, TX	F	25000	333445555	5
Ahmad	V	Jabber	987987987	03/29/1969	980 Dallas, Houston, TX	M	25000	987654321	4
James	E	Borg	888665555	11/10/1937	450 Stone, Houston, TX	M	55000	-	1
Franklin	T	Wong	333445555	12/08/1955	638 Voss, Houston, TX	M	40000	888665555	5

-

Q 4. Make a list of all project numbers for projects that involve an employee whose last name is 'Smith' either as a worker or as a manager of the department that controls the project

- SELECT works_on.Pno
  FROM works_on
  JOIN employee
  ON works_on.Essn = employee.Ssn
  WHERE employee.Lname = 'Smith';

PNO
1
2

-

Q 5. Find all employees who were born during the 1950s.

- SELECT *
  FROM employee
  WHERE EXTRACT(YEAR FROM Bdate) BETWEEN 1950 AND 1960;

FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPER_SSN	DNO
Franklin	T	Wong	333445555	12/08/1955	638 Voss, Houston, TX	M	40000	888665555	5

-

Q 6. Retrieve all employees in department 5 whose salary is between $30000 and $40000.

- SELECT *
  FROM employee
  WHERE Dno = 5 AND Salary BETWEEN 30000 AND 40000;

FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPER_SSN	DNO
John	B	Smith	123456789	09/01/1965	731 Fondren, Houston, TX	M	30000	333445555	5
Ramesh	K	Narayan	666884444	09/15/1962	975 Fire Oak, Humble, TX	M	38000	333445555	5
Franklin	T	Wong	333445555	12/08/1955	638 Voss, Houston, TX	M	40000	888665555	5

-

Q 7. Show the resulting salaries if every employee working on the 'ProductX' project is given a 10 percent raise.

- SELECT employee.salary *1.1
  FROM employee
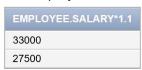 JOIN project
  ON employee.Dno = project.Dnum
  JOIN works_on
  ON employee.Ssn = works_on.Essn AND works_on.Pno = project.Pnumber
  WHERE project.Pname = 'ProductX';

EMPLOYEE.SALARY*1.1
33000
27500

-

Q 8. Retrieve a list of employees and the projects they are working on, ordered by department and, within each department, ordered alphabetically by last name, first name.

- SELECT employee.*, works_on.Pno
  FROM employee
  JOIN works_on
  ON employee.Ssn = works_on.Essn
  ORDER BY employee.Dno, employee.Lname, employee.Fname;

FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPER_SSN	DNO	PNO
James	E	Borg	888665555	11/10/1937	450 Stone, Houston, TX	M	55000	-	1	20
Ahmad	V	Jabber	987987987	03/29/1969	980 Dallas, Houston, TX	M	25000	987654321	4	30
Ahmad	V	Jabber	987987987	03/29/1969	980 Dallas, Houston, TX	M	25000	987654321	4	10
Jennifer	S	Wallace	987654321	06/20/1941	291 Berry, Bellaire, TX	F	43000	888665555	4	30
Jennifer	S	Wallace	987654321	06/20/1941	291 Berry, Bellaire, TX	F	43000	888665555	4	20
Alicia	J	Zelaya	999887777	01/19/1968	3321 Castle, Spring, TX	F	25000	987654321	4	30
Alicia	J	Zelaya	999887777	01/19/1968	3321 Castle, Spring, TX	F	25000	987654321	4	10
Joyce	A	English	453453453	07/31/1972	5631 rice, Houston, TX	F	25000	333445555	5	1
Joyce	A	English	453453453	07/31/1972	5631 rice, Houston, TX	F	25000	333445555	5	2
Ramesh	K	Narayan	666884444	09/15/1962	975 Fire Oak, Humble, TX	M	38000	333445555	5	3

More than 10 rows available. Increase rows selector to view more rows.

- 10 rows returned in 0.00 seconds   Download

Q 9. Retrieve the name of all employees who do not have supervisor.

- SELECT Fname, Minit, Lname
  FROM employee
  WHERE Super_ssn IS NULL;

FNAME	MINIT	LNAME
James	E	Borg

Q10. Retrieve the social security numbers of all employees who work on project numbers 1, 2, or 3.

- SELECT DISTINCT employee.Ssn
  FROM employee
  JOIN works_on
  ON employee.Ssn = works_on.Essn
  WHERE works_on.Pno = 1 OR works_on.Pno = 2 OR works_on.Pno = 3;

SSN
123456789
333445555
453453453
666884444

Q11. Find the sum of the salaries of all employees, the maximum salaries, the minimum salaries and the average salaries.

- SELECT DISTINCT SUM(Salary), MAX(salary), MIN(salary), AVG(salary)
  FROM employee;

SUM(SALARY)	MAX(SALARY)	MIN(SALARY)	AVG(SALARY)
281000	55000	25000	35125

Q12. Retrieve (find) the number of employees in the 'Research' department.

- SELECT COUNT(employee.Dno)
  FROM employee
  JOIN department
  ON employee.Dno = department.Dnumber
  WHERE department.Dname = 'Research';

COUNT(EMPLOYEE.DNO)
4

Q13. For each project, retrieve the project number, the project name, and the number of employees who work on that project

- SELECT DISTINCT project.Pnumber, project.Pname, COUNT(project.Pname) as empcount
  FROM project
  JOIN employee
  ON project.Dnum = employee.Dno
  JOIN works_on
  ON project.Pnumber = works_on.Pno AND works_on.Essn = employee.Ssn
  GROUP BY project.Pnumber, project.Pname;

PNUMBER	PNAME	EMPCOUNT
3	ProductZ	2
10	Computerization	2
20	Reorganization	1
30	Newbenefits	3
1	ProductX	2
2	ProductY	3

-

Q14. For each project on which more than two employees work, retrieve the project number, the project name, and the number of employees who work on the project.

- SELECT DISTINCT project.Pnumber, project.Pname, COUNT(project.Pname) as empcount
  FROM project
  JOIN employee
  ON project.Dnum = employee.Dno
  JOIN works_on
  ON project.Pnumber = works_on.Pno AND works_on.Essn = employee.Ssn
  GROUP BY project.Pnumber, project.Pname

HAVING COUNT(project.Pname) > 2;

PNUMBER	PNAME	EMPCOUNT
30	Newbenefits	3
2	ProductY	3

-

Q15. For each project retrieve the project number, the project name, and the number of employees from department 5 who work on the project.

- SELECT Pnumber, Pname, COUNT(*)
  FROM PROJECT, WORKS_ON, EMPLOYEE
  WHERE Pnumber=Pno AND Ssn=Essn AND Dno=5
  Group BY Pnumber, Pname;

PNUMBER	PNAME	COUNT(*)
10	Computerization	1
3	ProductZ	2
20	Reorganization	1
1	ProductX	2
2	ProductY	3

-