**Database Assignment 3**

**Exercise 1 Views**

**1.1**

create or replace view firstView as select \* from works\_on;

select \* from firstView;2

**1.2**

create or replace view secondView as select sum(hours) from works\_on;

select \* from secondView;

**1.3**

create or replace view thirdView as

select essn as "EMP#", fname as "EMP\_Name", pno as "PROJ#", pname as "Project Name" , hours, hours\*300 as "Cost"

from works\_on inner join employee on essn = ssn inner join project on pno = pnumber

select \* from thirdView

**1.4**

create or replace view FourthView as

select dname as "Department Name", fname as "Manager Name", salary as "Manager Salary"

from department inner join employee on ssn=mgrssn

select\* from FourthView

**1.5**

create or replace view supervisor as

select fname as "name1", ssn as "ssn1" from employee where superssn = 'null'

select \* from Supervisor

create or replace view departmentView as

select dname as "departmentname", dnumber from department

create or replace view FifthView as

select fname as "EmployeeName", name1 as "SuperVisorName", salary from employee inner join supervisor on ssn1 = superssn inner join departmentView on dno = dnumber

select \* from FifthView

**1.6**

create or replace view SixtView as

select pname as "Project name", dname as "Dept\_Name", count(ssn) as "NmbrOfEmployees", sum(hours) as "Total hours"

from works\_on inner join employee on essn = ssn

inner join project on pno = pnumber

inner join department on pnumber = dnumber

group by pname, dname, ssn

having count(ssn)>0

order by ssn desc;

select\*from SixtView

**1.7**

create or replace view TempView as

select pname as "projectname", dname as "deptname", count(ssn) as "nmbrofemployees", sum(hours) as "totalhours"

from works\_on inner join employee on essn = ssn

inner join project on pno = pnumber

inner join department on pnumber = dnumber

group by pname, dname, ssn

having count(ssn)>0

order by ssn desc;

create or replace view SeventhView as

select projectname, deptname, sum(nmbrofemployees) as "totalemployees", sum(totalhours) as "totalhours" from TempView

group by projectname, deptname

select \* from SeventhView

**1.8**

create or replace view tempView1 as

select fname, MAX(salary) as "salary"

from employee inner join department on dno = dnumber

group by fname, salary

order by salary desc;

select \* from tempView1

create or replace view tempView2 as

select max(salary) from tempView1

select \* from tempView2

create or replace view EightView as

select \* from employee where dno = (select dno from employee inner join tempView2 on salary = max )

select \* from EightView

**1.9**

create or replace view nine as

select \* from employee where superssn = '888665555'

**1.10**

create or replace view TempView as

select dname as "deptname", count(ssn) as "nmbrofemployees"

from employee

inner join department on dno = dnumber

group by dname, ssn

having salary>=30000

order by ssn desc;

create or replace view EightView as

select deptname, sum(nmbrofemployees) as "totalemployees" from TempView

group by deptname

select \* from EightView

**1.11**

create or replace view EleventhView as

select fname as "Name", lname as "Last Name", salary as "Salary", address as "Address"

from employee group by fname, lname, salary, address

select \* from EleventhView

**Exercise 6 Transactions**

**Exercise 7**

1. **Invoices who were paid**
   1. **Inner joins**

SELECT P.\*,D.\*

FROM PAYMENTS P,DEBTORS D

WHERE P.INVOICENUMBER=D.INVOICENUMBER;

* 1. **Intersect**

(SELECT INVOICENUMBER FROM PAYMENTS)

INTERSECT

(SELECT INVOICENUMBER FROM DEBTORS)

**1.3 Left outer join**

SELECT P.\*,D.\*

FROM DEBTORS D LEFT JOIN

PAYMENTS P ON D.INVOICENUMBER= P.INVOICENUMBER;

1. **Invoices that have not been paid**

**2.1 Except**

(SELECT INVOICENUMBER FROM DEBTORS)

EXCEPT

(SELECT INVOICENUMBER FROM PAYMENTS)

1. **Make a list of customers who have an invoice but have not paid**

**3.1 Except**

(SELECT INVOICENUMBER FROM PAYMENTS)

EXCEPT

(SELECT INVOICENUMBER FROM DEBTORS)