**Objective**

To familiarize with SELECT-FROM-WHERE SQL simple queries on the COMPANY database.

**Problem Statement**

From the COMPANY database as mentioned and described in the previous database :

1. Retrieve the birth date and address of the employee(s) whose name  
   is ‘John B. Smith’.
2. Retrieve the name and address of all employees who work for the ‘Research’ department.
3. 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
4. Select all combinations of EMPLOYEE Ssn and DEPARTMENT Dname in the database.
5. Retrieve all the attribute values of any EMPLOYEE who works in DEPARTMENT number 5.
6. Retrieve all distinct salary values.
7. 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.
8. Retrieve all employees whose address is in Houston, Texas.
9. Find all employees who were born during the 1950s
10. Show the resulting salaries if every employee working on the ‘ProductX’ project is given a 10 percent raise.
11. Retrieve a list of employees and the projects they are working on, ordered by department and, within each department, ordered alphabetically by last name, then first name.

1. SELECT Bdate, Address

FROM employee

WHERE Fname = 'John' AND Lname = 'Smith' AND Minit = 'B';

2. SELECT e.Fname, e.Lname, e.Address

FROM employee e

JOIN department d ON e.Dno = d.Dnumber

WHERE d.Dname = 'Research';

3. SELECT

p.Pnumber AS Project\_Number,

p.Dnum AS Controlling\_Department\_Number,

e.Lname AS Manager\_Last\_Name,

e.Address AS Manager\_Address,

e.Bdate AS Manager\_Birth\_Date

FROM

project p

JOIN

department d ON p.Dnum = d.Dnumber

JOIN

employee e ON d.Mgr\_ssn = e.Ssn

WHERE

p.Plocation = 'Stafford';

4. SELECT e.Ssn AS Employee\_Ssn, d.Dname AS Department\_Name

FROM employee e

CROSS JOIN department d;

5. SELECT \*

FROM employee

WHERE Dno = 5;

6. SELECT DISTINCT Salary

FROM employee;

7. SELECT DISTINCT p.Pnumber

FROM project p

JOIN works\_on w ON p.Pnumber = w.Pno

JOIN employee e ON w.Essn = e.Ssn

JOIN department d ON p.Dnum = d.Dnumber

WHERE e.Lname = 'Smith'

OR d.Mgr\_ssn IN (SELECT Ssn FROM employee WHERE Lname = 'Smith');

8. SELECT \*

FROM employee

WHERE Address LIKE '%Houston, Texas%';

9. SELECT \*

FROM employee

WHERE Bdate BETWEEN '1950-01-01' AND '1959-12-31';

10. UPDATE employee

SET Salary = Salary \* 1.1

WHERE Ssn IN (

SELECT Essn

FROM works\_on

WHERE Pno = (

SELECT Pnumber

FROM project

WHERE Pname = 'ProductX'

)

);

11. SELECT e.Fname, e.Lname, p.Pname AS Project\_Name, d.Dname AS Department\_Name

FROM employee e

JOIN works\_on w ON e.Ssn = w.Essn

JOIN project p ON w.Pno = p.Pnumber

JOIN department d ON e.Dno = d.Dnumber

ORDER BY d.Dname, e.Lname, e.Fname;