SQL Queries for Chap 7 Employee DB

1) Display all the details of all employees working in the company.

```
select * from employee;
```

2) Display ssn, lname, fname, address of employees who work in department no 7.

```
select ssn,lname,fname,address from employee where dno=7;
```

3) Retrieve the birthdate and address of the employee whose name is 'Franklin T.Wong'

```
select bdate,address from employee where fname="Franklin" and mname="T" and lname="Wong";
```

4) Retrieve the name and salary of every employee

```
select fname,mname,lname,salary from employee;
```

5) Retrieve all distinct salary values

```
select distinct salary from employee;
```

6) Retrieve all employee names whose address is in ‘Bellaire’

```
select fname,mname,lname from employee where address="Bellaire";
```

7) Retrieve all employees who were born during the 1950s

```
select fname from employee where bdate between #01-01-50# and #31-12-59#;
```

8) Retrieve all employees in department 5 whose salary is between 50,000 and 60,000(inclusive)

```
select * from employee where dno=5 and salary >=50000 and salary <=60000;
```

9) Retrieve the names of all employees who do not have supervisors

```
select fname,mname,lname from employee where superssn is null;
```

10) Retrieve SSN and department name for all employees

```
select e.ssn, d.dname from employee e, department d;
```

11) Retrieve the name and address of all employees who work for the 'Research' department

```
select e.fname,e.address from employee e, department d where
d.dname="Research" and d.dnumber = e.dno;
or
select fname, address from employee where dno in
(select dnumber from department where dname =’research’);
```

12) For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birthdate

```
select p.pnumber,p.dnum,e.lname,e.address,e.bdate

from project p, department d, employee e

where p.plocation="Stafford" and p.dnum= d.dnumber and d.mgrssn=e.ssn;
```

13) : For each employee, retrieve the employee's name, and the name of his or her immediate supervisor

```
select e.fname,e.lname,s.fname,s.lname

from employee as e, employee as s

where s.superssn=e.ssn;
```

14) Retrieve all combinations of Employee Name and Department Name

```
select e.fname,e.lname,d.dname

from employee e, department d;
```

15) Make a list of all project numbers for projects that involve an employee whose last name is 'Narayan’ either as a worker or as a manager of the department that controls the project

```
(select distinct pnumber

from project,department,employee

where dnum=dnumber and mgrssn=ssn and lname="Narayan")

union

(select distinct pnumber

from project,works_on,employee

where pnumber=pno and essn=ssn and lname="Narayan");
```

16) : Increase the salary of all employees working on the 'ProductX' project by 15% .

```
select fname,lname.1.1*salary as increased_sal

from employee,works_on,project

where ssn=essn and pno=pnumber and pname="productX";
```

**updating in DB

17) Retrieve a list of employees and the project name each works in, ordered by the employee's department, and within each department ordered alphabetically by employee first name

```
select dname,lname,fname,pname

from department,employee,works_on,project

where dnumber=dno and ssn=essn and pno=pnumber

order by dname,lname,fname;
```

18) Select the names of employees whose salary does not match with salary of any employee in department 10

```
select fname
```

```
from employee

where salary > all(select salary from employee where dno=5);
```

19) Retrieve the name of each employee who has a dependent with the same first name and same sex as the employee

```
select e.fname,e.lname

from employee as e

where e.ssn in (select essn from dependent where
e.fname=dependent_name and e.sex=sex);
```

20) Retrieve the employee numbers of all employees who work on project located in Bellaire, Houston, or Stafford

```
select ssn

from employee

where ((select pno

        from works_on

        where ssn=essn) contains

        (select pnumber

        from project

        where dnum=5));
```

21) Find the sum of the salaries of all employees, the maximum salary, the minimum salary, and the average salary. Display with proper headings

```
select sum(salary),max(salary),min(salary),avg(salary)

from employee;
```

22) Find the sum of the salaries and number of employees of all employees of the ‘Marketing’ department, as well as the maximum salary, the minimum salary, and the average salary in this department

```
select sum(salary),count(*)

from employee, department

where dname like "market%";
```

23) Select the names of employees whose salary is greater than the average salary of all employees in department 10

```
select fname

from employee

where dno=10

group by salary

having salary>avg(salary);
```

24) For each department, retrieve the department number, the number of employees in the department, and their average salary

```
select dno,count(*),avg(salary)

from employee

group by dno;
```

25) For each project, retrieve the project number, the project name, and the number of employees who work on that project

```
select pnumber,pname,count(*)

from project

group by pnumber;
```

26) Change the location and controlling department number for all projects having more than 5 employees to ‘Bellaire’ and 6 respectively

```
update project

set plocation="Bellaire", dnum=6

where (select count(essn)

      from works_on

      where pno=pnumber)>5;
```

27) : For each department having more than 10 employees, retrieve the department no, no of employees drawing more than 40,000 as salary

```
  select dno

  from employee

  where salary>40000

  group by dno

having count(*)>10;
```

28) Insert a record in Project table which violates refrential integrity constraint with respect to Department number. Now remove the violation by making necessary insertion in the Department table.

```
insert into project

    values("Research and development",25,"Bhopal",9);

    /* The above query will give an error since there exists no department with department number 9 exixts in the department table */

    /* To remove this error, we create a  record in table department with dnumber as 9 */

insert into department
```

```
    values("Research",9,"123","20-08-2012");
```

29) Delete all dependents of employee whose ssn is ‘123456789’

```
delete from dependent

where essn=123456789;
```

30) Delete an employee from Employee table with ssn = ‘12345’(make sure that this employee has some dependents, is working on some project, is a manager of some department and is supervising some employees). Check and display the cascading effect on Dependent and Works on table. In Department table MGRSSN should be set to default value and in Employee table SUPERSSN should be set to NULL

```
delete from employee

where ssn=1234567891 cascade****;
```

31) . Perform a query using alter command to drop/add field and a constraint in Employee table.

```
    alter table

drop foreign key(superssn);
```