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*/

set search_path = "projects";

/*--7.24--*/

create domain sexes as char(1) constraint con_sex check (value ='M' or value ='F');

create domain positions as varchar(20) constraint con_positions check (value in ('Manager', 'Team Leader', 'Software Developer', 'Analyst'));

create domain hours as int check (value >= 0 and value <= 40);

create table Employee

(
empNo char(4) NOT NULL UNIQUE ,
fName varchar(20) NOT NULL ,
lName varchar(10) NOT NULL ,
address varchar(20) NOT NULL ,
DOB date NOT NULL ,
sex sexes NOT NULL ,
position positions NOT NULL ,
deptNo char(4) NOT NULL ,
constraint Employee_PK primary key(empNo)
);

insert into Employee values ('1111','Michael Santa', 'Santa','Long Blvd. 42','1999-04-29','M','Software Developer','1100');

insert into Employee values ('1234','James Adam', 'Adam','Main Street 25','2000-06-09','M','Manager','1100');

insert into Employee values ('3333','Alexandra Davies', 'Davies','Red Light Avenue 22','1998-01-11','F','Analyst','2200');

insert into Employee values ('4444','Michael Meyer', 'Meyer','Lord Street 1','1964-04-10','M','Team Leader','3300');

insert into Employee values ('5555','Mariam Goldberg', 'Goldberg','Telephone Alley 3','1988-02-23','F','Analyst','4400');

create table Department

(
deptNo char(4) NOT NULL ,
deptName varchar(10) NOT NULL ,
mgrEmpNo char(4) NOT NULL ,
constraint Department_PK primary key (deptNo)
);

alter table Employee add constraint deptNo_FK foreign key (deptNo)
references Department(deptNo) on update cascade on delete set null;

```
insert into Department values ('1100', 'IT', '1234');
insert into Department values ('4400', 'Board', '3333');
insert into Department values ('3300', 'Sales', '4444');
insert into Department values ('2200', 'HR', '5555');
```

```
create table Project
(
    projNo char(4) ,
    projName varchar(20),
    deptNo char(4) ,
    constraint Project_PK primary key (projNo),
    constraint Project_FK foreign key (deptNo) references Department(deptNo)
);
```

```
insert into Project values (8989,'SCCS',1100);
```

```
create table WorksOn
(
    empNo varchar(4),
    projNo char(4),
    dateWorked date,
    hoursWorked hours,
    constraint WorksOn_PK primary key (empNo, projNo, dateWorked),
    constraint WorksOn_FK foreign key (empNo) references Employee(empNo)
);
insert into WorksOn values ('1234','SCCS','2019-01-12',33);
insert into WorksOn values ('1111','SCCS','2019-01-12',39);
```

```
/*--5.14--*/
select * from Employee;
/*--5.15--*/ /*--6.33--*/
select * from Employee where sex ='F';
/*--5.16 --*/ /*--6.34--*/
select fName, address from Employee where position ='Manager';
/* --5.17-- */ /*--6.35--*/
select Employee.fName, Employee.address from Employee inner join Department on Employee.deptNo =
Department.deptNo where deptName = 'IT';
/*--5.18--*/
select Employee.fName from Employee inner join Project on Employee.deptNo = Project.deptNo where projName
='SCCS';
/*--5.19--*/ /*--6.36--*/
/* not very clearly defined task therefore just DOB sorting -- What is the age for retirement ??*/
select fName, DOB from Employee where position = 'Manager' order by DOB,fName asc;
/*--5.20--*/ /*--6.37--*/
select count(empNo) from Employee inner join Department on Employee.deptNo = Department.deptNo where
((Employee.empNo != '1234') and mgrEmpNo = '1234');
/*--6.32--*/
select * from Employee order by fName, lName asc ;
/*--6.38--*/
select * from Employee inner join WorksOn WO on Employee.empNo = WO.empNo order by deptNo, lName asc;
```

/*--6.39--*/

```
select projNo,projName, count(empNo) from Employee inner join Project P on Employee.deptNo = P.deptNo
group by p.projNo having
count(empNo) > 2;
```

/*--6.40--*/

```
select count(empNo) as numberOfEmployeesInDepartment from Employee E inner join department D on
E.deptNo = D.deptNo group by E.empNo having count(empNo) >10;
```

/*--7.25--*/

```
create view W_Data as select Employee.deptNo, empNo, fName, lName, position, mgrEmpNo, deptName from
Employee, Department
where Employee.deptNo = Department.deptNo;
```

/*--7.26--*/

```
create view W_DataHours as select Employee.empNo, fName,lName, projName, hoursWorked from Employee,
Project, WorksOn where Employee.empNo = WorksOn.empNo and
```

WorksOn.projNo = Project.projNo;

/*--7.27--*/

```
create view EmpProject(empNo, projNo, totalHours) as select w.empNo, w.projNo, SUM(hoursWorked)
from Employee e, Project p, WorksOn w where e.empNo = w.empNo and p.projNo = w.projNo
group by w.empNo, w.projNo;
```

/* A) */

```
select * from EmpProject;
```

/* B) */

```
select projNo from EmpProject where projNo ='SCCS';
```

/* C) */

```
select count(projNo) from EmpProject where empNo ='E1';
```

/* D) */

```
select empNo, totalHours from EmpProject group by empNo;
```